



**GOLDER**

## **CONSTRUCTION SPECIFICATIONS**

### **MODULE 6 BASE LINER SYSTEM**

#### **MONTEREY PENINSULA LANDFILL Monterey County, California**

**Rev. 1**

Prepared for:

Monterey Regional Waste Management District  
14201 Del Monte Boulevard  
Marina, California 93933-1670  
(831) 384-5313

Prepared by:

Golder Associates Inc.  
1000 Enterprise Way, Suite 190  
Roseville, California 95678  
(916) 786-2424



**Document 00003**  
**BIDDING REQUIREMENTS**

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**INVITATION TO BID**

**PROJECT:** Module 6 Liner Construction  
Monterey Peninsula Landfill  
Monterey County, California

**OWNER:** Monterey Regional Waste Management District  
Project Manager: Guy R. Petraborg, P.E.  
14201 Del Monte Boulevard  
P.O. Box 1670  
Monterey County, CA 93933-1670  
Phone: (831) 384-5313  
Fax: (831) 384-3567

**ARCHITECT/ENGINEER** Golder Associates, Inc.  
Ken Haskell, P.E.  
1000 Enterprise Way, Suite 190  
Roseville, California, 95678  
Phone: (916) 786-2424  
Fax: (916) 786-2434

**CALL FOR BIDS**

The Monterey Regional Waste Management District (MRWMD) is inviting bids on a General Contract for the construction of a lined solid waste disposal cell at the Monterey Peninsula Landfill, a Class III municipal solid waste landfill. The landfill is located on MRWMD-owned property at the Monterey Regional Environmental Park, 14201 Del Monte Blvd., in unincorporated Monterey County about 2 miles north of the City of Marina. The applicable Sales Tax Rate is 7.75%.

**RECEIPT OF BIDS**

Sealed bids will be received at the office of the MRWMD, located at 14201 Del Monte Blvd., P.O. Box 1670, Monterey County, CA 93933-1670 until **2:00 p.m., Tuesday, March 5, 2019** at which time they will be publicly opened and read. Any bids received after that time will not be considered. Oral, telephonic, facsimile, or telegraphic bids are invalid and will not receive consideration.

**DESCRIPTION OF WORK**

Work involves construction of (1) approximately 14 acres of composite base liner, consisting of a compacted clay liner, geosynthetic clay liner, and HDPE geomembranes, and (2) a leachate collection and removal system, consisting of HDPE piping, drainage material layers, geotextile, and on-site sand drainage soil. The work also includes excavation of native clay soils,

subgrade preparation, placement of engineered fill, placement of operations layer, road base and paving, erosion control, and underdrains. Estimated Quantities of most work items (partial list) are as follows:

ITEM	QUANTITY
Excavation and Stockpiling	490,000 CY
Groundwater Underdrain	200 LF
Engineered Fill	10,000 CY
Anchor Trench Backfill	2160 LF
Compacted Clay Liner Test Pad	1 LS
Compacted Clay Liner	44,000 CY
Lysimeters	1 LS
LCRS Drainage Gravel	1,200 CY
LCRS Drainage Layer	21,000 CY
Operations Layer	23,000 CY
Single-Sided Textured HDPE 60-mil Geomembrane	28,000 SF
Double-Sided Textured HDPE 60-mil Geomembrane	607,000 SF
Geosynthetic Clay Liner	28,000 SF
Geotextile	81,000 SF
Sacrificial Geomembrane	52,000 SF
LCRS 6-inch Dia. HDPE Pipe	7,200 LF
LCRS 18-inch Dia. HDPE Riser Pipe	1 LS
Liner Tie-in	1,950 LF
Rain Gutter	1 LS
Temporary Sand Bag Lines	1 LS
Erosion Control Blanket and Straw Wattles	155,000 SF
Hydroseeding	155,000 SF
Culverts and Miscellaneous Drainage Related Work	1 LS
Calpine Road Realignment - Excavation	13,500 CY
Calpine Road Realignment – Engineered Fill	2,000 CY
Calpine Road Realignment - Pavement	27,500 SF
Module 6 Recycled Road Base and Geotextile Fabric	31,000 SF
Water Supply Well Abandonment	1 LS
Bonds	1 LS

## **BID DOCUMENTS**

Copies of the Bid Documents (including plans, specifications, contract forms, bid forms and conditions) may be obtained on or after January 23, 2019 at the office of the MRWMD by making a non-refundable payment of \$100.00 for each set. Bids shall be submitted on the Bid Forms provided with the Bid Documents. Bid Documents and supplemental information for bidders, such as drill logs, reports of geological information, soils testing data, etc., are available for examination without charge at the MRWMD office.

## **BID GUARANTY**

Each bid shall be accompanied by a certified or cashier's check or bid bond in the amount of **10 percent of the total bid price** payable to the MRWMD as a guaranty that the bidder, if his proposal is accepted, will promptly execute the contract, secure payment of worker's compensation insurance, and furnish a satisfactory faithful performance bond in the amount of **100 percent of the total bid price**.

## **WAGE RATES**

Pursuant to Section 1770 and the following sections of the California Labor Code, the contractor shall pay not less than the prevailing rate of per diem wages as determined by the California Department of Industrial Relations for projects in Monterey County.

## **COMPLETION OF WORK**

All contract work must be completed within one hundred and forty (140) calendar days after the Notice-to-Proceed is issued by the MRWMD.

## **PRE-BID CONFERENCE**

All prospective general contract bidders are required to attend a pre-bid conference to be held at the MRWMD office at 10:00 a.m., February 1, 2019. Representatives of the MRWMD and Golder Associates, Inc. will be in attendance. The conference will be followed by a tour of the Module 6 construction site area.

## **PROJECT ADMINISTRATION**

All Questions relative to this project prior to the opening of bids shall be directed to:

Ken Haskell, P.E., Golder Associates at khaskell@golder.com, ***and***  
Guy R. Petraborg, P.E., Monterey Regional Waste Management District at gpetraborg@mrwmd.org

The successful bidder must be licensed in the State of California and must demonstrate acceptable experience of the type of work described in the Bid Documents. The MRWMD reserves the right to waive any irregularities and to reject any or all bids.

**END OF DOCUMENT**

**Document 00100**

**INSTRUCTIONS TO BIDDERS**

1. DEFINED TERMS

- A. Terms used in these Instructions to Bidders and in other Bid Documents which are defined in the General Conditions and Supplementary Conditions have the meanings assigned to them therein.
- B. The "Project Manual" comprises the Contract Documents and the following: Invitation to Bid, Instructions to Bidders, Bid Form, Bid Schedule, Bid Bond, Bidder's Qualification Affidavit, List of Proposed Subcontractors, Labor and Equipment Rate Schedules, Contractor's License Form, and any other forms designated to be attached to the Bid Form.

2. INFORMATION FOR BIDDERS

- A. Supplemental Information for Bidders may be examined at the office of the OWNER and includes geological, hydrological and design documents. These documents are listed by name in Section 00200 of the Project Manual.
- B. Soil laboratory data (Atterberg limits, particle size, compaction, moisture content and permeability) for the on-site native clay stockpile.
- C. Disclaimer:
  - 1. The information contained in the above-referenced documents is being made available to the Bidder solely for his information and convenience. The information and data contained in the above-referenced documents does not constitute a part of the Contract.
  - 2. Neither the OWNER nor the ENGINEER represent that the information being made available shows the complete range of conditions which will be encountered in the construction of the project. The information concerning geological and other subsurface conditions furnished in the referenced document represents only the opinion of the OWNER and the ENGINEER as to the character of the materials encountered during field investigations.
  - 3. The OWNER and the ENGINEER disclaim responsibility for any opinions, conclusions, interpretations, or deductions that may be expressed or implied in any of the information and data contained in the referenced



documents, it being expressly understood that the making of deductions, interpretations, and conclusions is the Bidder's or CONTRACTOR'S sole responsibility.

3. EXAMINATION OF PROJECT MANUAL, SITE, AND CONDITIONS OF WORK

A. The Project Manual includes the most recent editions of the following documents and any other additional documents as issued by the OWNER and/or ENGINEER.

1. Bound herein

- a. Bidding Requirements
- b. Contract Forms
- c. Terms and Conditions
- d. Specifications

2. Bound separately

- a. Construction Drawings
- b. Construction Quality Assurance Plan

B. Before submitting a Bid, each Bidder shall (a) examine the Project Manual thoroughly; (b) visit the site to familiarize himself with local conditions that may in any manner affect cost, progress or performance of the Work; (c) familiarize himself with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the Work; and (d) study and carefully correlate Bidder's observations with the Project Manual.

C. Before submitting his Bid, each Bidder shall, at his own expense, make such additional investigations and tests as the Bidder may deem necessary to determine his Bid for performance of the Work in accordance with the time, scope or work, and other terms and conditions of the Project Manual. On request, OWNER will provide each Bidder access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of his Bid.

D. The lands upon which the Work is to be performed, rights-of-way for access thereto and other lands designated for use by CONTRACTOR in performing the Work are identified in the Supplementary Conditions, General Requirements or Drawings.

- E. The submission of a Bid will constitute an incontrovertible representation by the Bidder that he has complied with every requirement of this Article 3 and that the Project Manual is sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.
- F. Complete sets of Bidding Documents shall be used in preparing Bids; neither OWNER nor ENGINEER assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents
- G. OWNER and ENGINEER, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

#### 4. QUALIFICATIONS OF BIDDERS

- A. Contractors shall be properly qualified and licensed in accordance with the laws of the State of California, as applicable. Any individual, firm, or corporation acting as prime contractor and making, filing, or financially interested in more than one Bid for the same work will be disqualified. This does not apply to material suppliers or to subcontractors making proposals to general contractors.
- B. Bidders are required to complete the "Bidder's Qualification Affidavit" and "Contractor's License Form" and to submit them with their Bids as hereinafter specified. The OWNER may make such additional investigations as he deems necessary to determine the ability of any Bidders to perform the work, and the Bidders shall furnish to the OWNER such additional information and data for this purpose as the OWNER may request.
- C. Either the Bidder or his subcontractor shall be fully qualified to perform the installation of HDPE liner, geotextile and leachate collection and recovery system. Such qualification shall include satisfactory experience in the installation of HDPE liners, geotextiles and leachate collection and recovery systems of similar size, scope and magnitude. The Bidder's or subcontractor's experience in this field shall be fully documented in the "Bidder's Qualification Affidavit."
- D. The OWNER, by its sole determination, reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the OWNER that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work in accordance with the Project Manual. Conditional Bids will not be accepted.
- E. In accordance with the provisions of the Business and Professions Code Section 7028.15, the OWNER has determined that the CONTRACTOR shall possess a valid Class A (General Engineering Contractor) Contractor's License at the timethe bid

is submitted. Failure to possess the specified license shall cause the Bid to be rejected as being nonresponsive. The OWNER, before awarding the Bid, will verify that the CONTRACTOR was properly licensed at the time of bid submittal.

5. INTERPRETATIONS OF THE PROJECT MANUAL

- A. Every request for an interpretation of the Project Manual shall be in writing and, to be considered, must be received by the ENGINEER at least 12 calendar days before the date set for the opening of Bids.
- B. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the Project Manual. All such written addenda shall become a part of the Project Manual.
- C. Addenda, if any, will be mailed to all planholders at the respective addresses furnished for such purposes. Failure of any Bidder to receive any such addendum shall not relieve such Bidder from any obligation under his Bid as submitted.
- D. The OWNER and ENGINEER assume no responsibility for clarifications or interpretations of the Project Manual arrived at in any other manner.
- E. Any discrepancies or omissions in the Project Manual discovered by the Bidder shall be called to the attention of the ENGINEER during the Bidding period.
- F. The right is reserved by the OWNER to revise or amend the Project Manual prior to the date set for opening of Bids. Such revisions and amendments, if any, will be announced by written addenda. Copies of such addenda will be furnished to all registered Bidders as specified above. If the revisions and amendments are of a nature which requires substantial changes in quantities and prices, or either of them, the date set for opening of Bids may be postponed by such a number of days as the OWNER will determine to be necessary to enable Bidders to revise their Bids. In such cases, addenda will include announcement of the new date for opening of Bids.

6. PREPARATION OF BID

- A. The Bid:
  - 1. The following documents shall comprise the CONTRACTOR'S Bid and shall be submitted:
    - a. Bid Form (Document 00300)
    - b. Schedule of Unit Price Work (Document 00405)

- c. Bid Bond (Document 00410)
  - d. Bidder's Proposed Construction Schedule (Document 00415)
  - e. List of Proposed Subcontractors (Document 00420)
  - f. Bidder's Qualification Affidavit (Document 00425)
  - g. Bidder's Proposed Equipment (Document 00430)
  - h. Labor and Equipment Rate Schedules (Document 00440)
  - i. Contractor's License Form (Document 00450)
2. A copy of the foregoing documents is bound herein, and Bids shall be prepared on extra copies of these documents copied by the Bidder.
  3. Each of the documents comprising the CONTRACTOR'S Bid, as listed above, shall be filled in and completed in its entirety. The documents shall be completed in ink or by typewriter. Interlineations, alterations, or erasures shall be initialed. All blank spaces shall be filled in. Where any item or items in the documents are not applicable to the Work, then the words "none" or "not applicable" shall be filled in as appropriate.
  4. If any of the foregoing documents are not completed, the Bid may be considered unresponsive and rejected.
- B. Addenda: Receipt of all addenda issued shall be acknowledged. If no addenda were issued or received, "none" shall be written in.
- C. Bid Security:
1. Each Bid shall be accompanied by a certified check or cashier's check made payable to the OWNER, or a Bid Bond prepared on the Bid Bond form bound in with this Project Manual, duly executed by the Bidder as principal, and having as surety thereon a surety company licensed to do business in the State of California and approved by the OWNER, in an amount not less than 10 percent of the Bid.
  2. Checks submitted as bid security will be returned to all Bidders, except the three lowest Bidders, within 10 calendar days after the opening of Bids, and the remaining checks will be returned promptly after the OWNER and the accepted Bidder have executed the Contract (Agreement). Bid bonds will be returned only upon request and only to bidders not in contention for award of the Contract.

3. The successful Bidder, upon his failure or refusal to execute and deliver the Contract (Agreement) and the bond(s) required within 10 calendar days after he has received Notice of Award of the Contract, shall forfeit to the OWNER, as liquidated damages for such failure or refusal, the security deposited with his Bid.
  4. The Bid Bond shall remain in effect for a minimum period of 60 calendar days from the date of the opening of the Bids.
- D. List of Proposed Subcontractors:
1. Bidders shall list the various classes of work included in the Project and the names and business addresses of the subcontractors and material and equipment suppliers proposed to perform work, furnish materials or equipment, or render service on or about the Project in excess of 5 percent of the amount of the Bid Price. Work in excess of 5 percent of the Bid Price for which a subcontractor is not listed will be presumed to be performed by the Bidder.
  2. The Bidder shall utilize the services of one of the vendors identified in Section 02778, HDPE Liner, or one who meets the qualification requirements identified in Section 02778. Prequalification shall not release the Bidder from full compliance with the provisions of Section 02778. Subcontractor chosen shall be listed in the form provided in Section 00430, List of Proposed Subcontractors.
  3. Bidders shall fill in and complete the List of Proposed Subcontractors in the Form provided to fulfill the foregoing requirements. If space is not sufficient as provided in the Form, Bidder may add a separate sheet or sheets.
  4. Substitution of subcontractors after bid opening will require approval of the OWNER.
- E. Substitutions of Materials:
1. Bids shall be submitted on the basis of the Project Manual as prepared by the ENGINEER. Consideration of substitute "or equal" items of materials or equipment will be postponed until the apparent low Bidder has been identified.
  2. All matters relating to substitute "or equal" items shall be concluded after the bid opening and prior to installation of any proposed equals in

accordance with the procedures described in Section 01630, Product Options and Substitutions.

3. Requests for substitutions will be handled as specified in Section 01630, Product Options and Substitutions.

F. Signing of the Bid Form:

1. Bidders shall properly date and sign the Bid. In the case of a corporation, a duly authorized officer of the corporation shall sign; in the case of a partnership, a partner shall sign; in the case of a joint venture, a duly authorized officer of the sponsoring member shall sign, and in the case of an individual, such individual shall sign. Satisfactory evidence of the authority of the signatory on behalf of the Bidder shall be furnished.
2. Under the signing provisions of the Bid Form, all spaces provided shall be filled in as applicable. Corporations shall affix their seal where shown.

- G. Bid Schedule: Bidders shall complete the Bid Schedule as provided. All blank spaces shall be filled in. The total of the Bid Schedule shall be entered in the Bid Form in the space provided therein.

7. FILING OF BID

- A. Each Bid shall be submitted in a sealed envelope bearing on the outside the name of the Bidder, his address, the name of the Project, the title of the Project Manual for which the Bid is being submitted, and the time and date of the Bid opening. If forwarded by mail, the sealed envelope containing the Bid shall be enclosed in another envelope addressed to the OWNER.
- B. It is intended that Bids received prior to the time set for the Bid opening will be securely kept, unopened; but the OWNER shall in no event be liable for the premature opening of any Bid.
- C. Written modifications of Bids already submitted will be considered if received prior to the Bid opening.
- D. Any Bid may be withdrawn prior to the scheduled time for the opening of Bids, or authorized postponement thereof, upon signed written or telegraphic request delivered to the OWNER. Any Bid received after the time and date of the Bid opening will not be considered. No Bidder shall withdraw his Bid after the scheduled date and time of opening thereof. Negligence on the part of the Bidder in preparing the Bid confers no right for withdrawal of the Bid after it has been opened.

8. EVALUATION OF BIDS AND AWARD OF CONTRACT

- A. OWNER reserves the right to reject any and all Bids, to waive any and all irregularities, to negotiate contract terms with successful Bidder, and the right to disregard all nonconforming, nonresponsive or conditional Bids. Discrepancies between words and figures will be resolved in favor of words. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. In case of discrepancy between unit prices and extended amounts, the unit prices shall prevail and, for bid evaluation purposes, the extended amounts will be adjusted accordingly.
- B. In evaluating Bids, OWNER will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and alternatives and unit prices if requested in the Bid forms.
- C. OWNER may consider the qualifications and experience of subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the Work as to which the identity of subcontractors and other persons and organizations must be submitted as provided in the Supplementary Conditions. Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may also be considered by OWNER.
- D. OWNER may conduct such investigations as he deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed subcontractors and other persons and organizations to do the Work in accordance with the Project Manual to OWNER'S satisfaction within the prescribed time.
- E. OWNER, by its sole determination, reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to OWNER'S satisfaction.
- F. If the Contract is to be awarded, it will be awarded to the lowest responsive Bidder whose evaluation by OWNER indicates to OWNER that the award will be in the best interests of the Project.
- G. If the Contract is to be awarded, OWNER will give the successful Bidder a Notice of Award within 21 calendar days after the day of the Bid opening.
- H. The OWNER will issue a Notice of Award, which the successful Bidder will be required to sign and return within 10 calendar days. The Notice of Award will authorize the CONTRACTOR to proceed with obtaining the bond(s) and the various insurances and certificates which are required to be submitted with the signed Contract.

- I. The OWNER will issue the OWNER'S form of construction Contract (Agreement) concurrently with the Notice of Award. The CONTRACTOR will be required to execute and return the Contract within 10 calendar days after receipt of the Contract for signing. Upon receiving the Contract, signed and returned by the CONTRACTOR, along with the required bond(s) and certificates of insurance, the OWNER will sign and return one executed copy of the Contract to the CONTRACTOR within 10 calendar days.
  - J. If the award is made to a corporation, the corporation will be required to furnish evidence of its corporate existence and of its right to do business in the State of California, and of the authority of the officers signing the Contract.
9. OWNER AND ENGINEER
- A. For the purposes of administration of the Contract, the OWNER is as follows:

Monterey Regional Waste Management District  
14201 Del Monte Boulevard (P.O. Box 1670)  
Monterey, California 93933-1670  
Attention: Mr. Guy R. Petraborg, P.E.  
Telephone: (831) 384-5313  
Fax: (831) 384-3567
  - B. For purposes of administration of the Contract, the PROJECT ENGINEER is to be determined and the ARCHITECT/ENGINEER is as follows:

Golder Associates, Inc.  
Ken Haskell, P.E.  
1000 Enterprise Way, Suite 190  
Roseville, California, 95678  
Phone: (916) 786-2424  
Fax: (916) 786-2434
10. CORRESPONDENCE INSTRUCTIONS
- A. Correspondence relating to engineering and all correspondence prior to an award shall be sent in triplicate to the PROJECT ENGINEER.
  - B. Subsequent to notification of an award, the successful Bidder shall send all correspondence relating to price, terms, or schedules to the OWNER in triplicate, with a copy to the PROJECT ENGINEER.



- C. The OWNER reserves the right to designate additional persons and locations to which copies of all correspondence relating to the work shall be sent by the CONTRACTOR.

**END OF DOCUMENT**

**Document 00200**

**INFORMATION AVAILABLE TO BIDDERS**

1.0 AVAILABILITY

- A. The information described in this document is available for viewing at the Monterey Regional Waste Management District office, 14201 Del Monte Boulevard, Monterey County, California, 93933-1670, Mondays through Fridays, from 8 a.m. to 5 p.m.

2.0 BIDDER RESPONSIBILITIES

- A. The OWNER or ENGINEER shall not be responsible for the accuracy or completeness of such information. Responsibility for the accuracy of the information lies with the preparer.
- B. Bidder shall have full responsibility for the interpretation of the information for his bidding and construction purposes.
- C. Bidder shall have full responsibility for reviewing and verifying such information, for locating underground facilities or existing structures shown or indicated in the Contract Documents, and for coordination of the Work with the owners of such underground facilities or existing structures during construction.

3.0 REPORTS

- A. "Module 6 Base Liner Design Report, Monterey Peninsula Landfill, Monterey County, California" by Golder Associates, Inc., 2019
- B. "Design Basis Memorandum for the Module 5 Expansion, Monterey Peninsula Landfill, Monterey County, California" by Geo-Logic Associates, 2012
- C. "Geotechnical Investigation Report For Monterey Peninsula Landfill Module 4, Marina, California" by Vector Engineering, Inc., 2001
- D. Material Testing Data for on-site native Clay Stockpile

4.0 GEOLOGIC / HYDROGEOLOGIC INFORMATION

- A. Bidder is made aware that groundwater may be encountered within the sump and header trench area during excavation of Module 6 and dewatering may be required. It is the CONTRACTOR's responsibility to dewater the material as necessary to excavate down to the elevations shown on the Construction Drawings and complete construction of the Module 6 liner system.
- B. Bidder is made aware that municipal solid waste may be encountered during excavation and construction of the tie-ins to Modules 4 and 5.

**END OF DOCUMENT**

**Document 00300**

**BID FORM**

To: Guy R. Petraborg, P.E.  
Monterey Regional Waste Management District  
14201 Del Monte Boulevard  
P.O. Box 1670  
Monterey County, California 93933-1670

Project: Module 6 Liner Construction  
Monterey Peninsula Landfill

**Bid Due Date:** March 5, 2019 at 2:00 p.m.

Bidder: \_\_\_\_\_

**PART 1 OFFER**

Having examined the place of the Work and all matters referred to in the Bid Documents for the named Project, we the undersigned hereby offer to enter into a Contract to perform the Work for the Bid Price of

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )

**Lump Sum Contract.** If the Bid is for a single Lump Sum Contract, the Bid Price above is the Total Stipulated Price offered including Cash Allowances, if any.

**Unit Price or Combination Lump Sum and the Unit Price Contract.** If the Bid is for a Unit Price Contract or a combination of Lump Sum and Unit Price Contract, the Bid Price above is the Base Bid tabulated in Document 00405 - Schedule of Unit Price Work, including Cash Allowances, if any.

**Cash Allowances.** All Cash Allowances listed in Document 00405 - Schedule of Unit Price Work and described in the Bid Documents are included in the Bid Price.

**Changes in Contract Price Due to Variations in Actual Quantities.** For items quoted in the supplement to this Bid, Document 00405 - Schedule of Unit Price Work, the Total Unit Price Bid is based in whole or in part on the Unit Prices for the quantity of units for each of the items listed. The Contract Price is subject to change due to variation in the actual quantity of each unit in the completed Work in accordance with the Contract Documents.

**Alternate Bids.** We will perform Alternate Bid Work as listed in Document 00405 - Schedule of Unit Price Work and described in the Bid Documents for an amount added to the Bid Price for each Alternate Bid that is accepted by the OWNER.

**Period for Bid Acceptance.** This offer shall be open to acceptance and is irrevocable for 90 calendar days from the Bid due date. That period may be extended by mutual written agreement of the OWNER and the Bidder, or as needed to fulfill requirements for Agreement submittals, as discussed in Document 00450 - Contractor's License Form. After the Bid Acceptance Period, the Bidder may withdraw without penalty if no mutual agreement can be reached.

**PART 2 CONTRACT TIME**

If this offer is accepted, we shall meet the following schedule:

- Notice to Proceed – \_\_\_\_\_
- Start Work on or before – \_\_\_\_\_
- Substantial Completion of Excavation – \_\_\_\_\_
- Substantial Completion of HDPE Liner – \_\_\_\_\_
- Substantial Completion of Entire Project – \_\_\_\_\_
- Final Completion of Entire Project – \_\_\_\_\_

The CONTRACTOR shall perform the contract work between the hours of 6 AM and 6 PM, Monday through Saturday. No work shall be performed on Sundays and national holidays, without the written permission of the OWNER.

The CONTRACTOR'S construction schedule (Document 00415) submitted with his bid shall account for and identify the total number of working days assumed to develop his bid for each month of work. The CONTRACTOR'S schedule shall account for the anticipated normal weather condition.

**PART 3 ADDENDA**

The following Addenda have been received. The modifications to the Bid Documents noted therein have been considered and all costs relating thereto are included in the Bid Price:

- |                                 |                                 |
|---------------------------------|---------------------------------|
| Addendum No. _____, dated _____ | Addendum No. _____, dated _____ |
| Addendum No. _____, dated _____ | Addendum No. _____, dated _____ |
| Addendum No. _____, dated _____ | Addendum No. _____, dated _____ |

**PART 4 ATTACHMENTS TO THIS BID**

The following required Attachments to this Bid provide information which may be used by the OWNER for the evaluation of the Bid:

- [ ] Document 00405 - Schedule of Unit Price Work
- [ ] Document 00410 - Bid Bond
- [ ] Document 00415 - Bidder's Proposed Construction Schedule
- [ ] Document 00420 - List of Proposed Subcontractors
- [ ] Document 00425 - Bidder's Qualification Affidavit
- [ ] Document 00430 - Bidder's Proposed Equipment
- [ ] Document 00440 - Labor and Equipment Rate Schedule
- [ ] Document 00450 - Contractor's License Form

**PART 5 PENALTY FOR DELAY**

We agree that time is of the essence and that we will pay the OWNER delay penalties in accordance with Paragraph 9.11 of the Supplementary Conditions if we fail to meet any of the Substantial Completion or Final Completion dates specified in the Contract Times on this Bid Form.

**PART 6 SIGNATURES:**

Bidder: \_\_\_\_\_  
(Please print or type the full legal name of your proprietorship, partnership, corporation or joint venture.\*)

By: \_\_\_\_\_  
(Signature of sole proprietor, partner, or authorized officer of corporation.)

Name: \_\_\_\_\_  
(Please print or type name.) (Title)

Address: \_\_\_\_\_  
(Business Address of Bidder, print or type.)

Telephone: \_\_\_\_\_

(Print or type telephone number.)

(                    )

(                    )

(    Corporate    )

(      Seal      )

(                    )

(                    )

Attest: \_\_\_\_\_

(Corporate Secretary)

*\*If the Bid is a joint venture, add additional Bid Form (Document 00300 - Bid Form) signature sheets for each member of the joint venture.*

**END OF DOCUMENT**

**Document 00405**

**SCHEDULE OF UNIT PRICE WORK**

**Name of Bidder:** \_\_\_\_\_

**Date:** \_\_\_\_\_

This Document 00405 constitutes an attachment to Document 00300 - Bid Form for Module 6 Liner Construction, Monterey Regional Waste Management District (OWNER). When a Contract is awarded, this Document becomes an attachment to Document 00500 - Agreement Between Monterey Regional Waste Management District (OWNER) and Contractor (CONTRACTOR). Refer to Section 01025 for detail on bid items.

ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	TOTAL AMOUNT
1	Mobilization/Demobilization	LS	1		
2	Layout of Work and Surveys	LS	1		
3	Clearing, Grubbing, and Stripping	LS	1		
4	Excavation and Stockpiling	CY	490,000		
5	Groundwater Underdrain	LF	200		
6	Engineered Fill	CY	10,000		
7	Anchor Trench Backfill	LF	2,160		
8	Compacted Clay Liner Test Pad	LS	1		
9	Compacted Clay Liner	CY	44,000		
10	Lysimeters	LS	1		
11	LCRS Drainage Gravel	CY	1,200		
12	LCRS Drainage Layer	CY	21,000		
13	Operations Layer	CY	23,000		
14	Single-Sided Textured HDPE 60-mil Geomembrane	SF	28,000		
15	Double-Sided Textured HDPE 60-mil Geomembrane	SF	607,000		
16	Geosynthetic Clay Liner	SF	28,000		
17	Geotextile	SF	81,000		

ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	TOTAL AMOUNT
18	Sacrificial Geomembrane	SF	52,000		
19	LCRS 6-inch Dia. HDPE Pipe	LF	7,200		
20	LCRS 18-inch Dia. HDPE Riser Pipe	LS	1		
21	Liner Tie-in	LF	1,950		
22	Rain Gutter	LS	1		
23	Temporary Sand Bag Lines	LS	1		
24	Erosion Control Blanket and Straw Wattles	SF	155,000		
25	Hydroseeding	SF	155,000		
26	Culverts and Miscellaneous Drainage Related Work	LS	1		
27	Calpine Road Realignment - Excavation	CY	13,500		
28	Calpine Road Realignment – Engineered Fill	CY	2,000		
29	Calpine Road Realignment - Pavement	SF	27,500		
30	Module 6 Recycled Road Base and Geotextile Fabric	SF	31,000		
31	Water Supply Well Abandonment	LS	1		
32	Bonds – Payment and Performance Bonds	LS	1		
				<b>TOTAL:</b>	

**END OF DOCUMENT**



**Document 00410**

**BID BOND**

This Document 00410 - Bid Bond constitutes an Attachment to Document 00300 - Bid Form.

KNOW ALL MEN BY THESE PRESENTS, that we \_\_\_\_\_

\_\_\_\_\_

as Principal, hereinafter called the Principal, and \_\_\_\_\_

\_\_\_\_\_

a corporation duly organized under the laws of the State of \_\_\_\_\_ as Surety,  
hereinafter called the Surety, are held and firmly bound unto:

Monterey Regional Waste Management District  
14201 Del Monte Boulevard  
P.O. Box 1670  
Monterey County, California 93933-1670

as Obligee, hereinafter called the Obligee, in the sum of \_\_\_\_\_  
Dollars (\$ \_\_\_\_\_), or 10 percent of the total of the bid, for the payment of which  
sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs,  
executors, administrators, successors and assigns, jointly and severally, firmly by these  
presents.

WHEREAS, the Principal has submitted a Bid for all Work required to complete the Contract for  
Module 6 Liner Construction for the Monterey Peninsula Landfill, in accordance with the  
Project Manual prepared by Golder Associates, Inc., 1000 Enterprise Way, Suite 190  
Roseville, California, 95678.

NOW, THEREFORE, if the Obligee shall accept the Bid of the Principal and the Principal shall  
enter into a Contract with the Obligee in accordance with the terms of such Bid, and give such  
bond or bonds as may be specified in the Project Manual with good and sufficient surety for the  
faithful performance of such Contract and for the prompt payment of labor and material  
furnished in the prosecution thereof, or in the event of the failure of the Principal to enter into  
such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the  
difference not to exceed the penalty hereof between the amount specified in said Bid and such  
larger amount for which the Obligee may in good faith contract with another party to perform  
the Work covered by said Bid, then this obligation shall be null and void, otherwise to remain in  
full force and effect.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Witness: \_\_\_\_\_ Principal: \_\_\_\_\_

( )  
( )  
( Corporate )  
( Seal )  
( )  
( )

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Legal Address: \_\_\_\_\_  
\_\_\_\_\_

Attest: \_\_\_\_\_  
(Corporate Secretary)

Witness: \_\_\_\_\_ Surety  
: \_\_\_\_\_

( )  
( )  
( Corporate )  
( Seal )  
( )  
( )

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Legal Address: \_\_\_\_\_  
\_\_\_\_\_

Attest: \_\_\_\_\_  
(Corporate Secretary)

**END OF DOCUMENT**

**Document 00415**

**BIDDER'S PROPOSED CONSTRUCTION SCHEDULE**

- 1.00 This Document 00415 constitutes an Attachment to Document 00300 - Bid Form.
- 2.00 The information provided by the Bidder in this Document will be one component which OWNER may use to evaluate the Bid.
- 3.00 Bidder proposes the following construction schedule for the major items of the Work. A construction schedule outline in the format of Bidder's choice is attached:

Yes  No

<u>ACTIVITY</u>	<u>START DATE</u>	<u>COMPLETION DATE</u>

- 4.00 Upon award of the Contract, the successful Bidder will be required to prepare and submit a construction schedule for the Work to the detail required by OWNER'S Project Manager, in accordance with Paragraph 3.11.1 of Document 00700 - General Conditions.

**END OF DOCUMENT**

**Document 00420**

**LIST OF PROPOSED SUBCONTRACTORS**

1.01 GENERAL

- A. This Document 00420 - List of Proposed Subcontractors constitutes an Attachment to Document 00300 - Bid Form
- B. The Bidder shall list the names and business addresses on the following form of the subcontractors and material suppliers that he proposes to use to perform work or render service on or about the Project for the various portions of the Work that are in excess of five percent of the amount of the Bid Price.
- C. The Bidder shall use one of the vendors listed in Section 02778 Geomembrane as a subcontractor for the HDPE liner work.
- D. The Bidder shall use one of the vendors listed in Section 02779 GCL as a subcontractor for the GCL liner work.
- E. If no subcontractor is listed, it will be assumed that the CONTRACTOR will do all work as specified.
- F. No SUBCONTRACTORS other than those listed herein will be allowed to perform work under this contract. Substitutes will only be permitted with written approval of OWNER.
- G. The CONTRACTOR and all SUBCONTRACTORS shall have a valid contractor's license for the class of work to be performed prior to the award of the contract.

**LIST OF PROPOSED SUBCONTRACTORS**

No.	Class of Work/Material Subcontractor/Material Supplier	Name of Subcontractor/Material Supplier	Address of
1.			
2.			
3.			
4.			
5.			
6.			
7.			

8.

---

9.

---

Attach experience record and reference of subcontractor (or other affiliate). Use additional sheets if required.

**END OF DOCUMENT**

**Document 00425**

**BIDDER'S QUALIFICATION AFFIDAVIT**

This Document 00425 - Bidder's Qualification Affidavit constitutes an Attachment to Document 00300 - Bid Form.

THE UNDERSIGNED CERTIFIES under oath the truth and correctness of all statements and of all answers to questions made hereinafter.

Submitted To: Monterey Regional Waste Management District  
14201 Del Monte Boulevard  
P.O. Box 1670  
Monterey County, California 93933-1670

Submitted By: \_\_\_\_\_

Bidder's Legal Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Main Office: \_\_\_\_\_

\_\_\_\_\_

1. How many years has your organization been in business as a general contractor?

\_\_\_\_\_

2. How many years has your organization been in business under its present business name? \_\_\_\_\_

3. If a corporation, answer the following:

a. Date of incorporation: \_\_\_\_\_

b. State of incorporation: \_\_\_\_\_

c. President's name: \_\_\_\_\_

d. Vice-president's name(s): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- e. Secretary's name: \_\_\_\_\_
  - f. Treasurer's name: \_\_\_\_\_
4. If individual or partnership, answer the following:
- a. Date of organization: \_\_\_\_\_
  - b. Name and address of all partners.  
(State whether general or limited partnership):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. If other than corporation or partnership, describe organization and name principals:
6. We normally perform \_\_\_\_\_% of the work with our own forces. The work we perform with our own forces, listed by trades, includes the following:

(Attach additional sheets if necessary)

- 7. Have you ever failed to complete any work awarded to you? \_\_\_\_\_  
If so, note when, where and why:
- 8. Has any officer or partner of your organization ever been an officer or partner of another organization that failed to complete a construction contract? \_\_\_\_\_ If so, state circumstances:



9. List name of project, owner, architect/engineer, contract amount, percent complete, and scheduled completion of the major construction projects similar in type to the work described in this Project Manual, that your organization has in progress on this date:
  
10. List the name of the project, owner, architect/engineer, contract amount, date of completion, and percent of work with own forces of the major projects your organization has completed in the past ten years. State those projects which involved similar scope and magnitude to the Monterey Peninsula Landfill. To be qualified for award of the contract, the Bidder must have acceptable experience in earthwork and site preparation work.
  
11. List the construction experience of the principal individuals of your organization, indicating the alternative candidates whom you expect to make available for assignment as Project Manager or Project Superintendent.
  
12. List states and categories in which your organization is legally qualified to do business:

13. Construction industry references:

14. Bank references:

15. Name of bonding company and name and address of agent:

16. Attach Statement of Financial Conditions, including Bidder's latest annual financial statement with quarterly supplements to date, prepared in accordance with generally accepted accounting principles.

Dated at \_\_\_\_\_,  
this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Legal Name of  
Organization: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature)

Title: \_\_\_\_\_

( )  
( )  
( Corporate )  
( Seal if a )  
( Corporation )  
( )  
( )

M \_\_\_\_\_, being duly  
sworn, deposes and says that he (she) is the \_\_\_\_\_  
of \_\_\_\_\_ (Contractor's, Organization or Firm),  
and that the answers to the foregoing questions and all statements therein contained are true  
and correct.

Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Notary Public: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

**END OF DOCUMENT**

**Document 00430**

**BIDDER'S PROPOSED EQUIPMENT**

- 1.00 This Document 00430 Bidder's Proposed Equipment constitutes an Attachment to Document 00300 - Bid Form.
- 2.00 The information provided by the Bidder in this Document will be one component which OWNER may use to evaluate the Bid.
- 3.00 Bidder proposes to use the following major equipment to perform the Work.

**EQUIPMENT LIST**

<b>TYPE OF EQUIPMENT (E.G. EXCAVATOR)</b>	<b>MAKE AND MODEL (E.G. CAT 330)</b>	<b>NUMBER OF UNITS</b>

**END OF DOCUMENT**

**Document 00440**

**LABOR AND EQUIPMENT RATE SCHEDULES**

**1.01 GENERAL**

- A. This Document 00440 - Labor and Equipment Rate Schedules constitutes an Attachment to Document 00300 - Bid Form.
- B. The labor and equipment rate schedules shall be used in conjunction with the work that may be authorized by the OWNER under Cost of the Work Plus Contractor's Fee for Overhead and Profit (Force Account Work). The rates shall be used to determine compensation to be paid to the CONTRACTOR.
- C. The information included in this Section shall be supplemental to the provisions of Article 11 of the General Conditions.
- D. Labor and equipment rates presented shall remain frozen for the term of the Project.

**1.02 LABOR RATE SCHEDULE**

- A. The Bidder shall provide regular hourly rates and overtime hourly rates in \$/hr. for each class of labor that the Bidder expects to use on the Project and for each class of labor that the Bidder has available that may be used on the Project.
- B. The rates shall be provided in the format included on the following Labor Rate Schedule.

**1.03 EQUIPMENT RATE SCHEDULE**

- A. The Bidder shall, for each type and class of equipment, provide regular hourly rates in \$/hr. and cost for mobilization and demobilization to the site. The rates shall be provided for the equipment that will be used during this Contract and for equipment that may have to be mobilized to perform the Work of this Contract. Rate includes equipment, operator and consumables such as fuel.
- B. The rates shall be provided in the format included on the following Equipment Rate Schedule. Rates shall not include costs for operators.

**LABOR RATE SCHEDULE**

Labor Class	Regular Rate (\$/hr.)	Overtime Rate (\$/hr.)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

### EQUIPMENT RATE SCHEDULE

	Regular Rate	Cost for Mobilization
Equipment Type	(\$/hr.)	and Demobilization
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____
11.	_____	_____
12.	_____	_____
13.	_____	_____
14.	_____	_____
15.	_____	_____

**END OF DOCUMENT**

**Document 00450**

**CONTRACTOR'S LICENSE FORM**

This Document 00450 - Contractor's License Form constitutes an attachment to Document 00300 - Bid Form.

The undersigned, as bidder, declares that our valid California Contractor's license number is

\_\_\_\_\_ and that the license expiration date is \_\_\_\_\_ and that the representations made in this Bid are made under penalty of perjury

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_

Name of Bidder

\_\_\_\_\_

Signature of Bidder

\_\_\_\_\_

Title of Signer

**END OF DOCUMENT**



**Document 00500**

**AGREEMENT BETWEEN MONTEREY REGIONAL WASTE  
MANAGEMENT DISTRICT AND CONTRACTOR**

THIS Contract made and entered into on \_\_\_\_\_, 2019 by and between Monterey Regional Waste Management District hereinafter referred to as OWNER and \_\_\_\_\_, hereinafter referred to as CONTRACTOR. If there is a conflict among any contract documents the provisions of Document 00500 - Agreement Between Monterey Regional Waste Management District and CONTRACTOR shall take precedence.

**WITNESSETH**

WHEREAS, OWNER desires to employ the services of CONTRACTOR to provide services as described in the Scope of Work.

WHEREAS, CONTRACTOR has provided a bid submittal (Document 00405 - Schedule of Unit Price Work dated \_\_\_\_\_), to perform the services required to construct the facilities outlined in Exhibit A – Scope of Work.

NOW, THEREFORE, for, in consideration of the promises and other good and valuable considerations, and subject to the terms hereinafter contained, OWNER and CONTRACTOR agree as follows:

**1. SCOPE OF WORK**

CONTRACTOR shall perform the Work described in Exhibit A in accordance with the Terms and Conditions of this Contract.

**2. TIME OF PERFORMANCE**

CONTRACTOR shall commence Work immediately upon written notice to proceed by OWNER and shall complete the work within 130 calendar days of the date of notice to proceed. Should CONTRACTOR fail to achieve substantial completion of the Work within that Contract Time, the CONTRACTOR agrees to pay liquidated damages as stipulated in Supplementary Conditions. Time is of the essence in the performance of CONTRACTOR'S obligations under this Contract.

In accordance with the provisions of §4215 of the California Government Code, the CONTRACTOR shall not be assessed liquidated damages for delay in completion of the project, when such delay was caused by the failure of the public agency or owner of the utility to provide for the removal or relocation of such utility facilities.

### 3. COMPENSATION AND PAYMENT

- a. Payment. In consideration for materials furnished and services rendered, OWNER shall pay CONTRACTOR in accordance with the provisions specified in Exhibit B. OWNER shall make progress payments to the CONTRACTOR on account of the Contract Price as provided below and elsewhere in the Project Manual. The period covered by each progress payment shall be one calendar month ending on the last day of the month. Each month, not later than the tenth day of the month, CONTRACTOR shall make Application for Payment of work completed during the previous month, as provided in the General Conditions. ENGINEER'S Project Manager will make a recommendation for payment, and OWNER will make a progress payment on the basis of such recommendation, as provided in the document 00700 - General Conditions. Final payment, constituting the entire unpaid balance of the Contract Price, shall be made by OWNER to the CONTRACTOR as provided in the General Conditions. Invoices will be paid within 30 calendar days of receipt of an approved invoice.
- b. Substitution of Securities in Lieu of Retainage. The CONTRACTOR may elect to receive 100 percent of payments due under the Project Manual from time to time, without retention from any portion of the payment by the OWNER, by depositing securities of equivalent value with the OWNER in accordance with the provisions of §22300 of the California Public Contract Code. Such securities, if deposited by the CONTRACTOR, shall be valued by the OWNER, whose decision on valuation of the securities shall be final. Securities eligible for investment under this provision shall be limited to those listed in §22300 of the California Public Contract Code and §16430 of the California Government Code.
- c. Prevailing Wage Rates.
  - (1) As required by §1770 et seq. of the California Labor Code, the CONTRACTOR shall pay not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations. Copies of such prevailing rate per diem wages are on file at the office of the OWNER, which copies shall be made available to any interested party on request. The CONTRACTOR shall post a copy of such determination at each job site.
  - (2) As provided in §1775 of the California Labor Code, the CONTRACTOR shall, as a penalty of the OWNER, forfeit \$50.00 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the Director for such work or craft in which such worker is employed for any public work or craft in which such worker is employed

for any public work done under the CONTRACTOR by it or by any subcontractor under it.

- d. Retention and Inspection of Payroll Records. As required under the provisions of §1776 of the California Labor Code, 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. The payroll records shall be certified and shall be available for inspection at all reasonable hours at the principal office of the CONTRACTOR under certain specified conditions.
- e. Apprentices. Attention is directed to §§1777.5, 1777.6, and 1777.7 of the California Labor Code and Title 8, California Code of Regulations §§200 et seq. To insure compliance and complete understanding of the law regarding apprentices, and specifically the required ratio thereunder, the CONTRACTOR (and subcontractors) should, where some question exists, contact the Division of Apprenticeship Standards prior to commencement of the work. Responsibility for compliance with this paragraph lies with the CONTRACTOR. The OWNER'S policy is to encourage the employment and training of apprentices on its construction contracts as may be permitted under local apprenticeship standards.
- f. Working Hours. The CONTRACTOR shall comply with all applicable provisions of §§1810 to 1815, inclusive, of the California Labor Code relating to working hours. The CONTRACTOR shall, as a penalty to the OWNER, forfeit \$25.00 for each worker employed in the execution of the Contract by the CONTRACTOR or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one (1) calendar week, unless such worker receives compensation for all hours worked in excess of eight (8) hours at no less than 1-1/2 times the basic rate of pay.
- g. The Contract Price, for those unit price items of Work which are listed in Document 00405 – Schedule of Unit Price Work, when attached, is subject to adjustment at completion of the Work due to variation in quantities of units of work actually incorporated in the completed Work and other adjustments as provided in the Project Manual.

#### 4. INTERPRETATION

This Contract, together with the Exhibits attached hereto, and all documents, drawings,

specifications and instruments specifically referred to herein and made a part hereof shall constitute the entire Contract between the parties, and no other proposals, conversations, bids, memoranda, or other matter shall vary, alter, or interpret the terms hereof. The captions in this Contract are for the convenience of the parties in identification of the several provisions and shall not constitute a part of this Contract nor be considered interpretative thereof.

Failure of either party to exercise any opinion, right or privilege under this Contract or to demand compliance as to any obligation or covenant of the other party shall not constitute a waiver of any such right, privilege or option, or of the performance thereof, unless waiver is expressly required in such event or is evidenced by a properly executed instrument.

## **5. INDEPENDENT CONTRACTOR**

- a. In accordance with the provisions of California Public Contract Code §3300, the OWNER has determined that the CONTRACTOR possesses a Valid Class A Contractor license at the time that this contract is executed. Failure to possess the specified license shall render this contract void.
- b. CONTRACTOR shall be an independent CONTRACTOR in all its activities hereunder. CONTRACTOR is not to be considered OWNER'S employee for any purpose, including but not limited to the accrual of any employee benefits. CONTRACTOR is not authorized to represent OWNER or otherwise bind OWNER in any dealings between OWNER and any third parties.
- c. All employees furnished by CONTRACTOR to perform the work hereunder shall be deemed to be CONTRACTOR'S employees exclusively and shall be paid by CONTRACTOR for all services in this connection, including but not limited to the accrual of any employee benefits. CONTRACTOR shall be responsible for all obligations and reports covering Social Security, Unemployment Insurance, Workman's Compensation, Income Tax and other reports and deductions required by any applicable State or Federal law.
- d. The work to be performed by CONTRACTOR shall be under the general direction of OWNER'S on-site Resident Construction Representative and shall be limited to the Scope of Work of this Contract. OWNER may direct CONTRACTOR as to what work is to be done, the sequence in which it is to be performed and a schedule indicating start dates and/or completion dates, but shall not be responsible for or direct the means, methods or equipment whereby the work is to be accomplished.

## 6. SUBCONTRACTS AND ASSIGNMENTS

- a. Subcontractor. CONTRACTOR shall not assign or subcontract any portion of the services required under this Contract without prior written authorization of OWNER.
- b. Assignment of Antitrust Actions in Awarding Body. In accordance with §4551 of the Government Code, the CONTRACTOR and subcontractors shall conform to the following requirements. In entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, the CONTRACTOR or subcontractor offers and agrees to assign to the awarding body 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. §15) or under the Cartwright Act (Chapter 2 commencing with §16700 of Part 2 of Division 7 of the Business and Professions Code).

## 7. TERMINATION

- a. OWNER, with five days' written notice, may terminate this Contract without cause at any time. Any termination shall become effective in the manner specified in the Notice of Termination and shall be without prejudice to any claim, which OWNER may have against CONTRACTOR or CONTRACTOR may have against OWNER. OWNER shall reimburse CONTRACTOR only for the work performed to date of termination, and for expenses which were reasonably incurred and necessary costs of termination and protection of property.
- b. In the event of a termination for default of CONTRACTOR, CONTRACTOR shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the amount to be paid on this Contract exceeds the cost of finishing the Work, including the cost for additional managerial and administrative services and any other costs and damages OWNER may suffer, that excess amount shall be paid to CONTRACTOR. If the expense, compensation, costs, and damages exceed any unpaid balance, CONTRACTOR and its sureties, if any, shall be liable for and shall pay the difference to OWNER.
- c. Notwithstanding the above, the total amount due CONTRACTOR upon termination will not exceed the total compensation stated in Exhibit B.

## 8. FORCE MAJEURE

CONTRACTOR shall not be liable for failure or delay in delivery of services or delivery of goods due to Acts of God; war; civil commotion; labor disputes or strikes (including labor disputes and strikes involving employees of CONTRACTOR); fire, flood, or other casualty; governmental actions, priorities, or regulations; supplier or CONTRACTOR

delay; or any cause beyond CONTRACTOR'S reasonable control whether of similar or dissimilar nature than those enumerated. CONTRACTOR shall have such additional time within which to perform the Work as may be reasonably determined as the result of any of the above causes.

## 9. INDEMNIFICATION

CONTRACTOR shall indemnify, defend, and hold OWNER harmless from and against claims, liabilities, suits, loss, cost, and expense and damages arising from or in connection with CONTRACTOR'S performance of work pursuant to this Contract.

## 10. WARRANTIES

- a. CONTRACTOR warrants that all Work shall strictly comply with the provisions of this Contract and all specifications and drawings referred to in this Contract or thereafter furnished by OWNER and shall be free from defects in construction and workmanship and in any design or engineering furnished by CONTRACTOR. CONTRACTOR further warrants that all materials, equipment, and supplies furnished by CONTRACTOR for the Work shall be new, merchantable, of the most suitable grade, and fit for their intended purposes. Without limitation of any other rights or remedies of OWNER, if any defect in the Work in violation of the foregoing warranty appears within the period set forth below, CONTRACTOR shall upon receipt of written notice of such defect, promptly furnish, at no cost to OWNER, all labor, equipment and materials at the job site necessary to correct such defects and cause the Work to comply fully with the foregoing warranties.
- b. CONTRACTOR'S warranties set forth in "10.a." above shall extend for a period of 12 months after the date of final written acceptance of the Work by OWNER.
- c. All labor, equipment, and materials furnished by CONTRACTOR pursuant to "10.a." above to correct defects shall be warranted by CONTRACTOR in accordance with the warranties set forth in "10.a." above for a period of 12 months from the date of acceptance by OWNER of such corrections.
- d. If CONTRACTOR is notified of any defects in the Work and fails to promptly cure such defects, OWNER shall have the right to cure or to have such defects cured at CONTRACTOR'S cost and expense, and CONTRACTOR shall promptly reimburse OWNER for such costs and expenses.

## 11. INSURANCE

- a. Workers' Compensation

- (1) In accordance with provisions of §1860 of the California Labor Code, the CONTRACTOR'S attention is directed to the requirement that, in accordance with the provisions of §3700 of the California Labor Code, every contractor will be required to secure the payment of compensation of his or her employees.
  - (2) In accordance with the provisions of §1861 of the California Labor Code, each contractor to whom a public works contract is awarded shall sign and file with the awarding body the following certification prior to performing the work of the contract: "I am aware of the provisions of §3700 of the Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."
- b. Without limiting its liability to OWNER, CONTRACTOR shall place and maintain with responsible insurance carriers the following insurance. Prior to commencing work under this Contract, CONTRACTOR shall deliver to OWNER certificates of insurance evidencing coverage in accordance with this Article and an obligation to which shall provide thirty calendar days notice to OWNER in the event of a material change in coverage or cancellation. As to the insurance set out in Paragraphs (2) and (3) below, CONTRACTOR shall have OWNER named as additional insured and CONTRACTOR shall provide a certificate of insurance to OWNER before work is started.
- (1) Worker's Compensation and Employer's Liability Insurance. Workers' Compensation in compliance with the applicable State and Federal laws.  
  
Employer Liability Limit \$1,000,000.
  - (2) Comprehensive General Liability Insurance including Blanket Contractual; Excavation, Collapse and Underground (XCU) Hazards; Broad Form Property Damage; Completed Operations and Independent Contractor's Liability all applicable to Personal Injury, Bodily Injury and Property Damage to a combined single limit of \$1,000,000 each occurrence subject to \$2,000,000 annual aggregate for Completed Operations and Personal Injury other than Bodily Injury and Products/Completed Operations shall apply separately with respect to each project away from CONTRACTOR'S owned or rented premises.

- (3) Comprehensive Automobile Liability Insurance including owned, hired and non-owned automobiles, Bodily Injury and Property Damage to a combined single limit of \$1,000,000 each occurrence.

## **12. UNEMPLOYMENT INSURANCE AND TAXES**

CONTRACTOR shall have full and exclusive liability for the payment of any and all taxes and contributions for unemployment insurance, old age retirement benefits and similar pensions, and annuities which may now or hereafter be imposed by the United States, any state, or any local governmental authority, whether measured by the wages, salaries, or remuneration paid to persons employed by CONTRACTOR or otherwise, for the Work. CONTRACTOR shall comply with all Federal and State laws on such subjects, including all rules and regulations and shall maintain suitable forms, books and records, and save OWNER free and harmless from, and hereby indemnifies OWNER and against, liability for the payment of any and all such taxes, excises, assessments, or other charges levied by any governmental authority on or because of the Work, including, without limitation, the use of any equipment, supplies or materials pursuant to this Contract.

## **13. DISCLOSURE OF INFORMATION**

No news release, including photographs and films, public announcement, denial or confirmation shall be made by CONTRACTOR concerning subject matter of this Contract, or any phase of any program hereunder, without the prior written approval of OWNER.

## **14. SEVERABILITY**

It is understood and agreed by the parties hereto that if any part, term, or provision of this Contract is held illegal or in conflict with any law of the State where made or having jurisdiction over any of the parties hereto, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular part, term, or provisions held to be invalid.

## **15. CHANGES**

- a. Preference for Materials. Notwithstanding any other provision of the Bid Documents or Specifications to the contrary, any reference in the Project Manual to any material, item of equipment or type of construction by manufacturer's name, make, catalogue number, service or other proprietary identification shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition. Bidders may furnish any equal material, product, or service if the OWNER so approves.



If the CONTRACTOR wishes to propose a substitute or equal item for any specified by brand or trade name, he shall in writing notify the OWNER of his intent to do so and at this time submit to the OWNER an itemized list of the item or items he proposes setting forth the various manufacturers, names and such other information he has available. Unless this notification is given, the CONTRACTOR shall provide only the items specified by brand or trade name. If notification is so given the OWNER, within thirty-five (35) calendar days after issuance of Notice of Award, the CONTRACTOR shall supply data to the OWNER to substantiate the proposed substitution or equal. The OWNER will then decide whether the proposed substitution or equal is in fact equal in quality and utility to the specified trade or brand name items. It is agreed that the decision of the OWNER in this matter shall be final and that if the OWNER determines that the proposed substitution is not equal to that specified, the CONTRACTOR shall provide equipment which meets the specifications at the price specified in the CONTRACTOR'S Bid.

- b. Changes. OWNER, without invalidating this Contract, may direct changes within the general scope of work required by this Contract by altering, adding to and/or deducting from the work to be performed. If any changes under this clause, whether directed or otherwise, cause an increase or decrease in CONTRACTOR'S cost of, or the time required for, the performance of the work under this Contract, CONTRACTOR shall notify OWNER within five working days of the date of occurrence of any such change. CONTRACTOR shall submit detailed justification of time and cost impacts for review and approval of Contract. After mutual agreement has been reached by the parties, an equitable adjustment will be made to the contract time or price, and the Contract will be modified in writing accordingly. All such changes in the work shall be in writing and shall be performed subject to the provisions of this CONTRACTOR.

## 16. INSPECTION AND ACCEPTANCE

- a. All equipment and materials furnished to OWNER, and workmanship performed by CONTRACTOR or its lower-tier subcontractors shall be subject to final inspection, tests, and acceptance by OWNER or its representatives upon completion of all Work. OWNER may also inspect and reject any materials, equipment, or workmanship at any time during the performance of the Work. OWNER'S inspections shall not relieve CONTRACTOR from its obligation to comply with the requirements of this Contract. OWNER reserves the right to charge to CONTRACTOR any additional cost of inspection or test when material or workmanship is not ready at the time specified by the CONTRACTOR for inspection or test, or when reinspection or retesting is necessitated by prior rejection. The failure of OWNER to inspect or test, or to discover defective

material or workmanship, shall not prejudice the rights of OWNER upon the final inspection.

- b. CONTRACTOR, at its expense, shall promptly correct any workmanship which does not comply with the requirements of this Contract, and shall promptly repair or replace any material or equipment (except material or equipment furnished by OWNER) which is defective or does not conform to the Contract requirements, prior to resubmitting the Work for acceptance. If CONTRACTOR fails to repair or replace rejected equipment or material, or correct rejected workmanship promptly, OWNER, at its option, may repair, replace or correct the defective workmanship, equipment or material, and all costs and expenses of OWNER in correcting the defective Work shall be the responsibility of CONTRACTOR and shall be paid to OWNER on demand. Instead of requiring correction, removal, or replacement of defective Work, OWNER may accept the Work in its defective or unapproved state and a Subcontract amendment shall be issued to incorporate any unnecessary revisions to the Subcontract documents, including an appropriate reduction to the Contract price.
- c. CONTRACTOR acknowledges that the OWNER or its representatives may also inspect any materials, equipment, or workmanship at any time during the performance of the Work.

## **17. SUSPENSION OF WORK**

- a. OWNER may, at any time, suspend performance of all or any part of the Work by giving not less than five working days written notice to CONTRACTOR. The suspension may be continued by OWNER for a period up to sixty calendar days during which period OWNER may at any time, by written notice, require CONTRACTOR to resume performance of the Work. If at the end of the sixty-day period of suspension OWNER has not required a resumption of Work, that portion of the Work which has been suspended may be terminated by either party pursuant of the provisions of this paragraph. CONTRACTOR shall be compensated in accordance with, and shall follow the procedures specified in, paragraph 15 above.
- b. OWNER shall not be liable for any damages, anticipated profits, or costs incurred with respect to suspended Work during any period of suspension, except for costs which (i) are incurred for the purpose of safeguarding the Work, materials, and equipment in transit or at the job site, (ii) are incurred for such CONTRACTOR personnel or rented equipment which are maintained at the job site, or (iii) are other reasonable and unavoidable costs of shutting down the Work or reassembling personnel and equipment.

**18. PROTECTION OF WORKERS IN TRENCH EXCAVATIONS**

As required by §6705 of the California Labor Code and in addition thereto, whenever work under the Contract involves the excavation of any trench or trenches five (5) feet or more in depth, the CONTRACTOR shall submit for acceptance by the OWNER or by a registered civil or structural ENGINEER, employed by the OWNER, to whom authority to accept has been delegated, 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 such trench or trenches. If such plan varies from the shoring system standards established by the Construction Safety Orders of the Division of Industrial Safety, the plan shall be prepared by a registered civil or structural ENGINEER employed by the CONTRACTOR, and all costs therefor shall be included in the price named in the Contract for completion of the Work as set forth in the Project Manual. Nothing in this Section shall be deemed to allow the use of a shoring, sloping, or other protective system less effective than that required by the Construction Safety Orders. Nothing in this Section shall be construed to impose tort liability on the OWNER, the ENGINEER, nor any of their officers, agents, representatives, or employees.

**19. NOTICE OF THIRD PARTY CLAIMS AGAINST THE CONTRACTOR**

The CONTRACTOR shall give the OWNER immediate notice of any suit or action filed, or any claims made, against the CONTRACTOR arising out of the performance of this Contract or any lower-tier subcontracts. The CONTRACTOR shall furnish immediately to the OWNER copies of all documents received by the CONTRACTOR pertinent to such actions, suit or claim.

**20. BENEFICIAL OCCUPANCY AND POSSESSION PRIOR TO COMPLETION**

The OWNER shall have the right to take possession of or use any completed or partially completed part of the CONTRACTOR'S Work as OWNER may deem necessary for their operations upon notice to the CONTRACTOR. During such occupancy, OWNER shall exercise all reasonable efforts to avoid interference with the CONTRACTOR'S continuance of the Work. Such occupancy shall not constitute acceptance of the CONTRACTOR'S Work and the CONTRACTOR will remain responsible for that portion of the Work so occupied until final acceptance under the terms of this Contract and thereafter pursuant to the guarantees and warranty provisions of this Contract; provided that CONTRACTOR shall not be responsible for any damage or loss caused by OWNER.

**21. CONTRACTOR'S FINAL RELEASE CERTIFICATE AND INDEMNIFICATION**

Upon completion and acceptance of all Work, the CONTRACTOR shall complete the "Contractor's Final Release Certificate or Indemnity" hereto referred as Exhibit C

attached hereto and incorporated into this Contract by reference. This Certificate shall be submitted to OWNER along with the CONTRACTOR'S final invoice as prescribed in the Compensation and Payment section of this Contract.

**22. INDEX OF ATTACHMENTS**

The following list of Exhibits are incorporated herein and made a part thereof:

Exhibit A – Scope of Work

Exhibit B – Payment Schedule

Exhibit C – Contractor's Final Release Certificate and Indemnity

Exhibit D - List of Documents

Addendum No. \_\_\_\_\_

MONTEREY REGIONAL WASTE

MANAGEMENT DISTRICT

\_\_\_\_\_  
(CONTRACTOR)

\_\_\_\_\_  
(OWNER)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name and Title)

Tim S. Flanagan, General Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

( )  
( Corporate )  
( Seal )  
( )

( )  
( MRWMD )  
( Seal )  
( )

**EXHIBIT A**

**SCOPE OF WORK**

The CONTRACTOR will provide, furnish and install the material, equipment and labor necessary to accomplish the work as defined in Division 1 - General Requirements, Section 01010 - Summary of Work.

**END OF EXHIBIT**

**EXHIBIT B**

**SCHEDULE OF UNIT PRICE WORK**

The CONTRACTOR shall furnish all labor, materials, equipment, machinery, tools and construction expertise to carry out the work as described in the Exhibit A - Scope of Work.

Compensation is defined in the attached Document 00405 - Schedule of Unit Price Work.

**END OF EXHIBIT**

**EXHIBIT C**

**CONTRACTOR'S FINAL RELEASE CERTIFICATE AND INDEMNITY**

This Release and Certificate is made in accordance with the provisions of Contract No. \_\_\_\_\_ including any and all Amendments thereto, executed by \_\_\_\_\_ hereinafter referred to as the "CONTRACTOR" and Monterey Regional Waste Management District hereinafter referred to as the "OWNER."

In consideration of payments heretofore, or to be made by the OWNER to the CONTRACTOR for labor, materials, and services furnished by the CONTRACTOR in the performance of said Contract, the CONTRACTOR hereby unconditionally releases the OWNER, their Officers, Agents, Employees, Assigns, or Heirs from any and all liens and claims whatsoever arising out of or during the performance of said Contract, other than such claims, if any, that may with the consent of the OWNER be specifically excepted from the terms of this Release and Certificate, stated on Sheet 1, attached hereto (or, if none, so state): \_\_\_\_\_ and in further consideration of the aforesaid payments CONTRACTOR being first duly sworn, further affirms and certifies under penalty of perjury that all labor, and services of every nature by whomsoever furnished in connection with the performance of said CONTRACT and all applicable State and Federal payroll taxes and payroll insurance have been paid and CONTRACTOR hereby agrees to indemnify OWNER, against, and hold them harmless of and from, all liens, claims, demands, penalties, losses, costs, damages, and liability in any manner whatsoever heretofore or hereafter arising out of or in respect of any claim by any person or governmental agency for payment for work, labor, services, or materials performed, furnished, or rendered under or pursuant to or in respect of the performance of said CONTRACTOR.

Executed this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

\_\_\_\_\_

CONTRACTOR

By \_\_\_\_\_

\_\_\_\_\_

OFFICIAL TITLE

(If the CONTRACTOR is a corporation, the following Certificate will be executed.)

I, \_\_\_\_\_, certify that I am  
\_\_\_\_\_ of the Corporation executing this Release and  
Certificate; that \_\_\_\_\_ who signed this Release and  
Certificate on behalf of the CONTRACTOR was then \_\_\_\_\_ of said  
Corporation; that said Release and Certificate was duly signed for and on behalf of said  
Corporation by authority of its governing body, and is within the scope of its corporate  
powers.

STATE OF \_\_\_\_\_ )

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_.

\_\_\_\_\_

NOTARY PUBLIC FOR SAID STATE

**END OF EXHIBIT**



**EXHIBIT D**

**LIST OF DOCUMENTS**

<u>Document #</u>	<u>Name</u>
00300	Bid Form
00405	Schedule of Unit Price Work
00440	Labor and Equipment Rates Schedules
00610	Performance Bond
00615	Certificates of Insurance
00620	Payment Bond
00640	Notice of Award
00650	Notice to Proceed
00700	Standard General Conditions of the Construction Contract
00800	Supplementary Conditions
	General Requirements and Site Work - Divisions 1 & 2
	Construction Drawings (reduced)
	CQA Plan

**END OF EXHIBIT**

**Document 00610**

**PERFORMANCE BOND**

**THE STATE OF CALIFORNIA** §

§ **KNOW ALL MEN BY THESE PRESENTS:**

**THE COUNTY OF MONTEREY** §

**THAT WE,** \_\_\_\_\_, as  
Principal, hereinafter called "CONTRACTOR", and the other subscriber hereto as Surety, do hereby acknowledge ourselves to be held and firmly bound to OWNER in the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) for the payment of which sum, well and truly to be made to the OWNER and its successors, the said CONTRACTOR and Surety do bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally.

**THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:**

**WHEREAS,** the CONTRACTOR has on or about this day executed a Contract in writing with the OWNER for

Monterey Peninsula Landfill – Module 6 Liner Construction  
\_\_\_\_\_  
\_\_\_\_\_

all of such work to be done as set out in full in said Project Manual therein referred to and adopted by the OWNER all of which are made a part of this instrument as fully and completely as if set out in full herein.

**NOW THEREFORE,** if the said CONTRACTOR shall faithfully and strictly perform Contract in all its terms, provisions, and stipulations in accordance with its true meaning and effect, and in accordance with the Project Manual referred to therein and shall comply strictly with each and every provision of Contract and with this bond, then this obligation shall become null and void and shall have no further force and effect; otherwise the same is to remain in full force and effect.

It is further understood and agreed that the Surety does hereby relieve the OWNER or its representatives from the exercise of any diligence whatever in securing compliance on the part of the CONTRACTOR with the terms of the Contract, and the Surety hereby waives any notice to it of any default, or delay by the CONTRACTOR in the performance of his Contract and agrees that it, the Surety, shall be bound to take notice of and shall be held to have knowledge of all

acts or omissions of the CONTRACTOR in all matters pertaining to the contract. The Surety understands and agrees that the provision in the Contract that the OWNER shall retain certain amounts due the CONTRACTOR until the expiration of thirty calendar days from the acceptance of the Work is intended for the OWNER'S benefit, and the OWNER shall have the right to pay or withhold such retained amounts or any other amount owing under the Contract without changing or affecting the liability of the Surety hereon in any degree.

It is further expressly agreed by Surety that the OWNER or its representatives are at liberty at any time, without notice to the Surety, to make any change in the Project Manual and in the Work to be done thereunder, as provided in the Contract, and in the terms and conditions thereof, or to make any change in, addition to, or deduction from the work to be done thereunder; and that such changes, if made, shall not in any way vitiate the obligation in this bond and undertaking or release the Surety therefrom.

It is further expressly agreed and understood that the CONTRACTOR and Surety will fully indemnify and save harmless the OWNER from any liability, loss, cost, expense, or damage arising out of or in connection with the work done by the CONTRACTOR under the Contract. In the event that the OWNER shall bring any suit or other proceeding at law on the Contract or this bond or both, the CONTRACTOR and Surety agree to pay to the OWNER the sum of 10 percent of whatever amount may be recovered by the OWNER in suit or legal proceeding, which sum of 10 percent is agreed by all parties to be indemnity to the OWNER for the expense of or time consumed by its Attorney, his assistants, and office force, and other cost and damage occasioned to the OWNER. This amount of 10 percent is fixed and liquidated by the parties, it being agreed by them that the exact damage to the OWNER would be difficult to ascertain.

This bond and all obligations created hereunder shall be performable in Monterey County, in the State of California. When this bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

**IN WITNESS THEREOF**, the Said Principal and Surety have signed and sealed this instrument on the respective dates written below their signature.

CONTRACTOR AS PRINCIPAL

SURETY

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Surety Name

By \_\_\_\_\_  
Name:  
Title:  
Date:

By \_\_\_\_\_  
Name:  
Title:  
Date:

Attest/Witness or Corporate Seal

Attest/Witness or Corporate Seal

By \_\_\_\_\_  
Name:  
Title:  
Date:

By \_\_\_\_\_  
Name:  
Title:  
Date:

THE FOREGOING BOND IS ACCEPTED ON  
BEHALF OF MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

\_\_\_\_\_  
Name: William M. Merry  
Title: General Manager  
Date:

**END OF DOCUMENT**

**Document 00615**

**CERTIFICATES OF INSURANCE**

**THE STATE OF CALIFORNIA** §

§ **KNOW ALL MEN BY THESE PRESENTS:**

**THE COUNTY OF MONTEREY** §

**THAT WE,** \_\_\_\_\_  
\_\_\_\_\_, as

Principal, hereinafter called "CONTRACTOR", do hereby hold and will maintain the required coverages as set forth in Document 00800, Supplementary Conditions.

CONTRACTOR AS PRINCIPAL

\_\_\_\_\_  
Company Name

By \_\_\_\_\_  
Name:  
Title:  
Date:

THE FOREGOING ARE ACCEPTED ON BEHALF OF MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

\_\_\_\_\_  
Name: Tim S. Flanagan  
Title: General Manager  
Date:

**END OF DOCUMENT**

**Document 00620**

**PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS: that \_\_\_\_\_

\_\_\_\_\_

as Principal, hereinafter called CONTRACTOR, and, \_\_\_\_\_

\_\_\_\_\_

as Surety, hereinafter called Surety, are held and firmly bound unto:

Monterey Regional Waste Management District  
14201 Del Monte Boulevard  
P.O. Box 1670  
Monterey County, California 93933-1670

As Obligee, hereinafter called OWNER, for the use and benefit of claimants as herein below defined, in the penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), lawful money of the United States, for the payment whereof well and truly to be made, CONTRACTOR and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

CONTRACTOR has by written agreement dated \_\_\_\_\_, 20\_\_\_\_, entered into a contract with the District for all construction required to complete the Contract for Module 6 Liner Construction for the Monterey Peninsula Landfill, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if CONTRACTOR shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, and any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then this obligation shall be void; otherwise it shall remain in full force and effect, subject to the following conditions:

- 1) A claimant is defined as one having furnished labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the Contract.

- 2) The above named CONTRACTOR and Surety hereby jointly and severally agree with the OWNER that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety calendar days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this Bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, including attorney fees and interest, and have execution thereon. The OWNER shall not be liable for the payment of any costs or expenses of any such suit.
- 3) No suit or action shall be commenced hereunder by any claimant:
  - a) Unless claimant, other than one having a direct contract with the CONTRACTOR, shall have given written notice to any two of the following: the CONTRACTOR, the OWNER, or the Surety above named, within ninety calendar days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the CONTRACTOR, OWNER, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.
  - b) After the expiration of one year following the date on which CONTRACTOR ceased Work on said Contract, it being understood, however, that if any limitation embodied in this Bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
  - c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.
- 4) The amount of this bond shall be reduced by and to the extent of any payments promptly made by Surety in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said

improvement, whether or not claim for the amount of such lien be presented under and against this bond.

- 5) The terms and conditions of this bond shall be deemed to be amended so as to comply with any statutory requirements for labor and material payment bonds, in the event the law controlling the construction of this bond shall prohibit such terms and conditions or shall prescribe different or additional terms and conditions.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Witness: \_\_\_\_\_ Principal: \_\_\_\_\_

( )  
 ( )  
 ( Corporate )  
 ( Seal )  
 ( )  
 ( )

By: \_\_\_\_\_

Title: \_\_\_\_\_

Legal Address: \_\_\_\_\_

Attest: \_\_\_\_\_  
(Corporate Secretary)

Witness: \_\_\_\_\_ Surety : \_\_\_\_\_

( )  
 ( )  
 ( Corporate )  
 ( Seal )  
 ( )  
 ( )

By: \_\_\_\_\_

Title: \_\_\_\_\_

Legal Address: \_\_\_\_\_

Attest: \_\_\_\_\_  
(Corporate Secretary)

**END OF DOCUMENT**



**Document 00640**

**NOTICE OF AWARD**

To: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PROJECT DESCRIPTION: Monterey Peninsula Landfill, Module 6 Liner Construction located approximately two miles north of the City of Marina, Monterey County, California, in accordance with Contract Specifications, Contract Drawings, and Contract Documents.

The OWNER has considered the proposal submitted by you for the above-described work.

You are hereby notified that your proposal has been accepted for items in the amount of \$\_\_\_\_\_.

The agreement must be executed and the Contractor's Performance Bond, Payment Bond, and certificates of insurance must be furnished within ten (10) calendar days from the date of this notice.

If you fail to execute said agreement and to furnish said bonds within ten (10) days from the date of this notice, the OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your proposal as abandoned and as a forfeiture of your Bid Bond. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the OWNER.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Tim S. Flanagan, General Manager

Monterey Regional Waste Management District

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged by

\_\_\_\_\_

this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

**END OF DOCUMENT**

**Document 00650**

**NOTICE TO PROCEED**

Date: \_\_\_\_\_

To: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Project Title: Module 6 Liner Construction

Site Name: Monterey Peninsula Landfill

Location: 14201 Del Monte Blvd, Monterey County, California, 93933-1670

You are hereby notified that the Date of Commencement of the Work is \_\_\_\_\_. On that date you are to start performing your obligations under the Project Manual. In accordance with Article 2 of the Agreement, the date on which penalties for delay shall commence is established as 130 calendar days from the date of this notice to proceed.

A pre-construction conference will be held at 10:00 AM on January 23, 2019 at the Monterey Regional Waste Management District.

Additionally before you may start any Work at the site, you must:

N/A

\_\_\_\_\_

\_\_\_\_\_

MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

BY: \_\_\_\_\_

Guy R. Petraborg, P.E., Project Manager

cc: \_\_\_\_\_

\_\_\_\_\_

**END OF DOCUMENT**

**Document 00655**

**APPLICATION AND RECOMMENDATION FOR PAYMENT**

<b>APPLICATION NO. _____</b>		<b>FOR PERIOD</b> <b>BEGINNING _____</b> <b>&amp; ENDING _____</b>
<b>CONTRACTOR'S APPLICATION FOR PAYMENT</b>		
A.	Total Work Completed to Date  1. For Unit Price Work, attach itemized listing of number of units completed to date for each item of the Work identified in Document 00405 or approved Change Orders.  2. For Lump Sum Work, attach percentage complete of each portion of the Work listed in the Schedule of Values.	\$
B.	Materials Currently Stored and Not Incorporated Into the Work = _____, X .85 =	\$
C.	Total Earnings To Date (A + B)	\$
D.	Retainage, as a percentage of Total Work Completed to Date (check one): _____ 10% for Progress Payment _____ 0% for Final Payment _____ Other: _____	\$
E.	Liquidated Damages: _____ Days at \$ _____/Day	\$
F.	Total Reductions (D + E)	\$
G.	Total Payments Due To Date (C - F)	\$
H.	Previous Recommendations for Payment	\$
I.	<b>TOTAL AMOUNT DUE CONTRACTOR THIS DATE:</b>	<b>\$</b>

CONTRACT AMOUNT SUMMARY		CONTRACT TIME SUMMARY	
A. ORIGINAL CONTRACT PRICE	\$ _____	ORIGINAL CONTRACT TIME	
B. Approved Change Orders:		C. Approved Change Order Extensions:	
# _____	\$ _____	# _____, _____	
# _____	\$ _____	days	
# _____	\$ _____	# _____, _____	
# _____	\$ _____	days	
# _____	\$ _____	# _____, _____	
# _____	\$ _____	days	
# _____	\$ _____	# _____, _____	
# _____	\$ _____	days	
C. TOTAL CURRENT CONTRACT PRICE	\$ _____	C. TOTAL CURRENT CONTRACT TIME	
D. TOTAL EARNINGS TO DATE	\$ _____	D. DAYS USED TO DATE	
E. PERCENTAGE EARNINGS TO DATE	\$ _____	E. PERCENTAGE DAYS USED TO DATE	
CURRENT CONTRACT SUBSTANTIAL COMPLETION DATE: _____			
CONTRACTOR'S Estimated Substantial Completion Date: _____/_____/_____			
(Attach monthly revised construction schedule in accordance with Paragraph 3.11.3 of General Conditions)			

**CONTRACTOR'S CERTIFICATION**

CONTRACTOR hereby certifies that (1) all previous payments received from the OWNER for Work completed under this Contract have been applied by CONTRACTOR to discharge in full all obligations of CONTRACTOR incurred in connection with the Work covered by all previous Applications For Payment, and (2) all materials and equipment incorporated in the completed Work covered by the Application For Payment are free and clear of all liens, claims, security interests, and encumbrances.

\_\_\_\_\_  
 (Contractor)

By: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Name)

(Title)

\_\_\_\_\_  
(Date)

**RECOMMENDATION FOR PAYMENT**

Having reviewed the CONTRACTOR'S Application for Payment and supporting information,  
(initial appropriate action)

\_\_\_\_\_ I recommend payment for the full amount of the application, that is,  
\$\_\_\_\_\_.

\_\_\_\_\_ I recommend payment for a portion of the amount of the application, in the  
amount of \$\_\_\_\_\_. Payment for the remaining \$\_\_\_\_\_ of the  
application is contingent on receipt of the corrections or additional information marked  
on the application.

\_\_\_\_\_ I am returning the Application for Payment to the CONTRACTOR for the  
corrections or additional information marked on the application.

\_\_\_\_\_ I decline to recommend payment on the basis of the provisions in Paragraph 9.6  
of the General Conditions and described more specifically in Attachment A.

By: \_\_\_\_\_  
Guy R. Petraborg, P.E., Project Manager

Date: \_\_\_\_\_

**END OF DOCUMENT**

**Document 00675**

**CHANGE ORDER**

To: \_\_\_\_\_

From: \_\_\_\_\_

Re: \_\_\_\_\_

**PART 1 - NATURE OF CHANGES**

1.01 Brief description of changes in the Work:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1.02 Reason for changes:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1.03 Changes are described in detail in the following attachments, which are hereby made a part of this Change Order:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PART 2 - ADJUSTMENTS TO CONTRACT**

2.01 Change to Contract Price

Amounts,	Percentage of Original	Dollar
	<u>Contract Price</u>	<u>Contract Price</u>
A. Original Contract Price	<u>100%</u>	_____
B. Previous Change Orders	_____	_____
C. This Change Order	_____	_____
D. New Total Contract Price	_____	_____

2.01 Change to Contract Time

	Percentage of Original	
	<u>Contract Time</u>	<u>Date or Days</u>
A. Contract Commencement Date		_____
B. Original Contract Time	<u>100%</u>	_____ days
C. Previous Change Order Extensions	_____	_____ days
D. This Change Order Extension	_____	_____ days
E. New Total Contract Time	_____	_____ days
F. New Substantial Completion Date		_____

**PART 3 - CONTRACTOR'S ACCEPTANCE**

The undersigned Contractor agrees to perform the changes stipulated in this Change Order and any attachments for the dollar amount indicated and within the contract time indicated.

\_\_\_\_\_  
 (Contractor)

By \_\_\_\_\_  
 (Signature)

\_\_\_\_\_  
 (Printed Typed Name)



\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Date)

**PART 4 - MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT'S APPROVAL**

By \_\_\_\_\_  
(Signature)

Guy R. Petraborg, P.E.  
(Typed Name)

Project Manager  
(Title)

\_\_\_\_\_  
(Date)

**END OF DOCUMENT**

## Document 00700

### GENERAL CONDITIONS

#### ARTICLE 1 - GENERAL PROVISIONS

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##### 1.1 BASIC DEFINITIONS

1.1.1 *Agreement*: The written and signed Contract Document, Document 00500, between Monterey Regional Waste Management District, (Monterey Regional Waste Management District) and the Contractor covering the Work to be performed; other Contract Documents are attachments to the Agreement and are made a part thereof as identified in the Agreement.

1.1.2 *Approve, approved*: The acceptance or ratification by the Project Manager of an action by the Contractor or condition of the Work, provided in writing if required.

1.1.3 *Bonds*: Performance Bond, Payment Bond, and other instruments of surety.

1.1.4 *Conditions of the Contract*: The General Conditions and Supplementary Conditions constitute the part of Contract Documents which define the rights, responsibilities, and relationships of the entities involved in performance of the Contract. Participants in the contract, whose roles are identified in the Conditions of the Contract, include:

- .1 *Owner*: As defined in Article 2;
- .2 *Contractor and Superintendent*: As defined in Article 3;
- .3 *Monterey Regional Waste Management District Project Manager, Monterey Regional Waste Management District Project Engineer and Site Manager*: As defined in Article 4;
- .4 *Architect/Engineer*: As defined in Article 4;
- .5 *Subcontractor and Supplier*: As defined in Article 5; and
- .6 *Subconsultant*: As defined in Article 4.

1.1.5 *Contract*: The Contract Documents form the Contract for Work. The Contract represents the entire and integrated agreement between Monterey Regional Waste Management District and Contractor and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons or entities other than Monterey Regional Waste Management District and Contractor.

1.1.6 *Contract Documents*: The Agreement between Monterey Regional Waste Management District and Contractor, the portions of the Contractor's Bid attached to the Agreement, and any post-Bid documentation submitted prior to execution when attached to the Agreement; the Bonds, the Conditions of the Contract, the Drawings and Specifications prepared by or approved by Monterey Regional Waste Management District, appropriate Addenda, the Notice to Proceed, and other

documents as they are specifically enumerated in the Agreement, plus Modifications issued after execution of the Agreement.

1.1.7 *Drawings*: The graphic and pictorial portions of the Contract Documents which define the character and scope of the Work.

1.1.8 *Furnish*: Supply, pay for, and deliver to the Project Site, ready for unloading, unpacking, assembly, and installation.

1.1.9 *General Conditions*: The standard document published by Monterey Regional Waste Management District, a part of the Conditions of the Contract.

1.1.10 *General Requirements*: The sections of Division 1 of the Specifications which specify administrative and procedural requirements and temporary facilities required for the Project.

1.1.11 *Install*: Unload, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, clean, protect, and similar operations.

1.1.12 *Modification*: A modification to the Contract Documents, issued by the Monterey Regional Waste Management District Project Manager on or after the Effective Date of the Agreement, is a Change Order, a Work Change Directive, or a written order for a minor change in the Work.

1.1.13 *Notice of Intent to Award*: The written notice by Monterey Regional Waste Management District to the apparent successful Bidder stating that upon compliance by the Bidder with the conditions enumerated in the notice, Monterey Regional Waste Management District will sign and award the Contract.

1.1.14 *Notice to Proceed*: The written notice by Monterey Regional Waste Management District to Contractor fixing the date on which the Contract Time will commence and on which Contractor shall start to perform Contractor's on-site obligations under the Contract Documents.

1.1.15 *Product*: Materials, equipment, or systems incorporated into the Project.

1.1.16 *Project*: The total construction of which the Work performed under the Contract Documents may be the whole or part and which may include construction by Monterey Regional Waste Management District or by separate contractors.

1.1.17 *Project Manual*: The volume assembled for the Work which includes the Bidding Requirements, sample forms, Conditions of the Contract, and Specifications.

1.1.18 *Property:* Lands on which the Work is to be performed and easements for access thereto, and other lands which are designated for use by the Contractor.

1.1.19 *Provide:* Furnish and install, complete and ready for the intended use.

1.1.20 *Site:* The Property.

1.1.21 *Separate Contractor:* A person, firm, or corporation retained by Monterey Regional Waste Management District to perform work on the Property under a separate agreement.

1.1.22 *Specifications:* The portion of the Contract Documents, Divisions 1 through 16, consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

1.1.23 *Supplementary Conditions:* The part of the Conditions of the Contract which amends or supplements the General Conditions.

1.1.24 *Surety:* The entity that is bound by the Performance Bond, Statutory Payment Bond, One-Year Maintenance Bond, and One-Year Surface Correction Bond, and that is responsible for completion of the Contract, including the correction period, and for payment of debts incurred in fulfilling the Contract. Surety shall include any co-surety or reinsurer, as applicable.

1.1.25 *Work:* The entire completed construction required by the Contract Documents, including all labor, materials, equipment, and services provided by Contractor to fulfill Contractor's obligations. The Work may constitute the whole or a part of the Project.

## 1.2 EXECUTION, CORRELATION AND INTENT

1.2.1 The Agreement shall be signed by Monterey Regional Waste Management District and Contractor as provided in the Contract Documents.

1.2.2 Execution of the Contract by Contractor is conclusive that Contractor has carefully examined the Contract Documents, visited the site of the Work, become familiar with local conditions under which the Work is to be performed, and fully informed itself as to conditions and matters which can affect the Work or costs thereof. Contractor further affirms that it has correlated personal observations with requirements of the Contract Documents.

1.2.3 The intent of the Contract Documents is for Contractor to include all items necessary for the proper execution and completion of the Work. What is required by one of the Contract Documents shall be as binding as if required by all. Performance by Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the desired results.

1.2.4 Reference to standard specifications, manuals, or codes of a technical society, organization, or association, or to laws or regulations of a governmental authority, whether specific or implied, shall mean the latest edition in effect as of the date of receipt of bids, except as may be otherwise specifically stated.

1.2.5 No provision of any referenced standard, specification, or manual shall be effective to change the duties and responsibilities of Monterey Regional Waste Management District, Contractor, or Architect/Engineer or their consultants, employees, or representatives from those set forth in the Contract Documents, nor shall it be effective to assign to Architect/Engineer or its consultants, employees, or representatives any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibilities contrary to provisions of the Contract Documents.

1.2.6 The organization of Specifications into divisions, sections, and articles and arrangement of Drawings shall not control Contractor in dividing the Work among Subcontractors or in establishing the extent of work to be performed by any trade.

1.2.7 Specifications are written in imperative and streamlined form. This imperative language is directed to the Contractor unless specifically noted otherwise. When written in the streamlined form, the words "shall be" are included by inference where a colon(:) is used within sentences or phrases.

1.2.8 Unless otherwise stated in Contract Documents, words which have well-known construction industry technical meanings are used in Contract Documents in accordance with such recognized meanings.

## 1.3 CONFLICTS, ERRORS, OR DISCREPANCIES

1.3.1 If Contractor finds conflict, error, or discrepancy in the Contract Documents, Contractor shall report to Monterey Regional Waste Management District Project Manager in writing at once, and shall obtain a written interpretation or clarification from Project Manager before proceeding with the Work affected thereby; however, Contractor shall not be liable to Monterey Regional Waste Management District or to Architect/Engineer for failure to report any conflict, error, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof or should reasonably have known thereof.

## 1.4 OWNERSHIP AND USE OF CONTRACT DOCUMENTS

1.4.1 Drawings, Specifications, and other documents prepared by Monterey Regional Waste Management District or by Architect/Engineer are instruments of service through which the Work to be executed by Contractor is described.

1.4.2 Neither Contractor, nor Subcontractor, nor material or equipment supplier shall own or claim a copyright to the Contract Documents or any part of them.

1.4.3 Contract Documents prepared by Monterey Regional Waste Management District or by Architect/Engineer, and copies furnished to Contractor, are for use solely with respect to this Project. They shall not be used by Contractor, 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 Monterey Regional Waste Management District, and Architect /Engineer when applicable.

1.4.4 Contractor, Subcontractors, and material and equipment suppliers are granted a limited license to use and reproduce applicable portions of Contract Documents appropriate to and for use in execution of their work under the Contract.

#### 1.5 INTERPRETATION

1.5.1 In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an", but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

### ARTICLE 2 - THE OWNER

#### 2.1 DEFINITION

2.1.1 *Monterey Regional Waste Management District, Inc.:* The Owner is Monterey Regional Waste Management District, Inc. or its subsidiary. The term "Monterey Regional Waste Management District" means Monterey Regional Waste Management District, Inc., its subsidiary, or the authorized representative or Monterey Regional Waste Management District, Inc. or its subsidiary.

#### 2.2 LIMITATIONS ON MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT EMPLOYEES

2.2.1 No officer or employee of Monterey Regional Waste Management District is empowered to authorize the Contractor to perform any act contrary to the terms of this Contract or the laws and ordinances of the place of the Project.

#### 2.3 INFORMATION AND SERVICES REQUIRED OF MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

2.3.1 Monterey Regional Waste Management District, assisted by the Architect/Engineer when employed, will complete an application for building permit, as applicable for the place of the project.

2.3.2 Unless otherwise provided in Contract Documents, Monterey Regional Waste Management District will furnish to Contractor one set of Contract Documents. Additional copies will be furnished on Contractor's request at the discretion of the Monterey Regional Waste Management District Project Manager.

2.3.3 When necessary for performance of the Work, Monterey Regional Waste Management District will provide surveys describing physical characteristics, legal limitations, legal description of the Project site, and horizontal and vertical control adequate to locate the Project.

2.3.4 If Monterey Regional Waste Management District is required, under the Contract Documents, to provide information or services, such will be provided by Monterey Regional Waste Management District with reasonable promptness to avoid delay in orderly progress of the Work.

2.3.5 The foregoing are in addition to other duties and responsibilities of Monterey Regional Waste Management District enumerated herein and especially those in respect to Article 6 and Article 9.

#### 2.4 AVAILABILITY OF LANDS

2.4.1 Monterey Regional Waste Management District shall furnish the lands on which the Work is to be performed, easements for access thereto, and such other lands which are designated in the Contract Documents for use by the Contractor. Monterey Regional Waste Management District will obtain and pay for easements for permanent structures and for permanent changes in existing facilities unless otherwise provided in the Contract Documents.

#### 2.5 MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT'S RIGHT TO STOP WORK

2.5.1 If Contractor fails to correct Work which is not in accordance with requirements of the Contract Documents, as required in Paragraphs 12.1.2 and 12.2, or persistently fails to carry out Work in accordance with Contract Documents, Monterey Regional Waste Management District, by written order, may order Contractor to stop the Work or any portion thereof until the cause for such order has been eliminated. However, the right of Monterey Regional Waste Management District to stop the Work shall not give rise to a duty on the part of Monterey Regional Waste Management District to exercise this right for the benefit of Contractor or any other person or entity, except to the extent required by Paragraph.

#### 2.6 MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT'S RIGHT TO CARRY OUT WORK

2.6.1 If Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails, within a seven-day period after receipt of written notice from Monterey Regional Waste Management District, to commence and continue correction of such default or neglect with diligence and promptness, Monterey Regional Waste Management District may, after that seven-day period, give Contractor a second written notice to correct such deficiencies within a second seven-day period. If Contractor, within the second seven-day period after receipt of the second notice, fails to commence and continue to correct any deficiencies, Monterey Regional Waste Management District may correct such deficiencies without

prejudice to other remedies Monterey Regional Waste Management District may have, including right of termination under Paragraph 14.1.

2.6.2 In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due to Contractor the cost of correcting such deficiencies, including compensation for Architect/Engineer's additional services and expenses made necessary by such default, neglect, or failure. If payments then or thereafter due to Contractor are not sufficient to cover such amounts, Contractor shall pay the difference to Monterey Regional Waste Management District.

2.6.3 Notwithstanding Monterey Regional Waste Management District's right to carry out the Work, maintenance and protection of the Work remain Contractor's responsibility, as provided for in the Performance Bond and as provided in Paragraph.

### ARTICLE 3 - THE CONTRACTOR

#### 3.1 *DEFINITION*

3.1.1 The Contractor is the person, firm, or corporation identified as such in the Agreement, and is referred to throughout the Contract Documents as if singular in number. The term Contractor means the Contractor or its authorized representative.

3.1.2 Contractor shall maintain an office or agent located near the place of the Project during the period of construction; which location's street address or post office address shall be filed with the Monterey Regional Waste Management District Project Manager.

3.1.3 Contractor shall not let or transfer this Contract without the consent of Monterey Regional Waste Management District.

#### 3.2 *REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR*

3.2.1 Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Monterey Regional Waste Management District pursuant to Paragraph 2.3 and shall report at once to the Monterey Regional Waste Management District Project Manager any discovered errors, inconsistencies, or omissions.

3.2.2 Contractor shall take field measurements and verify field conditions and shall carefully compare such conditions and other information known to Contractor with the Contract Documents before commencing activities. Discrepancies, inconsistencies, or omissions discovered during this process shall be immediately report to the Monterey Regional Waste Management District Project Manager for resolution.

3.2.3 Contractor shall make a reasonable attempt to understand the Contract Documents before requesting

interpretation from Monterey Regional Waste Management District.

3.2.4 Contractor shall perform the Work in accordance with the Contract Documents and submittals approved pursuant to Paragraph 3.14.

3.2.5 Contractor shall verify compliance of the Work with Contract Documents before requesting observation by Monterey Regional Waste Management District.

3.2.6 Contractor shall give the Monterey Regional Waste Management District Project Manager 48 hour written notice before commencing work or renewing work where work has been stopped. Contractor shall also give the same notice to Monterey Regional Waste Management District's authorized inspectors.

#### 3.3 *SUPERVISION AND CONSTRUCTION PROCEDURES*

3.3.1 Contractor shall supervise, direct, and inspect the Work competently and efficiently, devoting such attention and applying such skills and expertise as necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible and have sole control over the means, methods, techniques, sequences, and procedures of construction, and for coordinating all work under the Contract.

3.3.2 Regardless of inspections by Monterey Regional Waste Management District, Contractor is responsible to perform and complete the Work in accordance with the Contract Documents. Monterey Regional Waste Management District has no liability or responsibility to Contractor or Surety for work performed by Contractor which is not in accordance with Contract Documents, regardless of whether discovered during construction or after acceptance of the Work.

#### 3.4 *SUPERINTENDENT*

3.4.1 Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall have the authority and responsibility to act for Contractor and to represent Contractor. Communications given to the superintendent shall be as binding as if given to Contractor.

3.4.2 Contractor, after Notice of Intent to Award, and prior to beginning field operations, shall furnish to the Monterey Regional Waste Management District Project Manager, in writing, the name and qualifications of the person proposed by Contractor to be the superintendent. Contractor shall not assign or substitute any person as superintendent to whom the Monterey Regional Waste Management District Project Manager makes reasonable objection in writing.

#### 3.5 *LABOR, MATERIALS, AND EQUIPMENT*

3.5.1 Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform

construction as required by the Contract Documents. Contractor shall at all times maintain strict discipline and good order at the site.

352 It is the policy of Monterey Regional Waste Management District to achieve a drug-free workforce and to provide a workplace that is free from the use of illegal drugs, substance abuse, and alcohol abuse. The manufacture, distribution, dispensation, possession (either externally or internally), sale, or use of illegal drugs by Contractor's employees while on duty at Monterey Regional Waste Management District worksites or on Monterey Regional Waste Management District projects is prohibited. Contractor's employees are prohibited from working at Monterey Regional Waste Management District worksites or Monterey Regional Waste Management District projects while impaired by alcohol or under the influence of illegal or illicit substances.

353 Unless otherwise provided in the Contract Documents, Contractor shall furnish and assume full responsibility for materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, transportation temporary facilities, supplies, and other facilities and incidentals necessary for the furnishing, performance, testing, start-up, and completion of the Work.

354 Materials and equipment shall be of specified quality and new, except as otherwise provided in the Contract Documents. If required by Monterey Regional Waste Management District, Contractor shall furnish satisfactory evidence, including reports of required tests, as to the kind and quality of materials and equipment.

355 Materials and equipment shall be suitably stored in a safe, neat, compact, and protected manner. Materials shall be stored in such a manner to cause the least inconvenience to adjacent property owners, tenants, and the general public, and shall not block access to or be closer than three feet to any fire hydrant. Trees, lawns, walks, drives, streets and other improvements shall be protected from damage by the Work, by materials, earth, debris, water, or otherwise. If private or public property is damaged by Contractor, it shall be restored to original condition or better by Contractor.

356 Contractor shall obtain Monterey Regional Waste Management District's approval for storage areas to be used for materials or equipment, for which payment has been requested under the provisions of Paragraph 9.4.3.2. Access to such storage areas, for inspection purposes, shall be provided to designated Monterey Regional Waste Management District representatives. Materials once paid for by Monterey Regional Waste Management District become the property of Monterey Regional Waste Management District and may not be removed from the place of storage, except to the worksite, without Monterey Regional Waste Management District's written permission. Contractor's all-risk insurance shall cover all perils including loss or damage to materials during storage, loading, unloading, and transit to the site.

357 Work shall be performed in a thorough, workmanlike manner, notwithstanding any omission from the Specifications or the Drawings. Work not in accordance with the Contract Documents shall be made to conform thereto. Material not in conformance with Contract Documents will be rejected and shall be promptly removed from the site at Contractor's expense.

3.6 *PRODUCT, CONSTRUCTION METHODS, AND CONSTRUCTION EQUIPMENT SUBSTITUTIONS*

3.6.1 For products specified by reference standards or by description only, Contractor may provide any product meeting those standards or description.

3.6.2 For products specified by naming one or more manufacturers, with provision for substitutions (or equal), Contractor may submit a request for substitution for any manufacturer not named.

3.6.3 When individual specification sections require a specific construction method or the use of specific construction equipment, with provision for substitutions (or equal), Contractor may submit a request for any method or equipment not named.

3.6.4 Contractor shall document each request for substitution with complete data substantiating compliance of proposed substitution with Contract Documents.

3.6.5 A request for substitution constitutes a representation that Contractor:

- .1 has investigated the proposed product, method, or equipment and determined that it meets or exceeds the quality level of the specified product, method or equipment;
- .2 shall provide the same warranty for the substitution as for the specified product;
- .3 shall coordinate installation or implementation of the proposed substitution and will make changes to other Work which may be required for the Work to be complete, with no additional cost to Monterey Regional Waste Management District;
- .4 confirms that cost data is complete and includes all related costs under the Contract Documents;
- .5 waives Claim for additional cost or time extension which may subsequently become apparent; and
- .6 shall provide review or redesign services by a licensed Architect/Engineer and shall obtain reapproval and permits from authorities.

3.6.6 Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate written request, nor will they be considered when acceptance will require revision to the Contract Documents.

3.6.7 Monterey Regional Waste Management District has authority to reject any request for substitution.

3.7 CASH ALLOWANCES

3.7.1 Contractor shall include in the Contract Price all allowances stated in the Contract Documents for:

- .1 services, utility relocations, permits, or other such capital costs;
- .2 materials and equipment.

Items covered by an allowance shall be supplied for such amounts and by such persons or entities as Monterey Regional Waste Management District may direct, but Contractor shall not be required to employ persons or entities against which Contractor makes reasonable objection.

3.7.2 Unless otherwise stated in the Contract Documents:

- .1 materials and equipment under an allowance shall be selected promptly by Monterey Regional Waste Management District within the time limits for processing submittals;
- .2 allowances shall cover the cost to Contractor of services completed or materials and equipment delivered at the site and all required non-exempt taxes, less applicable trade discounts;
- .3 Contractor's costs for administering services, unloading and handling products at the site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowance shall be included in the Contract Price and not in the allowance;
- .4 whenever costs are more than or less than the allowance, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order shall be the difference between actual costs and the amount of the allowance stated in the Contract Documents, and shall balance out all credits due to Monterey Regional Waste Management District.

3.8 WARRANTY

3.8.1 Contractor warrants to Monterey Regional Waste Management District that materials and equipment furnished under the Contract will be free of defects in title, of good quality, and new unless otherwise required or permitted by the Contract Documents. Contractor further warrants that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with requirements of the Contract Documents.

3.8.2 Contractor further warrants that the Work will be free of concentrations of polychlorinated biphenyl (PCB), and other substances defined as hazardous by the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) or any other applicable law or regulation. Excepted from this warranty, are those hazardous substances specified for use under this Contract.

3.8.3 Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered non-conforming Work. Contractor's warranty excludes remedy for damage or defect caused by abuse by person or persons other than those for whom Contractor is responsible, modifications performed by someone other than Contractor, improper or insufficient maintenance by Monterey Regional Waste Management District, improper operation, or normal wear and tear under normal usage, and excludes a claim that hazardous material was incorporated into the Work if that material was specified in the Contract Documents. If required by Monterey Regional Waste Management District, Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

3.8.4 In the event of a defect in a specified product, either during construction or the warranty period, Contractor shall take appropriate measures with the manufacturer of the product to assure correction or replacement of the defective product with minimum delay.

3.8.5 Contractor warrants that title to all Work, materials and equipment covered by an Application for Payment will pass to Monterey Regional Waste Management District either by incorporation in the construction or upon the receipt of payment by the Contractor, whichever occurs first. Such title shall be free and clear of all liens, claims, security interests, or encumbrances. No Work, materials, or equipment covered by an Application for Payment shall be subject to an agreement under which an interest is retained or an encumbrance is attached by the seller, the Contractor, or other party.

3.9 TAXES

3.9.1 Contractor shall pay all sales, consumer, use, and similar taxes for the Work or portions thereof provided by Contractor which are legally enacted when bids are received, whether or not yet effective or merely scheduled to go into effect.

3.9.2 Contractor shall obtain and require Subcontractors to obtain, all necessary permits from the State and from local taxing authorities to perform contractual obligations under the Agreement, including sales tax permits.

3.10 PERMITS, FEES, AND NOTICES

3.10.1 Unless otherwise provided in the Contract Documents, Contractor shall secure and pay for all construction permits, licenses, and inspections necessary for proper execution and completion of the Work and which are legally required at the time bids are received.

3.10.2 Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work, including Contractor's or Subcontractors' licenses; neither Monterey Regional Waste Management District nor its agents shall be

responsible for monitoring Contractor's compliance with this requirement.

3.10.3 It is not Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. However, if Contractor observes that portions of the Contract Documents are at variance therewith, Contractor shall promptly notify the Monterey Regional Waste Management District Project Manager in writing, and necessary changes shall be accomplished by appropriate modification.

3.10.4 If Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, rules and regulations without such notice, Contractor shall assume full responsibility for such Work and shall bear the attributable costs.

### 3.11 CONSTRUCTION SCHEDULES

3.11.1 Promptly after award of the Contract, Contractor shall prepare and submit a construction schedule for the Work for the Monterey Regional Waste Management District Project Manager's review. The schedule shall reflect the minimum time required to complete the Project, not to exceed time limits current under the Contract Documents. Contractor shall revise the schedule at appropriate intervals as required by conditions of the Work and the Project. The schedule shall be related to the entire Project to the extent required by Contract Documents. Contractor shall provide for expeditious and practicable execution of the Work.

3.11.2 Contractor shall prepare and keep current, and submit for Monterey Regional Waste Management District Project Manager's approval, a schedule of submittals which is coordinated with the construction schedule.

3.11.3 Each month, Contractor shall submit to the Monterey Regional Waste Management District Project Manager a copy of the revised construction schedule indicating actual progress, incorporating all applicable changes, and indicating courses of action required to assure Project completion within the Contract Time.

### 3.12 DOCUMENTS AND SAMPLES AT THE SITE

3.12.1 Contractor shall maintain at the site and make available to the Monterey Regional Waste Management District Project Manager one record copy of Drawings, Specifications, Addenda, Change Orders and other Modifications. Such documents shall be maintained in good order and marked currently to record changes and selections made during construction. In addition, Contractor shall maintain at the site approved Shop Drawings, Product Data, Samples, and similar submittals. These shall be delivered to the Monterey Regional Waste Management District Project Manager prior to final inspection as required in Subparagraph 9.10.3.

### 3.13 MANUFACTURER'S SPECIFICATIONS

3.13.1 Contractor shall handle and install all materials and perform all work in the manner required by the materials manufacturer. Should the Contract Documents and manufacturer's instructions conflict, Contractor shall report the conflict to the Monterey Regional Waste Management District Project Manager for resolution prior to proceeding with the Work.

3.13.2 References to the manufacturer's specifications, manufacturer's directions, or manufacturer's recommendations, shall refer to the referenced manufacturer's current published documents in effect as of the date of receipt of bids, or for Change Orders, as of the date of the Change Order.

### 3.14 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

3.14.1 *Shop Drawings:* The drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor, Subcontractor, manufacturer, supplier, or distributor, to illustrate some portion of the Work.

3.14.2 *Product Data:* The illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by Contractor to illustrate materials or equipment for some portion of the Work.

3.14.3 *Samples:* The physical examples which illustrate materials, equipment, or workmanship, and establish standards by which the work will be judged.

3.14.4 Shop Drawings, Product Data, and Samples are not Contract Documents. The purpose of their submittal is to demonstrate, for those portions of the Work for which submittals are required, the way Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Monterey Regional Waste Management District Project Manager is subject to the limitations of Subparagraph 4.2.4.

3.14.5 Contractor shall review, approve, and certify that the content of the submittals conforms to Contract Documents without exception by affixing Contractor's approval stamp and signature, and submit to the Monterey Regional Waste Management District Project Manager the Shop Drawings, Product Data, and Samples required by the Contract Documents. Submittals shall be transmitted with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of Monterey Regional Waste Management District or of a separate contractor. Submittals made by Contractor which are not required by the Contract Documents may be returned without action. If, in the opinion of the Monterey Regional Waste Management District Project Manager, the submittals are incomplete, indicate an inadequate understanding of the Work covered by the submittal, or indicate a lack of review by Contractor prior to submittal, the submittal may be returned unchecked to Contractor for correction of deficiencies and subsequent resubmittal.



3.14.6 Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, and Samples until the respective submittal has been returned with appropriate action. Such work shall be in accordance with reviewed submittals, unless the submittals are subsequently found to be defective.

3.14.7 By approving, certifying, and submitting Shop Drawings, Product Data, and Samples, Contractor represents, and Contractor's stamp of approval shall state, that Contractor has determined and verified materials, quantities, field measurements, and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and the Contract Documents.

3.14.8 Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by Monterey Regional Waste Management District's or Architect/Engineer's or Subconsultant's review of Shop Drawings, Product Data, or Samples unless Contractor has specifically informed the Monterey Regional Waste Management District Project Manager in writing of such deviation at the time of submittal, and the Monterey Regional Waste Management District Project Manager has given written approval of such deviation. Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, or Samples by Monterey Regional Waste Management District's or Architect/Engineer's or Subconsultant's approval thereof.

3.14.9 Contractor shall direct specific attention, in writing and on resubmitted Shop Drawings, Product Data, or Samples, to revisions other than those requested by Monterey Regional Waste Management District on previous submittals.

3.14.10 Informational submittals upon which Monterey Regional Waste Management District is not expected to take responsive action may be identified in the Contract Documents.

3.14.11 When professional certification of performance criteria or materials, systems, or equipment is required by the Contract Documents, Monterey Regional Waste Management District shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

3.14.12 Contractor shall submit Shop Drawings, Product Data, and Samples to the Monterey Regional Waste Management District Project Manager in time to allow a minimum of 30 days for the Project Manager's review prior to the date Contractor needs the reviewed submittals returned. On instructions of Monterey Regional Waste Management District Project Manager, this time may be shortened for a particular job requirement. For product colors or textures to be selected by Monterey Regional Waste Management District, submit all samples together to allow the Monterey Regional Waste Management District Project Manager to prepare a complete selection schedule.

3.14.13 Submit Shop Drawings, Product Data, and Samples in the forms, quantities, and procedures specified in the Specifications.

3.14.14 When Shop Drawings, Product Data, and Samples are required, related work performed prior to review and acceptance of such submittals shall be at Contractor's risk and Monterey Regional Waste Management District shall not be obligated to accept such work if such submittals are later found to be not acceptable.

### 3.15 USE OF SITE

3.15.1 Contractor shall perform and confine operations at the site to those areas permitted by law, ordinances, permits, and the Contract Documents, and shall not unreasonably encumber the site with materials or equipment.

3.15.2 In addition to lands provided by Monterey Regional Waste Management District under Paragraph 2.4, Contractor shall provide for all lands and access thereto that may be required for use by Contractor for temporary construction facilities or for storage of materials and equipment, and shall indemnify Monterey Regional Waste Management District during such use as stated in Paragraph 3.21.

### 3.16 CUTTING AND PATCHING

3.16.1 Contractor shall be responsible for cutting, fitting, and patching necessary to accomplish the Work and shall suitably support, anchor, attach, match, and trim or seal materials to the work of others. Contractor shall coordinate the Work with the work of other contractors to minimize conflicts, as provided in Article 6, Construction by Monterey Regional Waste Management District or by Separate Contractors.

3.16.2 Contractor shall not endanger any work by cutting, digging, or other action, and shall not cut or alter the work of other contractors except with the written consent of Monterey Regional Waste Management District and the affected contractor.

### 3.17 CLEANING

3.17.1 Contractor shall perform a daily clean-up of all dirt, debris, scrap materials, and other disposable items resulting from Contractor's operations, whether on site or off site. Unless otherwise authorized, all streets, access streets, driveways, and walkways shall be kept clean and open at all times.

3.17.2 Failure of Contractor to maintain a clean site, including access streets, will be the basis for Monterey Regional Waste Management District to issue a written notice of non-compliance with the Contract. Should that notice to correct not be complied with within 24 hours, Monterey Regional Waste Management District may authorize the necessary clean-up to be performed by others and the cost of such clean-up may be deducted from monies due Contractor.

3.17.3 Contractor is responsible for disposal of all waste materials and other excess materials resulting from Contractor's operations.

3.18 *SANITATION*

3.18.1 Contractor shall provide and maintain sanitary facilities at the jobsite for the use of all construction forces under the Contract.

3.19 *ACCESS TO WORK AND INFORMATION*

3.19.1 Contractor shall provide Monterey Regional Waste Management District, Architect/Engineer, Subconsultants, and governmental agencies with jurisdictional interests, access to the Work in preparation and in progress wherever located. Contractor shall provide proper and safe conditions for such access.

3.19.2 Contractor shall furnish to the Monterey Regional Waste Management District Project Manager such information as required respecting the character of the products and the progress and manner of the Work, including information necessary to determine the cost of the Work.

3.20 *ROYALTIES, PATENTS, AND TRADE SECRETS*

3.20.1 Unless otherwise provided in the Contract Documents, Contractor shall at its cost procure any license or permit which is required for the use of any patented invention, article, process, or means, method, or instrumentality wrought into, used in, upon, or in any way or manner connected with the construction, erection, or maintenance of the Work or any part thereof as embraced in the Contract. Contractor shall pay all fees or royalties required for any such use or license. Such fees shall, unless otherwise provided in these Contract Documents, be included in the Contract Price. Contractor and Surety shall protect and hold harmless Monterey Regional Waste Management District against any and all demands arising from Contractor's failure to comply with this requirement.

3.20.2 Alleged ownership by Contractor of trade secrets as to products used in the Work, or the preparation of any mixture for the Work, shall not be recognized by Monterey Regional Waste Management District in the performance of the Contract. Monterey Regional Waste Management District shall at all times have the Right to demand and shall be furnished information concerning materials or samples of ingredients of any materials used or proposed to be used in preparation of the concrete placed or other work to be done. Mixtures once agreed on shall not be changed in any manner without the knowledge and consent of Monterey Regional Waste Management District. Monterey Regional Waste Management District will make its best efforts to protect the confidentiality of such proprietary information.

3.21 *INDEMNIFICATION*

3.21.1 CONTRACTOR COVENANTS AND WARRANTS THAT IT WILL PROTECT, DEFEND, AND HOLD HARMLESS MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT, ITS EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVE (COLLECTIVELY, "MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT") FROM ANY AND ALL THIRD PARTY CLAIMS, DEMANDS, AND LIABILITY, INCLUDING DEFENSE COSTS, RELATING IN ANY WAY TO DAMAGES, CLAIMS, OR FINES ARISING BY REASON OF OR IN CONNECTION WITH CONTRACTOR'S ACTUAL OR ALLEGED NEGLIGENCE OR OTHER ACTIONABLE PERFORMANCE OR OMISSION OF CONTRACTOR IN CONNECTION WITH OR DURING THE PERFORMANCE OF THE DUTIES UNDER THIS AGREEMENT. DURING THE PERFORMANCE OF THE WORK AND ~~UP TO A PERIOD OF FIVE YEARS AFTER THE DATE OF FINAL ACCEPTANCE OF THE WORK~~, (*"DURING THE WARRANTY PERIOD AS DEFINED IN THE CONTRACT"*) CONTRACTOR FURTHER COVENANTS AND AGREES TO PROTECT, DEFEND, INDEMNIFY, AND HOLD HARMLESS MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT FROM ALL CLAIMS, ALLEGATIONS, FINES, DEMANDS, AND DAMAGES RELATING IN ANY WAY TO THE ACTUAL OR ALLEGED JOINT AND/OR CONCURRENT NEGLIGENCE OF MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT AND CONTRACTOR, ~~WHETHER CONTRACTOR IS IMMUNE FROM LIABILITY OR NOT.~~

3.21.2 IT IS THE EXPRESSED INTENTION OF THE PARTIES HERETO THAT THE INDEMNITY PROVIDED HEREIN IS AN AGREEMENT BY CONTRACTOR TO INDEMNIFY AND PROTECT MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT FROM MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT'S OWN NEGLIGENCE WHERE SAID NEGLIGENCE IS AN ALLEGED OR ACTUAL CONCURRING PROXIMATE CAUSE OF ANY ALLEGED THIRD PARTY HARM.

3.21.3 THE INDEMNITY PROVISION PROVIDED HEREIN SHALL HAVE NO APPLICATION TO ANY CLAIM OR DEMAND WHERE BODILY INJURY, DEATH, OR DAMAGE RESULTS ONLY FROM THE SOLE NEGLIGENCE OF MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT UNMIXED WITH ANY FAULT OF THE CONTRACTOR.

3.21.4 NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, THE LIABILITY OF THE CONTRACTOR UNDER THIS INDEMNITY PROVISION SHALL NOT EXCEED \$1,000,000 PER OCCURRENCE.

3.21.5 IN THE EXECUTION OF THE CONTRACT, THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS, INCLUDING BUT NOT LIMITED TO LAWS CONCERNED WITH LABOR, SAFETY, MINIMUM WAGES, AND THE ENVIRONMENT. THE CONTRACTOR SHALL MAKE HIMSELF FAMILIAR WITH AND AT ALL TIMES SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, AND REGULATIONS WHICH IN ANY MANNER AFFECT THE CONDUCT OF THE WORK, AND SHALL INDEMNIFY AND SAVE HARMLESS MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT AND THEIR REPRESENTATIVES AGAINST ANY CLAIM ARISING FROM VIOLATION OF ANY SUCH LAW, ORDINANCE OR REGULATION BY HIMSELF OR BY HIS SUBCONTRACTOR OR HIS EMPLOYEES.

3.21.6 IF AND ONLY IF APPLICABLE LAWS AND REGULATIONS PROHIBIT OR LIMIT OWNER'S RIGHT TO REQUIRE CONTRACTOR TO INDEMNIFY OWNER AND ENGINEER AND THEIR CONSULTANTS, AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING PARTIALLY FROM THEIR OWN NEGLIGENCE, CONTRACTOR'S INDEMNIFICATION OBLIGATIONS WITH RESPECT TO SUCH CLAIMS, DAMAGES, LOSSES AND EXPENSES SHALL BE REDUCED SO THAT CONTRACTOR AND THE INDEMNIFIED PARTIES SHALL EACH BEAR A SHARE OF ANY RESPONSIBILITY FOR SUCH CLAIMS, DAMAGES, LOSSES, AND EXPENSES WHICH IS PROPORTIONATE TO THEIR RESPECTIVE NEGLIGENCE ("CONCURRNET NEGLIGENCE DOES NOT INCLUDE DESIGN").

#### ARTICLE 4 - ADMINISTRATION OF THE CONTRACT

##### 4.1 DEFINITIONS

4.1.1 *Monterey Regional Waste Management District Project Manager:* The individual, designated in the Agreement, authorized to represent Monterey Regional Waste Management District and acting directly or through the Project Engineer, Site Manager, Architect/Engineer, or Subconsultants.

4.1.2 *Project Engineer:* The authorized representative of the Monterey Regional Waste Management District Project Manager for administration of the Project.

4.1.3 *Site Manager:* The authorized on-site representative of the Monterey Regional Waste Management District Project Manager for assistance to the Project Engineer in administration and inspection of the Work.

4.1.4 *Architect/Engineer:* The individual who is lawfully licensed to practice architecture or engineering, and is under contract to Monterey Regional Waste Management District to provide professional services as defined in the Contract Documents, under the direction of the Monterey Regional Waste Management District Project Manager, and in making recommendations to Monterey Regional Waste Management District Project Manager. The term Architect/Engineer means the architect or engineer or his or her authorized representative. When an Architect/Engineer is not employed for administration of the Contract, the Project Engineer will perform the duties and responsibilities designated in the Contract Documents for the Architect/Engineer in addition to the usual duties of the Project Engineer.

4.1.5 *Subconsultant:* The individual under contract to Monterey Regional Waste Management District or the Architect/Engineer to provide professional support services such as but not limited to control point surveying, construction monitoring, and materials testing, under the direction of Monterey Regional Waste Management District or the Architect/Engineer, and in making recommendations to Monterey Regional Waste Management District. The term Subconsultant means the subconsultant or his or her authorized representative.

4.1.6 *Underground Facilities:* Pipes, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments and encasements containing such facilities which exist underground for electricity, telephone, cable television, traffic control, or other communications systems; pipes conveying gases, steam, water, liquid petroleum products, sewage, storm drainage, or other liquids.

4.1.7 A single individual in the employ of Monterey Regional Waste Management District may concurrently fill and perform the required duties of more than one of the positions of Monterey Regional Waste Management District Project Manager, Monterey Regional Waste Management District Project Engineer, and Site Manager.

##### 4.2 CONTRACT ADMINISTRATION

4.2.1 The Monterey Regional Waste Management District Project Manager will provide administration of the Contract as described in the Contract Documents, and will be Monterey Regional Waste Management District's representative during construction, and from time to time during the correction period described in Subparagraph 12.2.2.

4.2.2 The Monterey Regional Waste Management District Project Manager, or his designated representative, will not have control over or charge of, and will not be responsible for, construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely Contractor's responsibility as provided in Paragraph 3.3 and Article 10. Monterey Regional Waste Management District Project Manager, or designated representative of Monterey Regional Waste Management District Project Manager, will not have control over or charge of and will not be responsible for acts or omission of Contractor, Subcontractor, or their agents or employees, or of any other persons performing portions of the Work.

4.2.3 Monterey Regional Waste Management District Project Manager or his designated representative has the right to attend project meetings and visit the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine in general if the Work is being performed in a manner indicating that the Work, when completed, will be in accordance with the Contract Documents. The Monterey Regional Waste Management District Project Manager will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.

4.2.4 Monterey Regional Waste Management District Project Manager or his designated representative will review and approve or take other appropriate action upon Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

4.2.4.1 Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details, such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of Contractor.

4.2.4.2 The Monterey Regional Waste Management District Project Manager's designated representative's review of submittals shall not relieve Contractor of obligations under Paragraphs 3.3, 3.8, and 3.14. The review will not constitute approval of safety precautions or, unless otherwise specifically stated by the Monterey Regional Waste Management District Project Manager of any construction means, methods, techniques, sequences, or procedures. The Monterey Regional Waste Management District Project Manager's review of a specific item shall not indicate approval of an assembly of which the item is a component.

4.2.5 The Monterey Regional Waste Management District Project Manager will prepare Change Orders and Work Change Directives and may authorize minor changes in the Work as provided in Paragraph 7.5.

4.2.6 Based on field observations and evaluations, the Monterey Regional Waste Management District Project Manager will process Contractor's Progress Payments, will certify the amounts due the Contractor, and will issue Certificates for Payment in such amounts.

4.2.7 The Monterey Regional Waste Management District Project Manager will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion, and will receive for Monterey Regional Waste Management District's review and records, written warranties and related documents required by the Contract and assembled by Contractor. The Monterey Regional Waste Management District Project Manager will issue a final Certificate for Payment upon compliance with requirements of the Contract Documents.

4.2.8 The Monterey Regional Waste Management District Project Manager will interpret and decide matters concerning performance under and requirements of the Contract Documents on written request from Contractor. The Monterey Regional Waste Management District Project Manager's response to such requests will be made with reasonable promptness and within time limits agreed upon. Interpretations and decisions of the Monterey Regional Waste Management District Project Manager will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings.

4.2.9 The Monterey Regional Waste Management District Project Manager has authority to reject Work which does not conform to Contract Documents.

4.2.10 Whenever the Monterey Regional Waste Management District Project Manager considers it necessary or advisable for implementation of the intent of the Contract Documents, Monterey Regional Waste Management District Project Manager

has authority to require additional inspection or testing of the Work in accordance with Subparagraphs 13.5.3 and 13.5.4, whether or not such Work is fabricated, installed, or completed.

4.2.11 Neither the authority of Monterey Regional Waste Management District Project Manager nor a decision made in good faith to exercise or not to exercise such authority under this Article 4 shall give rise to a duty or responsibility of the Monterey Regional Waste Management District Project Manager to Contractor, Subcontractors, or their agents or employees, or to other persons performing portions of the Work.

#### 4.3 COMMUNICATIONS IN CONTRACT ADMINISTRATION

4.3.1 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized by Monterey Regional Waste Management District Project Manager, Contractor communication shall be with Monterey Regional Waste Management District Project Manager. Communications by and with the Architect/Engineer shall be through the Monterey Regional Waste Management District Project Manager. Communication with Subconsultants shall be through the Monterey Regional Waste Management District Project Manager. Communications with Subcontractors and material suppliers shall be through Contractor. Communications by and with separate contractors shall be through the Monterey Regional Waste Management District Project Manager.

#### 4.4 CLAIMS

4.4.1 *Definition:* A Claim is a demand or assertion by Contractor seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time, or other relief with respect to terms of the Contract. The term Claim also includes other disputes and matters in question between Monterey Regional Waste Management District and the Contractor arising out of or relating to the Contract. Claims must be made by written notice. The responsibility to substantiate Claims by Contractor shall rest with the Contractor.

4.4.2 *Decision of the Monterey Regional Waste Management District Project Manager:* Claims shall be referred to the Monterey Regional Waste Management District Project Manager for action as provided in Paragraph 4.5. A presentation of a Claim and a decision by the Monterey Regional Waste Management District Project Manager, as provided in Subparagraph 4.5.4, shall be required as a condition precedent to litigation of a Claim between Contractor and Monterey Regional Waste Management District as to all such matters arising prior to the date the final payment is due, regardless of whether such matters relate to execution and progress of the Work or the extent to which the Work has been completed.

4.4.2.1 The decision by the Monterey Regional Waste Management District Project Manager in response to a Claim shall not be a condition precedent to litigation in the event the Monterey Regional Waste Management District Project Manager has failed to render a decision under Subparagraphs 4.5.1 or 4.5.4 within agreed time limits.

4.4.3 *Time Limits on Claims:* Claims by Contractor must be made within 30 days after occurrence of the event giving rise to such Claim.

4.4.4 *Continuing Contract Performance:* Pending final solution of a Claim, unless otherwise agreed in writing, Contractor shall proceed diligently with the performance of the Contract and Monterey Regional Waste Management District shall continue to make payments in accordance with Contract Documents.

4.4.4.1 Pending final resolution of a Claim, and during investigation of conditions, Contractor shall be responsible for the safety and protection of the physical properties and conditions at the site.

4.4.5 *Claims for Concealed or Unknown Conditions.*

4.4.5.1 Concealed or unknown physical conditions include utility lines, man-made structures, storage facilities, hazardous substance, and the like but do not include naturally occurring soil conditions, conditions arising from groundwater, rain or flood, Contractor operations, or the failure of Contractor to properly protect and safeguard subsurface facilities.

4.4.5.2 If conditions are encountered at the worksite which are subsurface, Underground Facilities, or otherwise concealed or unknown conditions which differ materially from

- .1 those indicated by Contract Documents; or
- .2 conditions which Contractor could have discovered through site inspection, geotechnical testing, or otherwise;

then notice shall be given by Contractor to the Monterey Regional Waste Management District Project Manager in writing before the condition is disturbed, but in no case later than 21 days after Contractor's first observation of the condition. Contractor's failure to provide notice as provided herein shall constitute waiver of Claim.

4.4.5.3 If the Monterey Regional Waste Management District Project Manager determines that conditions differ materially and cause an increase or decrease in Contractor's cost or time required for performance of any part of the Work, Monterey Regional Waste Management District Project Manager will recommend an adjustment in the Contract Price or the Contract Time, or both, as provided in Article 7, Changes in the Work. If the Monterey Regional Waste Management District Project Manager determines that the conditions at the site are not materially different and that no change in the Contract Price or Contract Time is justified, the Monterey Regional Waste Management District Project Manager shall so notify Contractor in writing, stating the reasons. Claims by Contractor in opposition to such determination must be made within 21 days after Monterey Regional Waste Management District Project Manager has given notice of the decision. If Monterey Regional Waste Management District and Contractor cannot agree on an adjustment to Contract Price or the Contract Time, the

adjustment shall be subject to further proceedings pursuant to Paragraph 4.5.

4.4.6 *Claims for Additional Cost:* If Contractor wishes to make Claim for an increase in the Contract Price, written notice shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Paragraph 10.4.

4.4.6.1 If Contractor believes additional cost is involved for reasons including but not limited to:

- .1 a written interpretation of the Monterey Regional Waste Management District Project Manager;
- .2 an order by Monterey Regional Waste Management District to stop the Work when the Contractor is not at fault;
- .3 failure of Monterey Regional Waste Management District to make payment;
- .4 suspension of Work by Monterey Regional Waste Management District;
- .5 termination of the Contract by Monterey Regional Waste Management District, or;
- .6 other provision herein,

Claims shall be filed in accordance with the procedure established herein.

4.4.6.2 No increase in Contract Price will be allowed for delays or hindrances to the Work, except for direct and unavoidable extra costs to Contractor caused by the failure of Monterey Regional Waste Management District to provide information or material, if any, which is to be provided by Monterey Regional Waste Management District under the terms of this Contract. Any such price increase shall be subject to the provisions of Article 7.

4.4.6.3 In no instance will Monterey Regional Waste Management District be deemed liable for claims for delay when the Date of Substantial Completion occurs prior to the expiration of the Contract Time.

4.4.7 *Claims for Additional Time:* If Contractor wishes to claim an increase in the Contract Time, written notice shall be given as provided in Paragraph 8.3. In the case of continuing delay, only one Claim is necessary.

4.4.8 *Claims for Injury or Damage to Person or Property:* If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party's employees or agents, or of others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time, not exceeding 21 days after the first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. If a Claim for additional cost or additional time due to damage or injury is to be asserted, it shall be filed as provided in Subparagraphs 4.4.6 or 4.4.7.

#### 4.5 RESOLUTION OF CLAIMS

4.5.1 The Monterey Regional Waste Management District Project Manager will review Claims and take one or more of the following preliminary actions within 10 days of receipt of a Claim:

- .1 request additional supporting data from the Contractor;
- .2 submit a schedule to Contractor indicating when the Monterey Regional Waste Management District Project Manager expects to take action;
- .3 reject the Claim in whole or in part, stating reasons for rejection;
- .4 recommend approval of the Claim, or;
- .5 suggest a compromise.

The Monterey Regional Waste Management District Project Manager may also, but is not obligated to, notify the Surety of the nature and amount of the Claim.

4.5.2 If a Claim has been resolved, the Monterey Regional Waste Management District Project Manager will prepare or obtain appropriate documentation.

4.5.3 If a Claim has not been resolved, the Contractor shall, within 10 days after receipt of the Monterey Regional Waste Management District Project Manager's preliminary response, take one or more of the following actions:

- .1 submit additional supporting data requested by the Monterey Regional Waste Management District Project Manager;
- .2 modify the initial Claim, or,
- .3 notify the Monterey Regional Waste Management District Project Manager that the initial Claim stands.

4.5.4 If a Claim has not been resolved after consideration of the foregoing and of further evidence presented by Contractor or requested by the Monterey Regional Waste Management District Project Manager, the Monterey Regional Waste Management District Project Manager will render a written decision relative to the Claim, including any change in the Contract Price or the Contract Time or both. The Monterey Regional Waste Management District Project Manager may, but is not obligated to, notify the Surety and request the Surety's assistance in resolving the controversy. Monterey Regional Waste Management District Project Manager's decision shall be final and binding.

#### ARTICLE 5 - SUBCONTRACTORS AND SUPPLIERS

##### 5.1 DEFINITIONS

5.1.1 *Subcontractor*: A Subcontractor is a person or entity who has a direct or indirect contract with the Contractor or is a person or entity who has a direct or indirect contract with another Subcontractor to perform a portion of the Work at the site. The term "Subcontractor" is referred throughout the Contract Documents as if singular in number and means a

Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or Subcontractor of a separate contractor.

5.1.2 *Supplier*: A Supplier is a manufacturer, distributor, materialman, or vendor having a direct agreement with the Contractor or a Subcontractor for furnishing materials, equipment, or services.

##### 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.1 After receipt of Notice of Intent to Award, and within the time period stated in Document 00450 - Post-Bid Procedures, Contractor shall submit in writing to the Monterey Regional Waste Management District Project Manager the names of Subcontractors and Suppliers proposed for each principal portion of the Work, with a description of the work. The Monterey Regional Waste Management District Project Manager will reply to Contractor in writing stating whether or not Monterey Regional Waste Management District, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Monterey Regional Waste Management District Project Manager to reply within seven days shall constitute notice of no reasonable objection.

5.2.2 Contractor shall not contract with a proposed Subcontractor or Supplier to whom the Monterey Regional Waste Management District Project Manager has made reasonable and timely objection.

5.2.3 If the Monterey Regional Waste Management District Project Manager has reasonable objection to a person or entity proposed by Contractor, the Contractor shall propose another to whom Monterey Regional Waste Management District has no reasonable objection.

5.2.4 The Contract Price will be adjusted by the difference in the cost caused by such substitution of a Subcontractor or Supplier, and an appropriate Change Order will be issued.

5.2.5 Contractor shall execute contracts with Suppliers and approved Subcontractors within 30 days after the date of the notice to proceed.

5.2.6 Contractor shall notify Monterey Regional Waste Management District Project Manager of any proposed change of a Subcontractor or Supplier previously accepted by Monterey Regional Waste Management District.

5.2.7 Contractor shall not be required to employ any Subcontractor, Supplier, or other persons or entities against whom Contractor has reasonable objection.

##### 5.3 CONTRACTOR RESPONSIBILITY FOR SUBCONTRACTORS

5.3.1 Contractor shall be fully responsible to Monterey Regional Waste Management District, as may be required by laws and regulations, for all acts and omissions of the Subcontractors, Suppliers, and other persons and organizations performing or

furnishing any of the Work under a direct or indirect contract with Contractor.

ARTICLE 6 - CONSTRUCTION BY MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT OR BY  
SEPARATE CONTRACTORS

6.1 *MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS*

6.1.1 Monterey Regional Waste Management District reserves the right to perform construction operations related to the Project with Monterey Regional Waste Management District's own forces, and to award separate prime contracts in connection with other portions of the Project or other construction or operations on the site under conditions of the Contract identical or substantially similar to these, including those portions related to insurance and waiver of subrogation. If Contractor claims that delay or additional cost is involved because of such action by Monterey Regional Waste Management District, Contractor shall make a Claim as provided elsewhere in the Contract Documents.

6.1.2 When separate contracts are awarded for different portions of the construction or operations at the site, the term "Contractor" in the Contract Documents in each case shall mean the entity which executes each separate agreement.

6.1.3 Unless otherwise provided in the Contract Documents, when Monterey Regional Waste Management District performs construction or operations related to the Project with Monterey Regional Waste Management District's own forces, Monterey Regional Waste Management District shall have the same rights which apply to Contractor under the Conditions of the Contract.

6.2 *COORDINATION*

6.2.1 Monterey Regional Waste Management District shall provide for coordination of the activities of Monterey Regional Waste Management District's own forces and of each separate contractor with the Work of Contractor, who shall cooperate with them. Contractor shall participate with other separate contractors and Monterey Regional Waste Management District in reviewing their construction schedules when directed to do so. Contractor shall make any revisions to the construction schedule and the Contract Price deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by Contractor, separate contractors, and Monterey Regional Waste Management District, until subsequently revised.

6.3 *MUTUAL RESPONSIBILITY*

6.3.1 Contractor shall afford to Monterey Regional Waste Management District and to separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities and shall

coordinate the construction and operations with other contractors as required by Contract Documents.

6.3.2 If part of Contractor's Work depends on proper execution of construction or operations by Monterey Regional Waste Management District or a separate contractor, Contractor shall, prior to proceeding with the portion of the Work, inspect such other work and promptly report to the Monterey Regional Waste Management District Project Manager apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution of the Work. Failure of the Contractor to so report shall constitute an acknowledgment that Monterey Regional Waste Management District's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to discrepancies or defects not then reasonably discoverable.

6.3.3 Costs caused by delays or by improperly timed activities or non-conforming construction shall be borne by the entity responsible therefor.

6.3.4 Contractor shall promptly remedy damage caused by Contractor to completed or partially completed construction or to property of Monterey Regional Waste Management District or separate contractor.

6.3.5 Each separate contractor shall have the same responsibilities for cutting and patching as are described in Paragraph 3.16.

6.4 *MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT'S RIGHT TO CLEAN UP*

6.4.1 If a dispute arises among the Contractor, separate contractors, and Monterey Regional Waste Management District, as to responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Paragraph 3.17, Monterey Regional Waste Management District may clean up and allocate the cost among those responsible as the Monterey Regional Waste Management District Project Manager determines.

ARTICLE 7 - CHANGES IN THE WORK

7.1 *CHANGES*

7.1.1 Changes within the scope of the Work may be accomplished after execution of the Agreement without invalidating the Contract and without notice to Contractor's Surety. Such changes may be accomplished by Change Order, Work Change Directive, or order for a minor change in the Work, subject to the limitations in this Article 7 and elsewhere in the Contract Documents.

7.1.2 Contractor shall proceed promptly to execute changes in the Work unless otherwise provided in the Change Order, Work Change Directive, or order for a minor change in the Work.

## 7.2 CHANGE ORDERS

7.2.1 A Change Order is a written instrument prepared by the Monterey Regional Waste Management District Project Manager and signed by the Monterey Regional Waste Management District Project Manager and Contractor, stating their agreement upon the following:

- .1 a change in the Work;
- .2 the amount of adjustment in the Contract Price, if any; and
- .3 the extent of the adjustment in the Contract Time, if any.

## 7.3 WORK CHANGE DIRECTIVES

7.3.1 The Monterey Regional Waste Management District Project Manager may, by Work Change Directive, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, stating a proposed basis for adjustment, if any, in contract Price or Contract Time, or both. Contractor shall carry out such directive promptly.

7.3.2 A Work Change Directive cannot change the Contract Price or the Contract Time, but is evidence that the parties agree that the change ordered by the Directive will be incorporated in a subsequently issued Change Order as to its effect, if any, on the Contract Price or the Contract Time.

7.3.3 A Work Change Directive signed by Contractor indicates the agreement of Contractor of the terms therewith, including adjustment in Contract Price and Contract Time or the method for determining them. Agreement on adjustments in Contract Price and Contract Time shall be immediately recorded as a Change Order.

7.3.4 A Work Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

## 7.4 ADJUSTMENTS IN CONTRACT PRICE

7.4.1 Adjustments in Contract Price shall be based on one of the following methods:

- .1 mutual acceptance of a fixed price properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 as provided in Subparagraph 7.4.2.

7.4.2 If Contractor does not respond promptly, or disagrees with the method for adjustment in the Contract Price, the method and the adjustment shall be determined by the Monterey Regional Waste Management District Project Manager

on the basis of reasonable expenditures and savings of those performing the work attributable to the change, including, in case of an increase in the Contract Price, an allowance for labor burden and for overhead and profit in the maximum percentages stated in Supplementary Conditions.

7.4.2.1 In such case, Contractor shall keep and present, in such form as the Monterey Regional Waste Management District Project Manager may prescribe, an itemized accounting together with appropriate supporting data. Failure to submit such itemized accounting and supporting data within 21 days of a request for such data by the Monterey Regional Waste Management District Project Manager shall constitute waiver of future Claims under this Subparagraph.

7.4.2.2 Unless otherwise provided in the Contract Documents, costs for the purposes of this Subparagraph shall be limited to the following:

- .1 costs of labor, including labor burden as stated in Supplementary Conditions for social security, unemployment insurance, customary and usual fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 rental costs of machinery and equipment, exclusive of hand tools, whether rented from Contractor or others, with prior approval of the Monterey Regional Waste Management District Project Manager;
- .4 costs of premiums for all bonds and insurance and permit fees related to the Work;
- .5 additional costs of supervision and field office personnel directly attributable to the change; and
- .6 allowances for overhead and profit.

7.4.3 The amount of credit to be allowed by Contractor to Monterey Regional Waste Management District for a deletion or change, which deletion or change results in a net decrease in the Contract Price, shall be determined in accordance with Paragraphs 7.4.1, 7.4.2, 7.4.2.1, and 7.4.2.2. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

7.4.4 When Contractor agrees with the determination made by the Monterey Regional Waste Management District Project Manager concerning adjustments in the Contract Price and Contract Time, or Monterey Regional Waste Management District and Contractor otherwise reach agreement upon the adjustments, such agreement shall be immediately recorded by preparation and execution of an appropriate Change Order.

## 7.5 MINOR CHANGES IN THE WORK

7.5.1 The Monterey Regional Waste Management District Project Manager will have the authority to order minor changes in the Work not involving adjustment in the Contract Price or the



Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be affected by written order and shall be binding on Monterey Regional Waste Management District and Contractor. Contractor shall carry out such written orders promptly.

## ARTICLE 8 - TIME

### 8.1 DEFINITIONS

8.1.1 *Contract Time*: Unless otherwise provided, Contract Time is the number of calendar days stated in the Agreement, including authorized adjustments, allotted in Contract Documents for Substantial Completion of the Work.

8.1.2 *Day*: As used in the Contract Documents, the term shall mean any calendar day of 24 hours measured from midnight to the next midnight unless otherwise specifically defined.

8.1.3 *Effective Date of the Agreement*: The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement was countersigned by Monterey Regional Waste Management District.

8.1.4 *Date of Commencement of the Work*: The date established in the Notice To Proceed. The date shall not be changed by the failure to act of the Contractor or of persons or entities for whom Contractor is responsible.

8.1.5 *Holiday*: The date established by Monterey Regional Waste Management District as a holiday.

8.1.6 *Date of Substantial Completion*: The date certified by the Monterey Regional Waste Management District Project Manager in accordance with Subparagraph 9.10.1.

### 8.2 PROGRESS AND COMPLETION

8.2.1 Time limits stated in the Contract Documents are the essence of the Contract. By executing the Agreement, Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.2.2 *Computation of Time*: In computing any period of time prescribed or allowed by these General Conditions, the day of the act, event, or default after which the designated period of time begins to run is not to be included. The last day of the period so computed is to be included, unless it is a Sunday or Holiday, in which event the period runs until the end of the next day which is not a Sunday or Holiday. Sundays and Holidays are considered to be calendar days and are to be included in all other time computations relative to the Contract Time.

8.2.3 Contractor shall not knowingly, except by agreement or instruction of the Monterey Regional Waste Management District Project Manager in writing, commence operations on the site or elsewhere prior to the effective date of insurance required by

Article 11. The date of commencement of the Work shall not be changed by the effective date of such insurance.

8.2.4 Contractor shall proceed expeditiously, and without interruption, with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.2.5 Should progress of the Work fall behind the Construction Schedule, except for reasons stated in Paragraph 8.3.1, Contractor shall submit a revised Construction schedule to Monterey Regional Waste Management District Project Manager for approval. Contractor shall take action necessary to restore progress to the revised Construction Schedule and shall work such hours, including night shifts and lawful overtime operations, as necessary to achieve Substantial Completion within the Contract Time.

8.2.6 Except in connection with safety or protection of persons or Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed Monday through Saturday between the hours of 7:00 am and 7:00 pm. Performance of work between 7:00 pm and 7:00 am, and on Sunday or Holiday, shall not be permitted without consent of the Monterey Regional Waste Management District Project Manager given after 24 hour prior written notice from Contractor.

8.2.7 The Monterey Regional Waste Management District Project Manager by Work Change Directive may direct Contractor to take such measures as necessary to expedite construction to achieve Substantial Completion prior to expiration of Contract Time. When the construction time is expedited solely for the convenience of Monterey Regional Waste Management District and not due to Contractor's failure to prosecute timely completion of the Work, then Contractor shall be entitled to an adjustment in the Contract Price equal to actual additional net costs in accordance with Article 7.

### 8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 Contractor may request an extension of Contract Time for any delay to the performance of the Agreement that arises from causes beyond the control and without the fault or negligence of Contractor. Examples of these causes are:

- .1 Acts of God or of the public enemy,
- .2 Acts of the Government in either its sovereign or contractual capacity,
- .3 Fires,
- .4 Floods,
- .5 Epidemics,
- .6 Quarantine restrictions,
- .7 Strikes,
- .8 Freight embargoes, and
- .9 Unusually severe weather.

Contractor may request an extension of Contract Time for delay if caused by the failure of a Subcontractor or Supplier at any tier to perform or make progress only if the cause of the failure is

beyond the control of both Contractor and the Subcontractor or Supplier.

8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Subparagraph 4.4.8.

8.3.3 Any Claim for extending or shortening the Contract Time shall be based on written notice promptly delivered by the party making the Claim to the other party. The Claim shall accurately describe the occurrence generating the Claim, and a statement of the probable effect on progress of the Work. For Claims where Contract Documents require critical path method schedules, Contractor shall provide a revised critical path method schedule.

8.3.4 Claims for extension of time will be considered only when a written Claim is filed within the time limits stated in Subparagraph 4.4.4 following the last date of the occurrence.

8.3.5 The notice shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant is entitled as a result of the occurrence of said event. When the parties cannot agree, Claims for adjustment in the Contract Time shall be determined by Monterey Regional Waste Management District Project Manager in accordance with Subparagraph 4.5.4.

## ARTICLE 9 - PAYMENTS AND COMPLETION

### *9.1 DEFINITIONS*

9.1.1 *Contract Price:* Contract Price is that amount stated in the Agreement and, including authorized adjustments, is the total amount payable by Monterey Regional Waste Management District to Contractor for performance of the Work under Contract Documents.

9.1.2 *Lump Sum:* The single amount stated in the bid for completion of all Work to be performed for the entire Contract, or to be performed for a designated portion of the Contract.

9.1.3 *Unit Price:* The amount stated in the bid for an individual, measurable item of work, which when multiplied by the actual quantity incorporated in the Work, amounts to the full compensation for completion of the item including work incidental to it.

### *9.2 UNIT PRICE WORK*

9.2.1 Where the Agreement provides that all or part of the Work is based on Unit Prices, initially the Contract Price will include, for all Unit Price work, an amount equal to the sum of the established Unit Prices for each separately identified item of Unit Price work times the estimated quantity of each item listed in the Agreement.

9.2.2 Each unit price shall include an amount to cover Contractor's overhead and profit for each separately identified item.

9.2.3. *Unit Price Quantities:* The quantities indicated in the Agreement are approximations made by Monterey Regional Waste Management District for contracting purposes. No Claim shall be made against Monterey Regional Waste Management District for excess or deficiency therein. Payment at the prices stated in the Agreement shall be in full for the completed Work, and will cover materials, supplies, labor, tools, machinery and all other expenditures incidental to satisfactory completion of the Work.

9.2.4 Monterey Regional Waste Management District may increase or decrease quantities of Work. Contractor will be entitled to payment for the actual quantities of items provided at the unit prices set forth in the Agreement.

### *9.3 SCHEDULE OF VALUES, FOR LUMP SUM WORK*

9.3.1 For work contracted on a lump sum basis, ten days before the first Application for Payment, the Contractor shall submit to Monterey Regional Waste Management District Project Manager a Schedule of Values allocated to various portions of the Work, prepared in such form and supported by such data as the Monterey Regional Waste Management District Project Manager may require to substantiate its accuracy. This schedule, as approved by the Monterey Regional Waste Management District Project Manager, shall be used as a basis for reviewing Contractor's Applications for Payment for lump sum work.

### *9.4 APPLICATIONS FOR PAYMENT*

9.4.1 Each month, not later than the tenth day of the month, the Contractor shall submit to the Monterey Regional Waste Management District Project Manager, an itemized application for payment for work completed during the previous month.

9.4.2 Such application shall be supported by such data substantiating Contractor's right to payment as the Monterey Regional Waste Management District Project Manager may require.

9.4.3 Subject to provisions of the Contract Documents, the amount of each Application for Payment shall be compiled as follows:

- .1 The Contract Price of the Work completed from commencement of the Project through the end of the previous month, as determined by multiplying the number of units completed of each item of the Work by the contract unit price of that item, or by multiplying the percentage of completion of each portion of the Work by the Lump Sum Price allocated to that portion of the Work listed in the Schedule of Values, as applicable.
- .2 Plus that portion of the Contract Price, properly substantiated by certified copies of invoices and freight

bills, for non-perishable materials and equipment not yet incorporated in the Work but delivered and suitably stored at the site or at another location agreed to by the Monterey Regional Waste Management District Project Manager in writing, for subsequent incorporation into the completed construction, less 15 percent.

- .3 Less retainage on the completed work of 5% for progress payments, 2% after Substantial Completion of the Work, and 0% for Final Payment.
- .4 Less Penalties for Delay, as applicable.
- .5 Less the total of previous payments made by Monterey Regional Waste Management District.

#### 9.5 RECOMMENDATIONS FOR PAYMENT

9.5.1 The Monterey Regional Waste Management District Project Manager will, within 10 days after receipt of Contractor's Application for Payment,

- .1 Issue a Recommendation for Payment for the full amount of the Application; or
- .2 Issue a Recommendation for Payment for a portion of the amount of the Application, and request the Contractor to make corrections or provide additional information to substantiate the remaining portion. Contractor shall make the corrections and provide the additional information, and resubmit the Application for Payment for the remaining portion; or
- .3 Return the Application to the Contractor for corrections or additional information. Contractor shall make the corrections and provide the additional information and resubmit the Application for Payment; or
- .4 Decline to recommend payment on the basis of the provisions in Paragraph 9.6.

9.5.2 Unless otherwise provided in Contract Documents, payments made on account of operations completed and for materials and equipment stored on or off the site shall be conditioned upon compliance by Contractor with procedures satisfactory to Monterey Regional Waste Management District Project Manager to establish Monterey Regional Waste Management District's title to such materials and equipment or otherwise protect Monterey Regional Waste Management District's interests. Procedures shall include applicable insurance, storage, and transportation to the site for materials and equipment stored off the site. Contractor is responsible for maintaining materials and equipment until Substantial Completion of the Work.

9.5.3 Title to all Work covered by the payment passes to Monterey Regional Waste Management District at the time of payment.

#### 9.6 DECISIONS TO WITHHOLD RECOMMENDATION

9.6.1 The Monterey Regional Waste Management District Project Manager may decline to recommend payment and may withhold an application for payment in whole or in part to the

extent reasonably necessary to protect Monterey Regional Waste Management District, if in the Monterey Regional Waste Management District Project Manager's opinion there is reason to believe that there is:

- .1 non-conforming work not remedied;
- .2 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- .3 damage to Monterey Regional Waste Management District or another contractor;
- .4 reasonable evidence Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual and liquidated damages;
- .5 failure of Contractor to make payments properly to subcontractors or for labor, materials, or equipment; or
- .6 Contractor's persistent failure to carry out the Work in accordance with the Contract Documents.

9.6.2 When the above reasons for withholding recommendation are removed, recommendation will be made for amounts previously withheld.

#### 9.7 PROGRESS PAYMENTS

9.7.1 Monterey Regional Waste Management District will make payment in the amount recommended by Monterey Regional Waste Management District Project Manager within 45 days after the date of receipt of application for payment.

9.7.2 Monterey Regional Waste Management District has no obligation to pay or to facilitate the payment to a Subcontractor or Supplier, except as may otherwise be required by law. Contractor will comply with the prompt payment requirements of the place of the project.

9.7.2.1 Monterey Regional Waste Management District may, on request and at the discretion of the Monterey Regional Waste Management District Project Manager, furnish to any subcontractor, if practical, information regarding the percentages of completion or the amounts applied for by Contractor, and the action taken thereon by Monterey Regional Waste Management District on account of Work done by such Subcontractor.

9.7.3 A Recommendation for Payment, a progress payment, or partial or entire use or occupancy of the Project by Monterey Regional Waste Management District, shall not constitute acceptance of work which is not in accordance with the Contract Documents.

#### 9.8 SUBSTANTIAL COMPLETION

9.8.1 The Date of Substantial Completion of the Work or designated portion thereof is the date certified by the Monterey Regional Waste Management District Project Manager that the construction is sufficiently complete in accordance with the Contract Documents so Monterey Regional Waste Management District can occupy or utilize the Work or designated portion thereof for the purpose for which it is intended.

9.8.2 When Contractor considers that the Work or a portion thereof is substantially complete, and Monterey Regional Waste Management District agrees, Contractor shall prepare and submit to the Monterey Regional Waste Management District Project Manager a comprehensive list of items to be completed or corrected. Contractor shall proceed promptly to complete and correct the items on the list. Failure to include an item on such list does not alter the responsibility of Contractor to complete the Work in accordance with the Contract Documents.

9.8.3 Upon receipt of the Contractor's list, the Monterey Regional Waste Management District Project Manager will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Monterey Regional Waste Management District Project Manager's inspection discloses any item, whether or not included on the Contractor's list, which is not in accordance with the requirements of the Contract Documents, Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item. Contractor shall then submit a request for another inspection by the Project Engineer to determine Substantial Completion. Should any inspection fail to comply with Contractor's claim of Substantial Completion, Monterey Regional Waste Management District may recover the costs of reinspection from Contractor.

9.8.4 When the Work or designated portion thereof is determined to be substantially complete, the Monterey Regional Waste Management District Project Manager will prepare a Certificate of Substantial Completion which establishes the Date of Substantial Completion, responsibilities of Monterey Regional Waste Management District and Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which Contractor shall complete all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the Date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

9.8.5 Upon Substantial Completion of the Work or designated portion thereof and upon application by Contractor and certification by the Monterey Regional Waste Management District Project Manager, Monterey Regional Waste Management District shall increase payment to Contractor to 98 percent of the Contract Price less accrued Liquidated Damages.

#### 9.9 PARTIAL OCCUPANCY OR USE

9.9.1 Monterey Regional Waste Management District may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by Contractor and the insurer. Consent of Contractor to partial occupancy or use shall not be unreasonably withheld.

9.9.2 Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the

Monterey Regional Waste Management District Project Manager and Contractor execute a Certificate of Partial Occupancy which will establish the date of partial occupancy, responsibilities of Monterey Regional Waste Management District and Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance. Warranties required by the Contract Documents shall commence on the date of partial occupancy unless otherwise provided in the Certificate of Partial Occupancy.

9.9.3 When Contractor considers a portion of the occupied Work subsequently complete, Contractor shall prepare a list and submit it to the Project Engineer as provided under Subparagraph 9.10.2.

9.9.4 Immediately prior to such partial occupancy or use, the Project Engineer and Contractor shall jointly inspect the area to be occupied or the portion of the Work to be used in order to determine and record the condition of the Work.

9.9.5 Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with requirements of the Contract Documents.

9.9.6 If Monterey Regional Waste Management District and Contractor cannot agree on any matter in Paragraph 9.11, the matter shall be subject to resolution pursuant to a Work Change Directive, Paragraph 7.3.

#### 9.10 FINAL COMPLETION AND FINAL PAYMENT

9.10.1 *Date of Final Completion* is the date certified by the Monterey Regional Waste Management District Project Manager that, to his best information, knowledge, and belief, construction is complete in conformance with Contract Documents. This includes satisfactory completion of all items listed to be completed or corrected as a part of the Certificate of Substantial Completion and submittal and acceptance by Monterey Regional Waste Management District of all closeout submittals required by Contract Documents.

9.10.2 Contractor shall review all Contract Documents and inspect the Work. Prior to Contractor notification to Monterey Regional Waste Management District Project Manager that Work is complete and ready for final inspection, Contractor shall submit an affidavit that the Work has been inspected and the Work is complete in accordance with requirements of Contract Documents.

9.10.3 Within 15 days after receipt of Contractor's written notice that Work is ready for final inspection and acceptance, and on receipt of final Application for Payment, Monterey Regional Waste Management District Project Manager will make such inspection. When Monterey Regional Waste Management District Project Manager finds the Work acceptable under the Contract Documents and the Work fully performed, the Monterey Regional Waste Management District Project Manager will issue a final Certificate of Completion stating that to the best of Monterey Regional Waste Management District Project Manager's knowledge, information, and belief, the Work has

been completed in accordance with terms and conditions of the Contract Documents, and will issue a final Recommendation for Payment.

9.10.4 Should Work be found not in compliance with requirements of Contract Documents, Monterey Regional Waste Management District Project Manager shall notify Contractor in writing of items of non-compliance. Upon correction of such non-complying items, Monterey Regional Waste Management District Project Manager shall issue a Certificate of Final Completion to Contractor as provided in Paragraph 9.12.3.

9.10.5 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Monterey Regional Waste Management District Project Manager:

- 1 an affidavit that payrolls, invoices for materials and equipment, and other indebtedness of the Contractor connected with the Work (less amounts withheld by Monterey Regional Waste Management District) have been paid or otherwise satisfied; and, if required by Monterey Regional Waste Management District Project Manager, submits further proof including waiver of release of lien or claims from laborers or material or equipment suppliers;
- 2 a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled, or materially changed, until at least 30 days written notice has been given to Monterey Regional Waste Management District;
- 3 a written statement that Contractor knows of no substantial reason that the insurance will not be renewable to cover the correction and warranty period required by the Contract Documents;
- 4 consent of Surety to final payment; and
- 5 Maintenance Bond and other required bonds, and copies of Record Documents, maintenance manuals, and tests, inspections, and approvals.

9.10.6 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of Contractor, or by issuance of Change Orders affecting final completion, and the Monterey Regional Waste Management District Project Manager so confirms, Monterey Regional Waste Management District may, upon application by Contractor and recommendation by the Monterey Regional Waste Management District Project Manager, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted.

9.10.6.1 If the remaining balance due for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, Contractor shall submit to Monterey Regional Waste Management District Project Manager the required bonds and the written consent of Surety to payment of the balance due for that portion of the Work fully completed and accepted, prior to recommendation of such payment. Such payment shall be made under terms and conditions governing

final payment, except that it shall not constitute a waiver of Claims.

9.10.7 Monterey Regional Waste Management District shall make final payment to Contractor within 30 days after the Monterey Regional Waste Management District Project Manager issues the final Certificate of Completion and the final Recommendation for Payment, subject to limitations, if any, as stated in the Supplementary Conditions.

9.10.8 Acceptance of final payment by Contractor shall constitute a waiver of Claims by the Contractor, except those previously made in writing and identified by Contractor as unsettled at the time of final Application for Payment.

#### 9.11 DELAY PENALTIES

9.11.1 The Contractor, the Surety, and Monterey Regional Waste Management District agree that time is of the essence and that failure to complete the Work within Contract Time will cause damages to Monterey Regional Waste Management District and that the actual damages from the harm are difficult to estimate accurately. Therefore, the Contractor, the Surety, and Monterey Regional Waste Management District agree that Contractor and the Surety shall be liable for and shall pay to Monterey Regional Waste Management District a penalty amount stipulated in Supplementary Conditions as penalties for delay and that the amount fixed therein is a reasonable forecast of just compensation to Monterey Regional Waste Management District resulting from failure to complete the Work within Contract Time. The amount stipulated shall be paid for each and every calendar day of delay beyond the Contract Time until the Work is substantially complete.

#### ARTICLE 10 - SAFETY PRECAUTIONS

##### 10.1 SAFETY PROGRAMS

10.1.1 Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. Contractor shall submit a safety program to the Monterey Regional Waste Management District Project Manager prior to mobilizing the Work, and shall be solely responsible for the safety, efficiency, and adequacy of the ways, means, and methods and for any damage which might result from failure or improper construction, maintenance, or operation performed by Contractor. Contractor shall submit a monthly safety report to the Monterey Regional Waste Management District Project Manager.

##### 10.2 HAZARDOUS SUBSTANCE

10.2.1 In the event Contractor encounters on the site material which it is reasonable to believe may be a "hazardous substance" as defined by the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) or any other applicable law or regulation, Contractor shall immediately stop Work in the area affected and immediately notify the Monterey Regional

Waste Management District Project Manager and thereafter confirm such notice in writing.

10.22 If, in fact, the material is a "hazardous substance", the Work in the affected area shall not thereafter be resumed, except by Change Order or Work Change Directive, and then only if such Work would not violate applicable laws or regulations.

10.23 If the material is not a "hazardous substance", the Work in the affected area shall be resumed.

10.24 Contractor shall not be required, pursuant to Article 7, to perform without consent any Work relating to a "hazardous substance" except for those hazardous substances specified for use under this Contract.

### 10.3 SAFETY OF THE ENVIRONMENT, PERSONS, AND PROPERTY

10.3.1 Contractor shall take reasonable precautions for safety and shall provide reasonable protection to prevent damage, injury, or loss from all causes, to:

- .1 employees performing the Work or on site, and other persons who may be affected thereby;
- .2 the Work including materials and equipment to be incorporated therein, whether in storage (on or off the site), under care, custody, or control of Contractor or Subcontractor;
- .3 other property at or adjacent to the site, such as trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and underground facilities not designated for removal or replacement in the course of construction, and;
- .4 Cultural resources and the environment.

10.3.2 Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on the safety of persons, property, or the environment.

10.3.3 Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for the safety and protection of persons and property; including posting danger signs and other warnings against hazards; promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

10.3.4 Contractor shall recognize the environmental requirements of the Project. Disturbed areas shall be strictly limited to boundaries established by the Monterey Regional Waste Management District Project Manager. Particular attention is drawn to the avoidance of any pollution of on-site or adjacent streams, sewers, wells, or other water sources.

10.3.5 Contractor shall use best management practices to minimize erosion of soil and excess runoff of surface or subsurface water from the site, or wind-blown dust or erosion, during the construction period.

10.3.6 Contractor shall allow no burning on the site, shall perform all Work in such a manner as required to minimize atmospheric pollution by dust or other contaminants, and shall control noise.

10.3.7 When use or storage of hazardous materials or equipment or unusual methods are necessary for execution of the Work, Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

10.3.8 Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by Contract Documents) to property referred to in Subparagraphs 10.3.1.2 and 10.3.1.3, caused in whole or in part by the Contractor, Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which Contractor is responsible under Subparagraphs 10.3.1.2 and 10.3.1.3, except damage or loss attributable to acts or omissions of Monterey Regional Waste Management District, Architect/Engineer, or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of Contractor. The foregoing obligations of the Contractor are in addition to Contractor's obligations under Paragraph 3.21.

10.3.9 Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by Contractor to the Monterey Regional Waste Management District Project Manager.

### 10.4 EMERGENCIES

10.4.1 In an emergency affecting safety of persons or property, Contractor shall act at the Contractor's discretion to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by Contractor on account of an emergency shall be determined as provided in Article 7.

## ARTICLE 11 - INSURANCE AND BONDS

### 11.1 GENERAL INSURANCE REQUIREMENTS

11.1.1 With no intent to limit Contractor's liability under the indemnification provisions set forth above, Contractor covenants to provide and maintain in full force and effect during the term of this Contract and all extensions and amendments thereto, at least the following insurance and available limits of liability.

11.1.2 If any of the following insurance is written as "claims made" coverage and Monterey Regional Waste Management District is required to be carried as an additional insured, then Contractor's insurance shall include a two-year extended discovery period after the last date that Contractor provides any work under this Contract.

11.13 "Aggregate" amounts of coverage, for purposes of this agreement, are agreed to be the amounts of coverage available during a fixed 12 month policy period.

11.2 *INSURANCE TO BE PROVIDED BY CONTRACTOR*

11.2.1 *Risks and Limits of Liability:* Contractor shall provide at a minimum the insurance coverages and limits of liability given in the Supplementary Conditions.

11.2.2 *Form of Policies:* The insurance may be in one or more policies of insurance, the form of which is subject to reasonable approval by Monterey Regional Waste Management District. It is agreed, however, that nothing Monterey Regional Waste Management District does or fails to do with regard to the insurance policies shall relieve Contractor from its duties to provide the required coverage hereunder and Monterey Regional Waste Management District's actions or inactions will never be construed as waiving Monterey Regional Waste Management District's rights hereunder.

11.2.3 *Issuers of Policies:* The issuer of any policy must have a certificate of authority to transact insurance business in the State of the place of the project. Each insurer must be responsible and reputable and must have financial capability consistent with the risks covered. Each insurer shall be subject to approval by Monterey Regional Waste Management District in Monterey Regional Waste Management District's sole discretion as to conformance with these requirements, pursuant to subparagraph 11.2.2 above.

11.2.4 *Insured Parties:* Each policy, except those for Workers' Compensation and Professional Liability, must name Monterey Regional Waste Management District (and its officers, agents, and employees) as additional insured parties on the original policy and all renewals or replacements during the term of this Contract. Monterey Regional Waste Management District's status as an additional insured under the Contractor's insurance does not extend to instances of sole negligence of Monterey Regional Waste Management District unmixed with any fault of the Contractor.

11.2.5 *Deductibles:* Contractor shall assume and bear any claims or losses to the extent of any deductible amounts and waives any claim it may ever have for the same against Monterey Regional Waste Management District, its officers, agents, or employees.

11.2.6 *Cancellation:* Each policy must expressly state that it may not be canceled or non-renewed unless thirty days' advance notice of cancellation is given in writing to Monterey Regional Waste Management District by the insurance company.

11.2.7 *Subrogation:* ~~Each policy must contain an endorsement to the effect that the issuer waives any claim or right in the nature of subrogation to recover against Monterey Regional Waste Management District, its officers, agents, or employees.~~

11.2.8 *Endorsement of Primary Insurance:* Each policy must contain an endorsement that such policy is primary insurance to

any other insurance available to the Additional Insured with respect to claims arising hereunder.

11.2.9 *Liability for Premium:* Contractor shall be solely responsible for payment of all insurance premium requirements hereunder and Monterey Regional Waste Management District shall not be obligated to pay any premiums.

11.3 *PROOF OF INSURANCE*

11.3.1 Prior to commencing any services and at any time during the term of work under this Contract, Contractor shall furnish Monterey Regional Waste Management District Project Manager with Certificates of Insurance, along with an Affidavit from Contractor confirming that the Certificate accurately reflects the insurance coverage that will be available during the term of the Contract. If requested in writing by the Monterey Regional Waste Management District Project Manager, the Contractor shall furnish the Monterey Regional Waste Management District Project Manager with certified copies of Contractor's actual insurance policies. Failure of Contractor to provide certified copies, as requested, may be deemed in Monterey Regional Waste Management District's discretion, to constitute a breach of this Contract.

11.3.2 Notwithstanding the proof of insurance requirements set forth above, it is the intention of the parties hereto that Contractor, continuously and without interruption, maintain in force the required insurance coverages set forth above. Failure of Contractor to comply with this requirement shall constitute a default of Contractor allowing Monterey Regional Waste Management District, at its option, to immediately suspend or terminate work under this Contract. Contractor agrees that Monterey Regional Waste Management District shall never be argued to have waived or be estopped to assert its right to terminate this contract hereunder because of any acts or omissions by Monterey Regional Waste Management District regarding its review of insurance documents provided by Contractor, its agents, employees, or assigns.

11.4 *PERFORMANCE AND PAYMENT BONDS*

11.4.1 For Projects over the value of \$25,000, Contractor shall provide surety bonds covering faithful performance of the Contract and payment of obligations arising thereunder as required in Contract Documents pursuant to the civil statutes of the State of the place of the Project, in the amount of 100 percent of the Contract Price as stipulated in Contract Documents on the date of execution of the Contract in accordance with the conditions stated on the Performance and Payment Bonds, Documents 00610 and 00611. Bonds may be obtained from the Contractor's usual source and the cost thereof shall be included in the Contract Price.

11.5 *MAINTENANCE BONDS*

11.5.1 *One-Year Maintenance Bond:* Contractor shall provide a bond in accordance with the conditions stated on the One-Year Maintenance Bond, Document 00612, providing for the

Contractor's correction, replacement, or restoration of any portion of the Work which is found to be not in compliance with requirements of Contract Documents during the one-year correction period required in Subparagraph 12.2.2.

#### 11.6 SURETY

11.61 The Surety on the bonds must be a corporate Surety authorized to conduct insurance business in the State of the place of the Project.

11.61.1 If the Surety on the bond is not listed on the current United States Treasury Department number 570 as having an underwriting capability in at least the amount of the bond, and if the bond exceeds 10 percent of the Surety Company's capital and surplus, Surety shall submit written documentation of reinsurance or Contractor must provide an additional Surety bond for the bond amount in excess of 10 percent of the original Surety's capital and surplus. Documentation of reinsurance shall show that Surety has reinsured the amount of the bond that exceeds 10 percent of its capital and surplus with one or more reinsurers who are duly authorized, accredited, or trusted to do business in the State of the place of the Project. Reinsurers shall meet the same requirements as Surety and shall sign Bonds as co-surety.

11.61.2 Each bond must be accompanied by a current power of attorney or other documentary proof that the individual signing the bond on behalf of the Surety has the necessary authority to execute the bond.

11.62 Upon request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations under the Contract, Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

#### 11.7 DELIVERY OF BONDS

11.7.1 Contractor shall deliver the required bonds to the Monterey Regional Waste Management District Project Manager within the time limits stated in the Notice of Intent to Award, or if the Work is to be commenced prior thereto in response to a letter of intent, Contractor shall submit bonds prior to commencement of the Work.

### ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

#### 12.1 UNCOVERING OF WORK

12.1.1 If a portion of the Work, including the work of others, is covered by Contractor contrary to the Monterey Regional Waste Management District Project Manager's request or to requirements of the Contract Documents, Contractor shall uncover such work, if required in writing by the Monterey Regional Waste Management District Project Manager, for observation by the Monterey Regional Waste Management

District Project Manager. The uncovered work shall be replaced without change to the Contract Price or Contract Time.

12.1.2 If a portion of the Work has been covered which the Monterey Regional Waste Management District Project Manager has not specifically requested to observe prior to it being covered, Monterey Regional Waste Management District Project Manager may request to see such Work and it shall be uncovered by Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall be charged to Monterey Regional Waste Management District by Change Order. If such Work is not in accordance with the Contract Documents, Contractor shall pay such costs.

#### 12.2 CORRECTION OF WORK

12.2.1 Contractor shall promptly correct or remove Work rejected by the Monterey Regional Waste Management District Project Manager or Work failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed, or completed. Contractor shall bear costs of correcting such rejected Work, including additional testing and inspections and compensation for Architect/Engineer's or subconsultant's services and expenses made necessary thereby.

12.2.2 *One Year Correction Period:* If, within one year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Paragraph 9.10.4, or of other applicable special warranty required by Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, Contractor shall correct the Work promptly after receipt of written notice from Monterey Regional Waste Management District to do so. The period of one year shall be extended with respect to portions of the Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual acceptance of the Work. This obligation under this Subparagraph shall survive acceptance of the Work under the Contract and termination of the Contract.

12.2.3 Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Monterey Regional Waste Management District Project Manager.

12.2.4 If Contractor does not proceed with correction of such non-conforming Work within the time fixed by written notice from the Monterey Regional Waste Management District Project Manager, Monterey Regional Waste Management District may correct the non-conforming Work in accordance with Paragraph 2.6, or remove non-conforming Work and store the salvable materials or equipment at the Contractor's expense. If Contractor does not pay costs of such removal and storage within 10 days after written notice, Monterey Regional Waste Management District may upon an additional 10 days written notice sell such materials and equipment at auction or at private sale and shall account for the proceeds thereof after deducting



costs and damages that would have been borne by Contractor, including compensation for the services of the Architect/Engineer or subconsultants and expenses made necessary thereby. If such proceeds of the sale do not cover costs which Contractor should have borne, the Contract Price shall be reduced by the deficiency, or Contractor shall pay the difference to Monterey Regional Waste Management District.

1225 Contractor shall bear the cost of correcting work originally installed by Monterey Regional Waste Management District or by separate contractors and damaged by the Contractor's correction or removal of Contractor's work. Article 6 describes coordination between the Contractor, Monterey Regional Waste Management District, and separate contractors.

### 12.3 ACCEPTANCE OF NONCONFORMING WORK

1231 If Monterey Regional Waste Management District prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Monterey Regional Waste Management District Project Manager may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

## ARTICLE 13 - MISCELLANEOUS PROVISIONS

### 13.1 GOVERNING LAW

13.1.1 The Contract shall be governed by the law of the State of the place of the project and the charter and ordinances of the City of the place of the project, where applicable. Venue for any cause of action shall be in Harris County in the State of Texas.

### 13.2 SUCCESSORS AND ASSIGNS

13.2.1 Monterey Regional Waste Management District and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract in whole or in part without the prior written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the contract.

### 13.3 WRITTEN NOTICE

13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the Monterey Regional Waste Management District Project Manager or Contractor at the address given in the Agreement, or if sent by registered or certified mail to the last business address known to the party giving notice.

### 13.4 RIGHTS AND REMEDIES

13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

13.4.2 No act or failure to act by Monterey Regional Waste Management District, Architect/Engineer, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such act or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

### 13.5 TESTS AND INSPECTIONS

13.5.1 Contractor shall give Monterey Regional Waste Management District and Architect/Engineer timely notice of the time and place where tests and inspections are to be made and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

13.5.2 Monterey Regional Waste Management District will employ and pay for the services of an independent testing laboratory to perform inspections or tests required by the Contract Documents except:

- .1 Inspections or tests covered by Paragraph 13.5.3;
- .2 Costs incurred in connection with tests or inspections conducted pursuant to Paragraph 12.2.1; or
- .3 Inspections or tests otherwise specifically provided in the Contract Documents to be paid by Contractor.

13.5.3 Contractor shall be responsible for and shall pay all costs in connection with any inspection or testing required in connection with Monterey Regional Waste Management District acceptance of a supplier of materials or equipment proposed to be incorporated in the Work, or of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

13.5.4 Neither observations by Monterey Regional Waste Management District or Architect/Engineer nor inspections, tests, or approvals by others shall relieve Contractor from Contractor's obligations to perform the Work in accordance with Contract Documents.

### 13.6 INTEREST

13.6.1 No interest will accrue on late payments by Monterey Regional Waste Management District except as provided under Civil Statutes of the State of the place of the project.

## ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

### 14.1 TERMINATION BY MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT FOR CAUSE

14.1.1 Monterey Regional Waste Management District may terminate the Contract if the Contractor:

- .1 persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 persistently disregards laws, ordinances, or rules, regulations, or orders of a public authority having jurisdiction; or
- .3 otherwise is guilty of material breach of a provision of the Contract Documents.

14.1.2 When any of the above reasons exists, the Monterey Regional Waste Management District Project Manager may, without prejudice to any other rights or remedies of Monterey Regional Waste Management District, and after giving Contractor and Surety seven days written notice, terminate employment of Contractor and may, subject to any prior rights of the Surety:

- .1 request that Surety complete the Work; or
- .2 take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by Contractor; and
- .3 finish the Work by whatever reasonable method the Monterey Regional Waste Management District Project Manager may deem expedient.

14.1.3 After receipt of a notice of termination, and except as otherwise directed by the Monterey Regional Waste Management District Project Manager, Contractor shall:

- .1 Stop Work under the Agreement on the date and to the extent specified in the notice of termination;
- .2 Place no further orders or subcontracts for materials, services, or facilities except as necessary to complete the portion of the Work (if any) under the Agreement which is not terminated;
- .3 Terminate all orders and subcontracts to the extent that they relate to the performance of Work under the Agreement which is terminated;
- .4 Assign to Monterey Regional Waste Management District Project Manager, in the manner, at the times, and to the extent directed by the Monterey Regional Waste Management District Project Manager, all of the right, title, and interest of Contractor under the orders and subcontracts so terminated. Monterey Regional Waste Management District shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;
- .5 Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval of the Monterey Regional Waste Management District Project Manager;
- .6 Take such action as may be necessary, or as the Monterey Regional Waste Management District Project Manager may direct, for the protection and preservation of the property related to this Agreement which is in the possession of Contractor, and in which

Monterey Regional Waste Management District has or may acquire an interest;

- .7 Secure the Project in a safe state before leaving the site, providing any necessary safety measures, shoring, or other devices.

14.1.4 When Monterey Regional Waste Management District terminates the Contract for one of the reasons stated in Subparagraph 14.1.1, Contractor shall not be entitled to receive further payment until the Work is complete, subject to the provisions of Paragraph 14.1.5.

14.1.5 If the unpaid balance of the Contract Price exceeds the costs of finishing the Work, including liquidated damages and other amounts due under this Contract, such balance shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to Monterey Regional Waste Management District. The amount to be paid to Contractor or Monterey Regional Waste Management District, as the case may be, shall be certified by the Monterey Regional Waste Management District Project Manager, upon application, and this obligation for payment shall survive termination of the Contract.

*14.2 TERMINATION BY MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT FOR CONVENIENCE*

14.2.1 Monterey Regional Waste Management District may, without cause, and without prejudice to any other rights or remedies of Monterey Regional Waste Management District, terminate employment of Contractor in whole or part by giving Contractor and Surety seven days written notice.

14.2.2 After receipt of a notice of termination, and except as otherwise directed by the Monterey Regional Waste Management District Project Manager, Contractor shall conform to the requirements of Paragraph 14.1.3.

14.2.3 After receipt of a notice of termination, Contractor shall submit to Monterey Regional Waste Management District its termination claim. Such claim shall be submitted to Monterey Regional Waste Management District promptly, but in no event later than six months from the effective date of termination, unless one or more extensions in writing are granted by the Monterey Regional Waste Management District Project Manager. If Contractor fails to submit its termination claim within the time allowed, Monterey Regional Waste Management District Project Manager shall determine, on the basis of available information, the amount, if any, due to Contractor because of the termination. Monterey Regional Waste Management District shall then pay to Contractor the amount so determined.

14.2.4 If Monterey Regional Waste Management District and Contractor fail to agree on the amount to be paid Contractor because of the termination of the Agreement or part thereof, Monterey Regional Waste Management District Project Manager will determine, on the basis of information available to Monterey Regional Waste Management District Project Manager, the

amount due (if any) to Contractor by reason of the termination as follows:

- .1 The Contract Price for all Work performed in accordance with Contract Documents up to the date of termination determined in the manner prescribed for monthly payments in Article 9, except no retainage shall be withheld by Monterey Regional Waste Management District either for payment determined by percentage of completion or for materials and equipment delivered to the site, in storage, or in transit.
- .2 Reasonable termination expenses, including the costs for settling and paying claims arising out of termination of work under subcontracts and purchase orders, the reasonable cost of preservation and protection of Monterey Regional Waste Management District property after termination (if required) and the cost of Claim preparation. Termination expenses do not include field or central office overhead, salaries of employees of Contractor or litigation costs including attorney fees.

No amount will be allowed for anticipated profit or central office overhead on the uncompleted Work, or any cost or lost profit for any other business of Contractor alleged to be damaged by the termination.

14.2.5 Contractor shall promptly remove from the site construction equipment, tools, and temporary facilities, except such temporary facilities which Monterey Regional Waste Management District Project Manager may wish to purchase and retain.

14.2.6 Contractor shall cooperate with Monterey Regional Waste Management District Project Manager during the transition period.

14.2.7 Monterey Regional Waste Management District will take possession of the Work and materials delivered to the site, in storage, or in transit as of the date, or dates, specified in the termination notice, and will be responsible for maintenance, utilities, security, and insurance, as stated in the notice of termination.

#### 14.3 *SUSPENSION BY MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT FOR CONVENIENCE*

14.3.1 The Monterey Regional Waste Management District Project Manager may, without cause, after giving Contractor and the Contractor's Surety notice, order Contractor in writing to suspend, delay, or interrupt the Work in whole or in part for such period of time as the Monterey Regional Waste Management District Project Manager may determine.

14.3.2 An adjustment shall be made in the Contract Time equivalent to the length of time of the suspension.

14.3.3 An adjustment shall be made for the increases in the cost of performance of the Contract, including profit on the increased cost of performance caused by suspension, delay, or interruption in accordance with Paragraph 7.4. No adjustment shall be made to the extent:

- .1 that performance is, was, or would have been so suspended, delayed, or interrupted by another cause for which Contractor is responsible; or
- .2 that an adjustment is made or denied under another provision of the Contract.

#### 14.4 *TERMINATION BY CONTRACTOR*

14.4.1 Contractor may terminate the Contract if the Work is stopped for a period of 30 days through no act or fault of Contractor, Subcontractor, or their agents or employees, or any other persons performing portions of the Work under contract with Contractor, for any of the following reasons:

- .1 issuance of an order of a court or other public authority having jurisdiction;
- .2 an act of government, such as a declaration of national emergency, making material unavailable;
- .3 if repeated suspensions, delays or interruptions by Monterey Regional Waste Management District as described in Paragraph 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365 day period, whichever is less.

14.4.2 If the Agreement is terminated pursuant to this provision, Contractor shall file a Claim for termination expenses in accordance with the requirements of Paragraph 14.2.

END OF DOCUMENT

**Document 00800**

**SUPPLEMENTARY CONDITIONS**

**PART 1 – GENERAL**

1.01 SUMMARY

- A. These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (Engineers Joint Contract Documents Committee –EJCDC Document No. 1910-8, 1990 edition) and other provisions of the Contract as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

**PART 2 – CHANGES TO GENERAL CONDITIONS**

2.01 ARTICLE 1 – DEFINITIONS

- A. The terms used in these Supplementary Conditions which are defined in the General Conditions have the meanings assigned to them therein. In addition, wherever used in these Supplementary Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to the singular and plural thereof.
1. “ENGINEER” is further defined to be Golder Associates, Inc. “CQA FIRM” is further defined to be \_\_\_\_\_.
  2. Site of the Work: The area to be occupied by the Project and all adjacent areas and other related areas occupied or used by the CONTRACTOR or his subcontractors during performance of the Work, including storage areas and buildings, staging areas, and areas for the production, procurement, storage, and disposal of earthwork, concrete and paving materials, and similar materials and equipment. The use of the word “jobsite” or “site” in the Project Manual shall be interpreted to be synonymous with Site of the Work.
  3. Force Account: Wherever in the Project Manual the term “Force Account” is used to describe a method of compensation, it shall be understood to mean the method specified in Paragraph 11.3.3 (modified in this specification section) of the General Conditions, i.e., Cost of the Work Plus a Fee.

2.02. ARTICLE 2 – PRELIMINARY MATTERS

- A. Paragraph 2.3 of the General Conditions: delete in its entirety and insert the following in its place:

2.3 The Contract Time will commence to run on the date indicated in the Notice to Proceed. Any Work undertaken by CONTRACTOR prior to the date indicated in the Notice to Proceed will be entirely at his own risk.

- B. Paragraph 2.5 of the General Conditions: Insert the following at the end of the paragraph:

If CONTRACTOR, before receiving orders or instructions from the OWNER, performs any portion of the work affected by such apparent conflict or discrepancy, such performance shall be at his own risk, and he shall not be entitled to additional compensation or time by reason of the conflict or discrepancy or its later correction.

- C. Paragraph 2.6 of the General Conditions: delete in its entirety.

- D. Paragraph 2.8 of the General Conditions: delete in its entirety and insert the following in its place:

2.8 A preconstruction conference attended by the CONTRACTOR, PROJECT ENGINEER, ARCHITECT/ENGINEER and OWNER will be held at an appropriate time after the Notice to Proceed has been issued. The purpose of this meeting will be to discuss the schedules required under Section 01300 of the Specifications, to discuss procedures for handling shop drawings and other submittals, and to establish a working understanding among the parties as to the Work.

- E. Paragraph 2.9 of the General Conditions: delete in its entirety and insert the following in its place:

2.9 The CONTRACTOR shall obtain approval of the various schedules specified in Section 01300, Submittals, before submitting the first application for payment.

2.03 ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS

- A. Paragraph 4.2 of the General Conditions: add new paragraphs as follows:

4.2.7 No claim of the CONTRACTOR under this clause shall be allowed unless the CONTRACTOR has given the notice required in Paragraph 4.2; provided, however, the time prescribed therefor may be extended by the OWNER.

4.2.8 No claim by the CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract.

- B. Paragraph 4.3 of the General Conditions: delete in its entirety.
- C. Paragraph 4.4 of the General Conditions: change the first sentence to read as follows:

The OWNER shall provide a minimum of four horizontal and vertical control points, shown on the Drawings, which, in the ENGINEER'S judgment, are necessary to enable CONTRACTOR to proceed with the Work in accordance with the requirements of Section 01052, Layout of Work and Surveys.

## 2.04 ARTICLE 5 – BONDS AND INSURANCE

- A. The limits of liability for the insurance required by paragraph 5.4 (CONTRACTOR'S Liability Insurance) of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
  - 1. Workers' Compensation, etc., under paragraph 5.4.1 of the General Conditions:
    - a. State: Statutory
    - b. Applicable Federal (e.g. Longshoreman's): Statutory
    - c. Employer's Liability: \$1,000,000
  - 2. Comprehensive General Liability under paragraph 5.4.2 through 5.4.8 of the General Conditions:
    - a. Bodily injury (including completed operations and products liability):

\$1,000,000	Each Occurrence
\$2,000,000	Annual Aggregate
    - b. Personal Injury, with employment exclusion deleted:

\$2,000,000	Annual Aggregate
-------------	------------------
    - c. Property Damage:

- |  |             |                  |
|--|-------------|------------------|
|  | \$1,000,000 | Each Occurrence  |
|  | \$2,000,000 | Annual Aggregate |
- d. Property Damage liability insurance shall provide Explosion, Collapse and Underground coverages where applicable.
3. Comprehensive Automobile Liability under paragraph 5.7 of the General Conditions:
- a. Bodily Injury:
- |  |             |                 |
|--|-------------|-----------------|
|  | \$1,000,000 | Each Person     |
|  | \$1,000,000 | Each Occurrence |
- b. Property Damage:
- |  |             |                 |
|--|-------------|-----------------|
|  | \$1,000,000 | Each Occurrence |
|--|-------------|-----------------|
- B. The Contractual Liability required by paragraph 5.4.10 of the General Conditions shall provide coverage for not less than the following amounts:
- 5.4.1. Bodily Injury:
- |  |             |                 |
|--|-------------|-----------------|
|  | \$1,000,000 | Each Occurrence |
|--|-------------|-----------------|
- 5.4.2. Property Damage:
- |  |             |                  |
|--|-------------|------------------|
|  | \$1,000,000 | Each Occurrence  |
|  | \$2,000,000 | Annual Aggregate |
- C. Paragraph 5.6 of the General Conditions: delete in its entirety and insert the following in its place:
- 5.6 Unless otherwise provided in these Supplementary Conditions, CONTRACTOR shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided in these Supplementary Conditions or as required by law). This insurance shall include the interests of the OWNER, CONTRACTOR and Subcontractors in the work, shall insure against the perils of fire and extended coverage, shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in these Supplementary Conditions, and shall

include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance or otherwise provided in these Supplementary Conditions, CONTRACTOR shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment. The policies of insurance required to be purchased and maintained by CONTRACTOR in accordance with paragraphs 5.6 and 5.7 shall contain a provision that the coverage afforded will not be cancelled or materially changed until at least thirty calendar days' prior written notice has been given to OWNER.

## 2.05 ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

- A. Paragraph 6.5 of the General Conditions add the following:

Any deviation from the manufacturer's printed recommendations shall be explained and acknowledged as correct for the circumstances, in writing, by the manufacturer.

- B. Paragraph 6.6 of the General Conditions: insert the following at the end of paragraph:

The time limit set forth in the Project Manual for substantial completion (as extended or shortened pursuant to Article 12) shall govern, and the schedule shall be adjusted to meet such time limits.

- C. Paragraph 6.6 of the General Conditions: add new paragraphs as follows:

6.6.3 If the progress of the Work is deemed unsatisfactory in accordance with this provision, OWNER may withhold progress payments pursuant to Article 14.7 of the General Conditions.

6.6.4 In the event the Contract Time is adjusted pursuant to Article 12, the CONTRACTOR'S schedule shall be revised to correspond with the adjustment.

- D. Paragraph 6.8.3: add new paragraph to the General Conditions as follows:

6.8.3 Except as provided in the foregoing paragraphs 6.8.1 and 6.8.2, no substitution of subcontractors from those listed with the CONTRACTOR'S Bid will be permitted without the written consent of OWNER.

- E. Paragraph 6.15: add new paragraph to the General Conditions as follows:



6.15.1 The CONTRACTOR shall accept exclusive liability and hold the OWNER harmless for payment of social security taxes, unemployment insurance, worker's compensation, contributions, and other taxes measured by wages of employees employed upon the Work.

F. Paragraph 6.16: add new paragraphs to the General Conditions as follows:

6.16.1 CONTRACTOR shall examine all documents covering rights of way, permits and easements. CONTRACTOR shall comply with all terms and conditions contained in such documents.

6.16.2 CONTRACTOR shall comply with the requirements of OWNER'S site Regulations.

G. Paragraph 6.20: add new paragraph to the General Conditions as follows:

6.20.4 Spills

6.20.4.1 In the event that CONTRACTOR spills any hazardous material, including fuel or oil for equipment, the location, amount and type of material spilled shall be reported to the OWNER. This information is necessary to determine the spill's effect on ground water monitoring at the site.

6.20.4.2 In the event that CONTRACTOR spills any hazardous material, including fuel or oil that the CONTRACTOR spills, the CONTRACTOR shall be responsible for all costs and work to remediate such spill. Remediation will be as directed by the OWNER.

## 2.06 ARTICLE 7 – OTHER WORK

A. Paragraph 7.4 of the General Conditions: Add new paragraphs as follows:

7.5 The project site is located within the permitted disposal area of the Monterey Peninsula Landfill which is an active Class III waste disposal facility as defined by California Code of Regulations, Title 23, Chapter 15, Article 3. The OWNER will have full authority and responsibility for activities related to waste disposal operations and for coordination of the waste disposal operations with the work of the CONTRACTOR. Areas of mutual concern include but are not limited to allocation of unloading areas and areas of common use, requirements of a dust-free atmosphere, absence of vibration or noise or natural light, and the like.

7.6 The Contract Drawings include work identified in Section 01010, Summary of Work, to be performed by the OWNER concurrently with work being performed by the CONTRACTOR. The CONTRACTOR shall coordinate his schedule with the

work schedule of the OWNER and the OWNER shall cooperate with the CONTRACTOR to schedule and perform the work described in Section 01010, Summary of Work, so as not to adversely impact the CONTRACTOR'S schedule or work.

7.7 The ENGINEER, as OWNER'S representative, will coordinate the work of this Monterey Peninsula Landfill Contract.

## 2.07 ARTICLE 8 – OWNER'S RESPONSIBILITY

- A. Paragraph 8.1 of the General Conditions: amend the first sentence by striking out the words "through ENGINEER."

## 2.08 ARTICLE 9 – PROJECT ENGINEER'S STATUS DURING CONSTRUCTION

- A. Paragraph 9.2 of the General Conditions: delete in its entirety.
- B. Paragraph 9.3 of the General Conditions: delete in its entirety and insert the following in its place:

9.3 The PROJECT ENGINEER will observe the performance and quality of the Work, perform inspections and tests, review and verify quantities, approve progress payments, and, in general, administer the Contract. The PROJECT ENGINEER will keep the OWNER informed of the progress of the Work and will endeavor to guard the OWNER against defects and deficiencies in the Work.

- C. Paragraph 9.11 of the General Conditions: delete in its entirety and insert the following in its place:

9.11 The PROJECT ENGINEER, as the OWNER'S representative, will be the initial interpreter of the technical requirements of the Project Manual and will determine the acceptability of the work performed thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Project Manual pertaining to performance and furnishing of the Work and Claims under Articles 11 and 12, in respect to changes in the Contract Price or Contract Time, shall be referred, initially, to the PROJECT ENGINEER in writing. Such written notice of claim, dispute or other matter shall be delivered by the claimant to the PROJECT ENGINEER and the other party to the Agreement promptly (but in no event later than 15 calendar days) after the occurrence of the event giving rise thereto. Written supporting data shall be submitted to the PROJECT ENGINEER and the other party within 30 calendar days after such occurrence unless PROJECT ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim.

9.11.1 In presenting the claim, dispute, or other matter, the party raising the issue shall specifically include, to the extent then possible, the following:

9.11.1.1 The Contract provisions which apply to the matter and under which the claim or dispute is made;

9.11.1.2 The Bid items and quantities, if any, upon which the claim is based.

9.11.1.3 The specific relief requested, including but not limited to, increase or decrease of the Contract Price and/or extension or shortening of the Contract Time.

9.11.2 The claim will be acknowledged in writing by the ENGINEER. If the claim is not disposed of within 30 calendar days by meetings or other process of negotiation which results in agreement, the PROJECT ENGINEER will make a written recommendation on the claim. The recommendation of the PROJECT ENGINEER will be delivered to both the OWNER and the CONTRACTOR. The recommendation of the PROJECT ENGINEER will be subject to the approval of the OWNER.

9.11.3 After the OWNER receives the PROJECT ENGINEER'S formal recommendation, the OWNER shall have the right to make written request to the CONTRACTOR at any time for additional information which the CONTRACTOR may possess to clarify the claim. The CONTRACTOR shall provide such additional information within 30 calendar days after it is requested by the OWNER. The OWNER may allow a reasonable time extension for good cause if the CONTRACTOR presents a written request for the time extension prior to the expiration of the 30 calendar days. If the CONTRACTOR fails to furnish the additional information requested by the OWNER, the CONTRACTOR will be deemed to have waived its claim.

9.11.4 Within 90 calendar days after receipt of all necessary information, the OWNER will issue a written decision on the claim, dispute, or other matter. The decision of the OWNER constitutes the exhaustion of contractual and administrative remedies. The OWNER'S decision shall be final and conclusive unless it is fraudulent or unless the CONTRACTOR commences action through a Court of Proper Jurisdiction within 120 calendar days from receipt thereof.

9.11.5 Wherever in the Project Manual reference is made to "appeals," "claims," "review by the ENGINEER," or other similar phrases, such reference shall be construed to mean review in accordance with the provisions in Paragraph 9.11.

D. Paragraph 9.12 of the General Conditions: delete in its entirety.

## 2.09 ARTICLE 11 – CHANGE OF CONTRACT PRICE

- A. Force Account: See Paragraph 2.01, Subparagraph A.2 of these Supplementary Conditions.
- B. Paragraph 11.2 of the General Conditions, second sentence: delete the words “thirty days” and replace with “seven days.”
- C. Paragraph 11.2 of the General Conditions, third sentence: delete the words “sixty days” and replace with “twenty-one days.” Also, delete the word “known.”
- D. Paragraph 11.2 of the General Conditions: revise the last sentence and add new subparagraphs as follows:

No claim for an adjustment in Contract Price will be valid if not submitted in accordance with this paragraph 11.2 and, in the case of a claim by the CONTRACTOR for an increase in the Contract Price to be determined by mutual acceptance of a unit price or lump sum as provided in paragraph 11.3.2, if the supporting data does not include all of the following as applicable:

11.2.1 Labor cost calculation showing hourly base rate and fringe benefits for each craft employed, and showing crew composition and productivity rates for each operation required.

11.2.2 Calculation sheets showing derivation of all quantities.

11.2.3 Permanent material cost calculation showing unit prices and quantities with waste allowances.

11.2.4 Permanent equipment cost calculation supported by copies of quotations or purchase orders.

11.2.5 Calculation of cost of non-permanent construction supplies.

11.2.6 Construction equipment cost calculation showing hours used, hourly rate, and productivity rate, where applicable.

11.2.7 Overhead calculation showing percentages added for small tools, field offices, supervision, home office overhead, and other miscellaneous costs.

11.2.8 Profit.

- E. Paragraph 11.3 of the General Conditions: delete in its entirety and insert the following in its place:

11.3 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

11.3.1 Where, as determined by the ENGINEER, the work is covered by unit prices contained in the Contract by application of those unit prices to the quantities of the items involved (subject to the provisions of paragraphs 11.9.1 through 11.9.3, inclusive).

11.3.2 By mutual acceptance of a lump sum or a new unit price or prices.

11.3.3 On the basis of the Cost of the Work (determined as provided in paragraphs 11.4, 11.5, and 11.7) plus a CONTRACTOR'S Fee for overhead and profit (determined as provided in paragraph 11.6). In proceeding with any work in response to a Work Directive Change, or any other work for which the CONTRACTOR believes he may be entitled to an adjustment in the Contract Price, in the absence of an executed Change Order specifying adjustment in the Contract Price pertaining to such work, the CONTRACTOR shall maintain records as provided in paragraph 11.7 so that subsequently, if agreement cannot be reached pursuant to paragraphs 11.3.1 or 11.3.2, the necessary data will be available to enable a determination pursuant to this paragraph 11.3.3. Should the CONTRACTOR fail to maintain such records, the Cost of the Work will be determined by the PROJECT ENGINEER based upon his own records or, if the PROJECT ENGINEER has not been present to observe the work in progress and record the cost elements thereof, based upon the PROJECT ENGINEER'S best estimate of the reasonable Cost of the Work.

- F. Paragraph 11.4.1 of the General Conditions, fourth sentence: modify to read as follows:

Such employees shall include workers and foremen at the site and shall exclude superintendents and other management personnel above the rank of foreman.

- G. Paragraphs 11.4.5.1, 11.4.5.2, 11.4.5.7, 11.4.5.8 and 11.4.5.9 of the General Conditions: delete in their entirety.

- H. Paragraph 11.5.4 of the General Conditions: modify by striking out the words "(except for the cost of premiums covered by subparagraph 11.4.5.9 above)."

- I. Subparagraph 11.5.5 of the General Conditions: add new subparagraphs to read as follows:

11.5.6 Transportation, travel, and subsistence expenses of CONTRACTOR'S employees and those of any subcontractor.

11.5.7 Cost including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, whether or not consumed in the performance of the Work.

11.5.8 The cost of utilities, fuel and sanitary facilities at the site.

11.5.9 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, postage and similar petty cash items in connection with the Work.

- J. Paragraph 11.6.2 of the General Conditions: delete in its entirety, and insert the following in its place:

11.6.2 A fee based upon the following percentages of the various portions of the Cost of the Work:

11.6.2.1 For costs incurred under paragraph 11.4.1, the CONTRACTOR'S fee shall be 15 percent;

11.6.2.2 For costs incurred under paragraph 11.4.2, the CONTRACTOR'S fee shall be 10 percent;

11.6.2.3 For costs incurred under paragraph 11.4.3, the CONTRACTOR'S fee shall be 5 percent, and if a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all Subcontractors shall be 15 percent for labor and 10 percent for materials;

11.6.2.4 No fee shall be payable on the basis of costs itemized under paragraphs 11.4.4 and 11.4.5.

- K. Paragraph 11.7 of the General Conditions: delete in its entirety and insert the following in its place:

11.7 The CONTRACTOR shall maintain his records to provide a clear distinction between the costs of work paid for on a Cost of the Work plus a Fee basis and the costs of other operations.

11.7.1 The CONTRACTOR shall prepare and furnish to the ENGINEER, on the following work day, report sheets in duplicate of each day's work paid for on a Cost of the Work plus a Fee basis. The daily report sheets shall itemize the materials used and shall cover the direct cost of labor and the charges for equipment, whether furnished by the CONTRACTOR, subcontractor, or other forces. The daily report sheets shall provide names or identifications and

classifications of workmen, the hourly rate of pay and hours worked, and the size, type and identification number of equipment, and hours operated. Daily report sheets shall be signed by the CONTRACTOR or his authorized agent.

11.7.2 Material charges shall be substantiated by valid copies of vendor's invoices. Such invoices shall be submitted with the daily report sheets, or if not available, they shall be submitted with subsequent daily report sheets. Should the vendor's invoices not be submitted within 20 calendar days after the date of delivery of the material or 15 calendar days after acceptance of the work, whichever comes first, the PROJECT ENGINEER reserves the right to establish the cost of such materials at the lowest current wholesale prices at which such materials are available in the quantities concerned and delivered to the location of the work, less any discounts provided in Article 11.4.2.

11.7.3 The PROJECT ENGINEER will compare his records with the daily report sheets furnished by the CONTRACTOR, make any necessary adjustments, and compile the costs of work paid for on a Cost of the Work plus a Fee basis on daily report forms furnished by the PROJECT ENGINEER. When these daily reports are agreed upon and signed by the PROJECT ENGINEER, they shall become the basis of payment for the work performed, but shall not preclude subsequent adjustment based on a later audit.

11.7.4 The CONTRACTOR'S original cost records pertaining to work paid for on a Cost of the Work plus a Fee basis shall be retained and shall be open to inspection and audit as may be required by other provisions of the Contract.

- L. Paragraph 11.8 of the General Conditions: delete in its entirety.
- M. Paragraph 11.9.3 of the General Conditions: add the following new paragraphs:

11.9.4 Increased or Decreased Quantities:

11.9.4.1 For Bid Items paid for on a unit price basis, increases or decreases in quantity of a Bid Item will be determined by comparing the total pay quantity of the Bid Item with the ARCHITECT/ENGINEER'S estimated quantity in the Bid Schedule.

11.9.4.2 If the total pay quantity of a Bid Item, which has a total value of two percent or more of the total Contract Bid price, varies from the ARCHITECT/ENGINEER'S quantity estimate by 25 percent or less, payment for the Bid Item will be made at the Contract unit price. If the total pay quantity of a Bid Item varies from the ARCHITECT/ENGINEER'S quantity estimate by more than 25 percent, the compensation payable to the CONTRACTOR will be subject to review by the CONTRACTOR and the ARCHITECT/ENGINEER, and an equitable adjustment will be made by means of a Change Order to credit the OWNER with any reduction in cost or to compensate the

CONTRACTOR for any increase in cost resulting from variations between estimated and actual pay quantities. The adjustment review will be made at a time mutually acceptable to the ARCHITECT/ENGINEER and the CONTRACTOR.

11.9.4.3 Payment for a Bid Item which has a final total value of less than two percent of the total Contract Price will be made at the Contract unit price regardless of increased or decreased quantities.

## 2.10 ARTICLE 12 – CHANGE OF CONTRACT TIMES

- A. Paragraph 12.1 of the General Conditions, second sentence: delete the words “thirty days” and substitute with “seven calendar days.”
- B. Paragraph 12.1 of the General Conditions, third sentence: delete the words “sixty days” and substitute with “thirty calendar days.”

## 2.11 ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

- A. Paragraph 13.1 of the General Conditions: add new subparagraphs to read as follows:

13.1.1 Unless otherwise provided elsewhere in the Contract, all materials and equipment incorporated into any work covered by the Contract shall be of the quality specified and, where not specified, of a grade suitable for their intended use and in conformance with the Specifications, Drawings, Samples and other descriptions set forth in this Agreement. CONTRACTOR warrants all equipment, materials and labor furnished or performed under this Contract against defects in materials and workmanship (unless furnished by OWNER) for a period of one year from and after Final Acceptance under this Contract regardless of whether the same were furnished or performed by the CONTRACTOR or by any of its subcontractors or vendors of any tier. Upon receipt of written notice from OWNER of any defect in any such equipment, materials or labor during the applicable warranty period due to defective materials or workmanship, the affected item or parts thereof shall be repaired or replaced by CONTRACTOR at a time acceptable to OWNER.

13.1.2 CONTRACTOR shall perform such tests as OWNER may require to verify that such repairs and replacements comply with the requirements of this Contract. All costs incidental to such repair, replacement and testing, including the value of any OWNER-furnished materials spoiled by the CONTRACTOR’S failure to comply with the specifications set out in this Agreement, and the removal, replacement and reinstallation of equipment and materials necessary to gain access shall be borne by CONTRACTOR. CONTRACTOR warrants such



repaired or replaced work against defective materials and workmanship for a period of one year from and after acceptance thereof. Should CONTRACTOR fail to promptly make the necessary repair, replacement and tests, OWNER may perform or cause to be performed the same at CONTRACTOR'S expense. CONTRACTOR and its surety or sureties, if any, shall be liable for the satisfaction and full performance of the warranties as set forth herein.

2.12 ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

- A. Paragraph 14.1 of the General Conditions: delete in its entirety.
- B. Paragraph 14.2 of the General Conditions: add new subparagraph as follows:

14.2.1 With each Application for Payment, CONTRACTOR shall submit to PROJECT ENGINEER (a) an itemized Application for Payment based on Document 00405 - Schedule of Unit Price Work items and reflecting any retainage as may be specified in the Project Manual; and (b) such other Documents as may be reasonably requested by ENGINEER.

- C. Paragraph 14.4 of the General Conditions: add new subparagraph as follows:

14.4.1 CONTRACTOR shall promptly pay each Subcontractor upon receipt of payment from OWNER out of the amount paid to CONTRACTOR on account of such Subcontractor's Work, the amount Subcontractor is entitled, reflecting the percentage actually retained from payments to CONTRACTOR on account of Subcontractor's Work. CONTRACTOR shall obtain Waiver of Liens from Subcontractor for such payment. CONTRACTOR shall, by an appropriate agreement with Subcontractor, require Subcontractor to make payments to their subcontractors in similar manner.

- D. Paragraph 14.7 of the General Conditions: add three new paragraphs as follows:

14.7.9 third party claims filed or evidence indicating probable filing of such claims.

14.7.10 failure of CONTRACTOR to make payments properly or promptly to Subcontractors for material, labor, or equipment.

14.7.11 damage to OWNER or others.

- E. Paragraph 14.8 of the General Conditions: add new subparagraph as follows:

14.8.1 CONTRACTOR'S request for issuance of a Certificate of Substantial Completion shall include guarantees, bonds, certificates of inspection, waivers of

lien, marked-up record documents and other documents as required by the Project Manual.

- F. Add the following at the end of Article 14: Liquidated Damages.

14.16 Should CONTRACTOR or Surety fail to complete the Work within such extra time as may be allowed by extensions, there shall be deducted from any monies due, or that may become due CONTRACTOR or Surety, the same set forth in the Agreement for each calendar day, including Sundays and holidays, that the Work shall remain uncompleted. This sum shall be the amount of \$2,000 per calendar day and shall be considered liquidated damages due the OWNER from CONTRACTOR or Surety because of OWNER'S loss of income and other costs incurred resulting from the failure to complete the Work within the time specified. Permitting CONTRACTOR or Surety to continue and finish the Work, or any part of it, after the time fixed for its completion may have been extended, shall in no way operate as a waiver on the part of OWNER of its rights under the Contract.

## 2.13 ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

- A. Paragraph 15.1 of the General Conditions, first sentence: delete the words “which will fix the date on which the Work will be resumed.”
- B. Paragraph 15.1 of the General Conditions: add a new sentence immediately following the first sentence as follows:

Within 45 calendar days after such notice of suspension, OWNER shall give written notice to CONTRACTOR and PROJECT ENGINEER of the date on which Work will be resumed.

- C. Paragraph 15.2 of the General Conditions: add six new paragraphs as follows:

15.2.5 if CONTRACTOR fails to make prompt payment to Subcontractors or for materials or labor; or

15.2.6 if CONTRACTOR abandons the Work; or

15.2.7 if CONTRACTOR sublets the Work without the previous written consent of the OWNER; or

15.2.8 if CONTRACTOR assigns this Agreement, or any claim thereunder, without the previous written consent of OWNER; or

15.2.9 if CONTRACTOR fails to achieve Substantial Completion within the Contract Time; or

15.2.10 if CONTRACTOR fails to make diligent and timely progress toward Substantial Completion.

## 2.14 ARTICLE 17 - MISCELLANEOUS

Paragraph 17.1 of the General Conditions: delete in its entirety and replace with the following:

17.1 Whenever any provision of the Project Manual requires the giving of written notice or the delivery of any Bond, Agreement, Certificate of Insurance, or any other item, it shall be deemed to have been validly delivered if given in person to the individual, to a member of the firm, or to an officer of the corporation for whom it is intended, or if given at or sent by registered or certified mail (return receipt), postage prepaid, to the last business address known to the individual who delivers the article.

## **PART 3 – ADDITIONS TO GENERAL CONDITIONS**

### 3.01 ASSIGNMENT OF ANTITRUST ACTIONS TO OWNER

A. In accordance with Section 451 of the Government Code, the CONTRACTOR and subcontractors shall conform to the following requirements. In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the CONTRACTOR or subcontractor offers and agrees 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 Professional 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 the OWNER tenders final payment to the CONTRACTOR, without further acknowledgment by the parties. See also Section 4552 for further related requirements for those who submit bids.

### 3.02 SUBSTITUTION OF SECURITIES IN LIEU OF RETAINAGE

A. The CONTRACTOR may elect to receive 100 percent of payments due under the Project Manual, from time to time, without retention from any portion of the payment by the OWNER by depositing securities of equivalent value with the OWNER in accordance with the provisions of Section 22300 of the California Public Contract Code. Such securities, if deposited by the CONTRACTOR, shall be valued by the OWNER whose decision on the valuation under this section shall be final. Securities eligible for investment under this shall be limited to those listed in Section 22300 of the California Public Contract Code and Section 16430 of the California Government Code.

### 3.03 TRAVEL AND SUBSISTENCE PAYMENTS

- A. As required by Section 1773.8 of the California Labor Code, the CONTRACTOR shall pay travel and subsistence payments to each worker needed to execute the Work as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with this Section.

### 3.04 PREVAILING WAGE RATES

- A. As required by Section 1770 et. seq. of the California Labor Code, the CONTRACTOR shall pay not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations. Copies of such prevailing rate per diem wages are on file at the office of the OWNER, which shall be made available to any interested party on request. The CONTRACTOR shall post a copy of such determination at each job site.
- B. As provided in Section 1775 of the California Labor Code, the CONTRACTOR shall, as a penalty to the OWNER, forfeit \$50.00 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the Director for such work under the contract by it or by any subcontractor under it.

### 3.05 RETENTION AND INSPECTION OF PAYROLL RECORDS

- A. As required under the provision of Section 1776 of the California Labor Code, 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 by journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. The payroll records shall be certified and shall be available for inspection at all reasonable hours at the principal office of the CONTRACTOR under certain specified conditions.

### 3.06 WORKING HOURS

- A. The CONTRACTOR shall comply with all applicable provisions of Section 1810 and 1815 inclusive of the California Labor Code relating to working hours. The CONTRACTOR shall, as a penalty to the OWNER, forfeit \$25.00 for each worker employed in the execution of the Contract by the CONTRACTOR or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one (1) calendar day or forty (40) hours in any one (1) calendar week, unless such workers receive compensation for all such hours worked in excess of eight (8) hours at no less than 1-1/2 times the basic rate of pay.

### 3.07 WORKER'S COMPENSATION

- A. In accordance with the provisions of Section 1860 of the California Labor Code, the CONTRACTOR's attention is directed to the requirement that, in accordance with the provisions of Section 3700 of the California Labor Code, every CONTRACTOR will be required to secure the payment of compensation of his or her employees.
  
- B. In accordance with the provisions of Section 1861 of the California Labor Code, each CONTRACTOR to whom a public works contract is awarded shall sign and file with the awarding body, the following certification prior to performing the work of the contract: "I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

**END OF DOCUMENT**

# **CONSTRUCTION SPECIFICATIONS**

## **MODULE 6 BASE LINER SYSTEM**

### **DIVISION 1 – GENERAL REQUIREMENTS**

#### **DIVISION 2 – SITE WORK**



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**SECTION 01010**  
**SUMMARY OF WORK**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. The purpose of the project is to complete the construction of the Module 6 base liner system at the Monterey Peninsula landfill. The project includes, but is not limited to, the following:
1. Surveying
  2. Controlling dust, groundwater, stormwater and erosion
  3. Preparation of site, including implementation of traffic control and protective measures associated with the construction activities as necessary to ensure site safety
  4. Utility coordination, relocation, protection and extension as necessary to complete the project
  5. Clearing, stripping and grubbing
  6. Removal of existing drain pipes and floating dock
  7. Construction of a groundwater underdrain
  8. Excavation and earthfill placement
  9. Abandonment of water supply well
  10. Construction of compacted clay liner test pad
  11. Supply and install soil liner components (compacted clay, drainage gravel, LCRS drainage layer and operations soil layer) for the base liner system
  12. Installation of lysimeters
  13. Supply and install geosynthetic liner components (HDPE geomembrane, GCL, and geotextile)
  14. Installation of HDPE pipe for the groundwater underdrain and LCRS
  15. Construct drainage and erosion controls
  16. Hydroseed disturbed areas
  17. Preparation of as-built drawings
- B. The CONTRACTOR will be required to complete the work as shown on the Construction Drawings within the contract time frame.



## **1.02 CODES AND REGULATIONS**

- A. CONTRACTOR must meet requirements of applicable laws, statutes, regulations, ordinances, safety regulations of federal, state, city, and county jurisdictions and as may be further referenced in the Contract Documents.
- B. CONTRACTOR must comply with provisions of federal, state, and local statutes, ordinances, and regulations dealing with the prevention of environmental pollution of natural resources that affect the project.
- C. If the CONTRACTOR must undertake additional work due to the enactment of new or the amendment of existing statutes, ordinances, and regulations dealing with the project, the CONTRACTOR will submit a change order request setting forth the additional work that must be undertaken. The change order will not invalidate the Contract and there will be, in addition to a reasonable extension of contract time, if necessary, a reasonable adjustment in the contract price to compensate the CONTRACTOR for all costs and expenses incurred, including overhead, and profit, as a result of the additional work.

## **1.03 MONITORING AND TESTING**

- A. All tests called for in the Construction Specifications or deemed necessary by the OWNER will be performed by the OWNER or his authorized representative except when indicated otherwise in the Construction Specifications.

## **1.04 SITE CONDITIONS**

- A. CONTRACTOR'S Staging Area: An area will be set aside on the project property for the CONTRACTOR's use as a staging area for workers, equipment, and materials. CONTRACTOR must restore the staging area to its original condition at the conclusion of work, or to a condition acceptable to the OWNER.
- B. Disposal of Waste Material: Burning will not be permitted on the site. CONTRACTOR must remove material from the site which cannot be placed in on-site waste areas as determined by the OWNER. CONTRACTOR must dispose waste in accordance with all federal, state, and local laws relating to fire prevention, air pollution control, and other restrictions. Use of the on-site waste disposal units must be approved by the OWNER.
- C. Fire Prevention and Protection: Perform all work in a fire-safe manner. Comply with applicable local and State fire prevention regulations.

## **1.05 CONSTRUCTION WATER**

- A. CONTRACTOR is responsible for providing pumps and equipment as necessary to use available on-site water. The OWNER has an on-site construction water stand that may be used by the contractor to the extent that CONTRACTOR'S use does not interfere with OWNER'S operations.

## **1.06 ROLES AND RESPONSIBILITIES OF PARTIES**

- A. The roles and responsibilities of the various parties involved in construction, including but not limited to, the OWNER, CONTRACTOR, GEOSYNTHETICS INSTALLER or INSTALLER, CQA ENGINEER AND CQA MONITOR, PROJECT MANAGER, AND DESIGN ENGINEER are defined in the Project CQA Plan.
- B. CONTRACTOR shall be responsible for offloading all geosynthetic materials delivered to the site. No separate payment will be provided for this work.
- C. CONTRACTOR is solely responsible for the security of their equipment and materials (whether they are supplied by the CONTRACTOR, INSTALLER, or OWNER) throughout the duration of the project.

### **PART 2: PRODUCTS**

Not Used

### **PART 3: EXECUTION**

Not Used

**END OF SECTION**

**SECTION 01016  
HEALTH AND SAFETY CONSIDERATIONS**

**PART 1: GENERAL**

**1.01 SECTION INCLUDES**

- A. Preparing project Site Specific Health & Safety Plan.
- B. Implementing project Site Specific Health & Safety Plan.

**1.02 OTHER**

- A. The exact nature of materials and wastes disposed of at the landfill is unknown. The possibility exists of encountering gases and/or other substances during the Work that may be potentially hazardous to the safety and health of personnel, especially those working in the vicinity of open excavations and pipes venting gases.
- B. The CONTRACTOR is advised that decomposing refuse produces landfill gas which is approximately 50 percent methane (natural gas) by volume. Landfill gas is colorless, can be odorless, contains hydrogen sulfide, toxic or hazardous materials, is combustible, and may contain no oxygen. Landfill gas can also migrate through several thousand feet of soil adjacent to landfills. The CONTRACTOR is advised of the need for precautions against fire, explosion, and asphyxiation when working on the landfill and in or near the excavations on the project site.

**1.03 SUBMITTALS**

- A. CONTRACTOR shall submit with bid documents, a general Health and Safety Plan to the OWNER, for informational purposes only.
- B. CONTRACTOR shall submit, after Notice of Award, but prior to pre-construction meeting, a Site Specific Health & Safety Plan for acceptance by the OWNER. Acceptance of the plan by OWNER does not release the CONTRACTOR of liability in the event of an accident or injury, nor does it place any liability on the OWNER.

**PART 2: PRODUCTS**

Not Used

**PART 3: EXECUTION**

**3.01 CONSTRUCTION**

- A. CONTRACTOR shall be solely and completely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Take all necessary precautions for the safety of, and provide the necessary protection to prevent injury or loss to all CONTRACTOR employees.
- B. CONTRACTOR shall comply with all applicable California OSHA regulations. The CONTRACTOR's Site-Specific Health and Safety plan does not supersede or in any way relieve the CONTRACTOR of obligations under any applicable Occupational Safety and Health Agency (OSHA) regulations including, but not limited to, 29 CFR 1910: Occupational Safety and Health Standards and 29 CFR 1926: Health and Safety Regulations for Construction.

- C. CONTRACTOR shall be responsible for ensuring that all Subcontractors abide with the contents of this section.
- D. CONTRACTOR shall become familiar with the potential hazardous health and safety conditions and risks associated with working in or near decomposing refuse at a landfill site and take the applicable precautions for work at the project site.
- E. CONTRACTOR shall be solely responsible for determining and providing an appropriate health and safety program, including monitoring, equipment, plans in the event of problems and/or emergencies, and other related items as needed.

### **3.02 SITE RESTRICTIONS**

- A. Smoking or vaping will not be permitted at the project site.
- B. High-visibility safety vests, hard hats, and steel-toed boots shall be worn by all personnel during work. Other personnel protective equipment shall be worn as necessary for the type of work being performed.
- C. CONTRACTOR shall adhere to the site speed limit at all times.

### **3.03 SITE SPECIFIC HEALTH AND SAFETY PROGRAM**

- A. Develop and implement a Health and Safety Program in accordance with all applicable California OSHA regulations, 29 CFR 1910 and 29 CFR 1926, and any other applicable federal state or local agency regulations or requirements. If any of these requirements are in conflict, the more stringent requirement shall apply. CONTRACTOR's failure to be thoroughly familiarized with the aforementioned safety and health provisions shall not relieve the CONTRACTOR of responsibility for full compliance with the obligations and requirements set forth herein. The CONTRACTOR's Health and Safety Plan shall include as appropriate, but shall not be limited to, the items required by OSHA 29 CFR 1910.120:
  - 1. Organizational structure
  - 2. Comprehensive work plan
  - 3. Hazard analysis for each site task
  - 4. Employee training
  - 5. Personal protective equipment to be used for each task
  - 6. Medical surveillance
  - 7. Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used
  - 8. Site control measures
  - 9. Decontamination procedures
  - 10. Emergency response plan
  - 11. Confined space entry procedures (if applicable)
  - 12. Spill containment program

- B. Provide to the OWNER, prior to the start of any field activities, certification that requirements of this Section have been met. This certification shall include:
1. Documentation of the training required under OSHA 29 CFR 1910.120 for the site personnel and supervisors.
  2. Documentation of current first aid and CPR training for at least two employees per work shift.
  3. Documentation of participation of all site personnel in a medical surveillance program in accordance with OSHA 29 CFR 1910.120.
  4. Documentation that all site personnel expected to wear respiratory protection have been medically examined and approved for wearing such equipment and have been fit tested in accordance with OSHA regulations.
- C. The CONTRACTOR shall maintain a copy of the Site-Specific Health and Safety Plan at the site for the duration of the Work.
- D. If the OWNER observes any of the CONTRACTOR's employees or Subcontractors engaging in an unsafe act or procedure that may result in serious injury or death to the person performing the act/procedure, or to any other person, the OWNER shall have the right, but not the duty, to stop the Work until the condition is corrected. The CONTRACTOR shall be held responsible for any increased costs that result from this work stoppage.
- E. The CONTRACTOR shall be responsible for holding mandatory weekly safety meetings on the site. The OWNER shall be notified of the time and place for the meetings, so they may attend if they desire. Meetings shall reiterate all safety measures to be taken and shall discuss any violations committed and preventative measures. The CONTRACTOR shall provide the OWNER with a copy of the minutes and the attendance upon request.
- F. The CONTRACTOR shall provide all personnel working on the project with required orientation and training on the potential hazards and the appropriate use of safety equipment.
- G. The CONTRACTOR shall meet applicable OSHA health and safety requirements at all times during drilling and excavations. The CONTRACTOR shall secure all work areas and close any open holes or excavations when not working by marking with ribbons and cones, and posting of signs indicating to the public to stay away due to the existence of deep open excavations.
- H. The CONTRACTOR shall provide continuous LEL gas detection monitoring and oxygen monitoring in enclosed areas prone to gas build-up or during drilling and 4-gas detection monitoring when performing work in or adjacent to Modules 4 and 5.

**END OF SECTION**

**SECTION 01025  
MEASUREMENT AND PAYMENT**

**PART 1: GENERAL**

**1.01 SECTION INCLUDES**

- A. Methods for measuring and calculating quantities for all contract bid items.
- B. Basis of payment for all contract bid items.
- C. Values of Unit Prices.
- D. Description of payment method for extra work or changes.
- E. Discussion of payment for rejected materials.
- F. Description of payment for force account work.
- G. Measurement and payment descriptions for contract bid items.

**1.02 MEASUREMENT**

- A. Performed according to United States Standard measure.
- B. Based on actual units installed or neat line dimensions of work completed.

**1.03 CALCULATION OF QUANTITIES**

- A. Progress Payment Quantities:
  - 1. CONTRACTOR will compute all quantities of Work performed, or of materials and equipment delivered to the site for progress payment purposes.
  - 2. OWNER may at any time verify quantities calculated by CONTRACTOR.
- B. Final Payment Quantities: CONTRACTOR will compute all quantities of Work performed, or of materials and equipment delivered to the site for final payment purposes. Calculation of final quantities will be as described in Paragraph 1.11. The OWNER may verify all quantities.
- C. Earthwork Quantities: Quantities of earthwork will be measured in their final installed location only. It is anticipated that soil processing, and stockpiling may require multiple handling of materials. CONTRACTOR shall include any associated costs for multiple handling of materials or temporary stockpiling in bid items for other specified work.

**1.04 PAYMENT**

- A. In accordance with lump sum, unit prices, or force account rates shown on the Base Bid Schedule.
- B. Includes all costs for overhead and profit and for supplying materials, labor, equipment, and tools, necessary to complete the Work in accordance with the Construction Specifications, Drawings, and Contract Conditions.

## **1.05 VALUES OF UNIT PRICES**

- A. The number of units and quantities contained in the Bid Schedule of Unit Price Work are approximate only, and final payment will be made for the actual number of units and quantities incorporated in the work or made necessary to complete the project.
- B. In the event that work and materials or equipment are required to be furnished to a greater or lesser extent than is indicated by the Contract Documents, such work and materials or equipment will be furnished in greater or lesser quantities.
- C. When the quantity of a pay item in this contract is an estimated quantity and where the actual quantity of such pay item varies more than twenty five percent (25%) above or below the estimated quantity stated in this contract, an equitable adjustment shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above one hundred twenty five percent (125%) or below seventy-five percent (75%) of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the OWNER shall, upon receipt of a written request for an extension of time within ten days from the beginning of such delay, if within such further period of time which may be granted by the OWNER prior to the date of final settlement of the Contract, ascertain facts and make such adjustments for extending the completion date as in the OWNER's judgment the findings justify.

## **1.06 CHANGES AND EXTRA WORK**

- A. Changes and extra work will be measured and paid for in accordance with the requirements of this Section, or as provided in written change orders.

## **1.07 REJECTED MATERIALS**

- A. Quantities of material wasted or disposed of in a manner not called for in the Construction Specifications; rejected loads of material, including material rejected after it has been placed by reasons of the failure of the CONTRACTOR to conform to the provision of the Specifications; material not unloaded from the transporting vehicle; or material placed outside the limits indicated by the Construction Drawings or established by the OWNER; or material remaining on hand after completion of the Work, will not be paid for, and such quantities will not be included in the final total quantities. No compensation will be permitted for loading, hauling, and disposing of rejected material.

## **1.08 FORCE ACCOUNT WORK**

- A. Payment for Force Account work will be determined as follows:
  - 1. Labor
    - a. Payment for labor will be based on the Force Account Labor Rate Schedule submitted with the bid.
    - b. Payment constitutes full compensation for labor including wages, benefits, overhead, and profit for each individual.
  - 2. Equipment
    - a. Payment for equipment will be based on the Force Account Equipment Rate Schedule submitted with the bid.

- b. Payment constitutes full compensation for supplying equipment and includes all costs for maintenance, fuel, insurance, overhead, profit and any other costs necessary to provide and operate the equipment. Payment does not include operator labor cost.
- 3. Materials
  - a. Payment for materials will be paid at cost plus 10 percent.
  - b. Payment will be based on invoices from suppliers indicating cost to CONTRACTOR.
  - c. Where invoices are not available, a unit cost must be approved by the OWNER prior to the use of the material.
- 4. Standby Time
  - a. Payment for standby time will be based on the Force Account Labor Rate, Force Account Equipment Rate (minus an agreed upon percentage for fuel, maintenance and wear and tear) and Overhead Profit Percentage.
- 5. Where requested by the OWNER, force account work will be based on three bids from suppliers or Subcontractors.

#### **1.09 DEWATERING**

- A. No measurement or payment will be made for dewatering.
- B. Include cost for this work in other bid items. Dewatering includes, but is not limited to:
  - 1. Constructing any necessary temporary storm water drainage features.

#### **1.10 TEMPORARY CONTROLS**

- A. No measurement or payment will be made for temporary controls, including but not limited to dust, pollution, traffic, temporary erosion, sediment control, and other temporary controls listed in Section 01500.
- B. Include cost for all temporary controls in other bid items.

#### **1.11 MEASUREMENT AND PAYMENT DESCRIPTIONS FOR CONTRACT BID ITEMS**

##### **Bid Item 1 – Mobilization/Demobilization**

- 1. Basis of Measurement: Lump Sum (LS)
- 2. Basis for Payment: Includes mobilization and demobilization of equipment, materials, and labor as required to complete the Work, prepare CONTRACTOR's staging area including all temporary control facilities and temporary controls (including but not limited to pollution, dust, traffic, and safety controls), set-up and maintenance of a field office, and any other administrative costs necessary to complete Work described in Division 1. Includes all labor and equipment necessary to complete the Work described in Section 02020. Fifty percent (50%) of the mobilization/demobilization will be paid after mobilization and completion of 25% of the Work. The balance of the payment will be made after submittal to and acceptance by OWNER of the as-built record drawing. The total amount quoted for mobilization/demobilization in the Base Bid Schedule shall not exceed ten (10) percent of the total net base bid price.



### **Bid Item 2 – Layout of Work and Surveys**

1. Basis of Measurement: Lump Sum (LS).
2. Basis for Payment: Includes surveying services necessary to complete the Work described in Section 01052. Surveys include layout of Work, as-built documentation, and measurement of pay quantities.

### **Bid Item 3 – Clearing, Grubbing, and Stripping**

1. Basis of Measurement: Lump Sum (LS).
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to perform clearing, grubbing, and stripping in accordance with Section 02110 and removal of any debris and other materials from the work area.

### **Bid Item 4 – Excavation and Stockpiling**

1. Basis of Measurement: Cubic Yard (CY). Measurement shall be based on before and after as-built surveys of the excavation.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to perform excavation from the Module 6 footprint, perimeter channel and stormwater pond and stockpiling in accordance with Section 02200 and the Construction Drawings.

### **Bid Item 5 – Groundwater Underdrain**

1. Basis of Measurement: Lineal Foot (LF). Measurement shall be based on before and after as-built surveys.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to excavate, place drainage gravel and HDPE pipe in accordance with Sections 02200, 02223, 02725 and the Construction Drawings.

### **Bid Item 6 – Engineered Fill**

1. Basis of Measurement: Cubic Yard (CY). Measurement shall be based on before and after as-built surveys of engineered fill.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to perform placement of compacted engineered fill in accordance with Section 02200 and the Construction Drawings.

### **Bid Item 7 – Anchor Trench Backfill**

1. Basis of Measurement: Lineal Foot (LF). Measurement shall be based on the as-built lineal footage of anchor trench length.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to perform placement of compacted engineered fill in accordance with Section 02200 and the Construction Drawings.

### **Bid Item 8 – Compacted Clay Liner Test Pad**

1. Basis of Measurement: Lump Sum (LS).

2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to construct the compacted clay liner test pad as described in Section 02222 and the Construction Drawings.

#### **Bid Item 9 – Compacted Clay Liner**

1. Basis of Measurement: Cubic Yard (CY). Measurement shall be based on before and after as-built surveys of completed compacted clay liner.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals necessary to construct the compacted clay liner as described in Section 02222 and as shown on the Construction Drawings. Includes the stockpiling, excavation, placement, and grading of the compacted clay liner.

#### **Bid Item 10 – Lysimeters**

1. Basis of Measurement: Lump Sum (LS).
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to supply and install the vacuum lysimeters as shown in the Construction Drawings and Section 02810.

#### **Bid Item 11 – LCRS Drainage Gravel**

1. Basis of Measurement: Cubic Yard (CY). Measurement shall be based on before and after as-built surveys.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals necessary to construct the LCRS drainage gravel as described in Section 02223 and as shown on the Construction Drawings. Includes the supply, stockpiling, placement, and grading of the LCRS drainage gravel.

#### **Bid Item 12 – LCRS Drainage Layer**

1. Basis of Measurement: Cubic Yard (CY). Measurement shall be based on before and after as-built surveys of the LCRS drainage layer.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals necessary to complete the Work as described in Section 02223 and as shown on the Construction Drawings. Includes the supply, excavation, placement, and grading of the LCRS drainage layer.

#### **Bid Item 13 – Operations Layer**

1. Basis of Measurement: Cubic Yard (CY). Measurement shall be based on before and after as-built surveys of the completed operations layer.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals necessary to complete the Work as described in Section 02200 and as shown on the Construction Drawings. Includes the supply, stockpiling, placement, and grading of the Operations Layer.

#### **Bid Item 14 – Single-Sided Textured HDPE 60-mil Geomembrane**

1. Basis of Measurement: Square Foot (SF). Measurement shall be based on before and after as-built surveys of installed geomembrane. Material placed in excess of design in anchor trenches shall not be included in the measurement. Slopes shall be taken into account when computing the surface area.

2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to supply and install the single-sided textured HDPE 60-mil geomembrane in accordance with Section 02751 and the Construction Drawings.

**Bid Item 15 – Double-Sided Textured HDPE 60-mil Geomembrane**

1. Basis of Measurement: Square Foot (SF). Measurement shall be based on before and after as-built surveys of installed geomembrane. Material placed in excess of design in anchor trenches shall not be included in the measurement. Slopes shall be taken into account when computing the surface area.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to supply and install the double-sided textured HDPE 60-mil geomembrane in accordance with Section 02751 and the Construction Drawings.

**Bid Item 16 – Geosynthetic Clay Liner**

1. Basis of Measurement: Square Foot (SF). Measurement shall be based on before and after as-built surveys of the installed geosynthetics clay liner.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to supply and install the geosynthetic clay liner in accordance with Section 02756 and the Construction Drawings. Material placed in excess of design in anchor trenches shall not be included in the measurement. Slopes shall be taken into account when computing the surface area.

**Bid Item 17 – Geotextile**

1. Basis of Measurement: Square Foot (SF). Measurement shall be based on before and after as-built surveys of installed geotextile. Material placed in excess of design in anchor trenches shall not be included in the measurement. Slopes shall be taken into account when computing the surface area.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to supply and install the geosynthetic clay liner in accordance with Section 02752 and the Construction Drawings.

**Bid Item 18 – Sacrificial Geomembrane**

1. Basis of Measurement: Square Foot (SF). Measurement shall be based on before and after as-built surveys of installed sacrificial geomembrane. Material placed in excess of design in anchor trenches shall not be included in the measurement. Slopes shall be taken into account when computing the surface area.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to supply and install the geosynthetic clay liner in accordance with Section 02751 and the Construction Drawings.

**Bid Item 19 – LCRS 6-inch Dia. HDPE Pipe**

1. Basis of Measurement: Lineal Foot (LF). Measurement shall be based on before and after as-built surveys of installed HDPE pipe.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to supply and install solid and perforated, 6-inch dia. HDPE pipe in accordance with Section 02725 and the Construction Drawings.

**Bid Item 20 – LCRS 18-inch Dia. HDPE Riser Pipe**

1. Basis of Measurement: Lump Sum (LS).
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to supply and install solid and perforated, 18-inch dia. HDPE riser pipe in accordance with Section 02725 and the Construction Drawings.

**Bid Item 21 – Liner Tie-In**

1. Basis of Measurement: Lineal Foot (LF). Measurement shall be based on before and after as-built surveys on completed liner tie-in.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to excavate, expose, clean, and tie all soil and geosynthetic components to the existing Module 4 and Module 5 liner systems as described in Section 02200, 02751, 07756, 02723 and the Construction Drawings.

**Bid Item 22 – Rain Gutter**

1. Basis of Measurement: Lump Sum (LS)
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to supply and install the HDPE rain gutter as shown in the Construction Drawings.

**Bid Item 23 – Temporary Sand Bag Lines**

1. Basis of Measurement: Lump Sum (LS)
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to supply and construct the temporary sand bag lines over the sacrificial geomembrane as shown in the Construction Drawings.

**Bid Item 24 – Erosion Control Blanket and Straw Wattles**

1. Basis of Measurement: Square Foot (SF) Measurement shall be based on before and after as-built surveys of the installed erosion control blanket. There will be no separate measurement for straw wattles. Cost of supplying and installing straw wattles shall be included in the unit price for the erosion control blanket.
2. Basis for Payment: Basis for Payment: Includes all labor, materials, equipment, and incidentals necessary to supply and install erosion control blanket and straw wattles in accordance with Section 02720 and as shown in the Construction Drawings.

**Bid Item 25 – Hydroseeding**

1. Basis of Measurement: Lump Sum (SF) Measurement shall be based on before and after as-built surveys of the hydroseeded area.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to hydroseed areas per Section 02720 which are disturbed by CONTRACTOR's construction activities including fill slopes and stockpile slopes.

**Bid Item 26 – Culverts and Miscellaneous Drainage Related Work**

1. Basis of Measurement: Lump Sum (LS)

2. Basis for Payment: Includes all labor, materials, equipment, and incidentals to to remove drainage pipes, the floating dock and install any new drainage pipes as shown in the Construction Drawings.

**Bid Item 27 – Calpine Road Realignment – Excavation**

1. Basis of Measurement: Cubic Yard (CY). Measurement shall be based on before and after as-built surveys of the excavation area.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals necessary to complete the Work as described in Section 02200 and as shown on the Construction Drawings.

**Bid Item 28 – Calpine Road Realignment – Engineered Fill**

1. Basis of Measurement: Cubic Yard (CY). Measurement shall be based on before and after as-built surveys of the placed engineered fill.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals necessary to complete the Work as described in Section 02200 and as shown on the Construction Drawings. Includes all work necessary to haul, place, compact and grade the Engineered Fill

**Bid Item 29 – Calpine Road Realignment – Pavement**

1. Basis of Measurement: Square Foot (SF). Measurement shall be based on before and after as-built surveys of the installed pavement.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals necessary to complete the Work as described in Section 02200, Section 02510, and as shown on the Construction Drawings. Includes all work necessary to supply haul, place, compact and grade the aggregate base and asphaltic concrete pavement

**Bid Item 30 – Module 6 Recycled Road Base and Geotextile Fabric**

1. Basis of Measurement: Square Foot (SF). Measurement shall be based on before and after as-built surveys of the installed road base. No separate measurement will be made for the geotextile fabric. The recycled road base area will be used for payment of the geotextile fabric.
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals necessary to complete the Work as described in Section 02200 and as shown on the Construction Drawings. Includes all work necessary to supply, and install the geotextile fabric under the road base, and to haul, place, compact and grade the road base. OWNER shall provide source of road base on site.

**Bid Item 31 – Water Supply Well Abandonment**

1. Basis of Measurement: Basis of Measurement: Lump Sum (LS)
2. Basis for Payment: Includes all labor, materials, equipment, and incidentals necessary to complete the Work as described in Section 02850 and as shown on the Construction Drawings. Includes all work necessary to prepare and submit permit application, coordinate inspection with Monterey County Health Department, and to complete the abandonment of the well.

**Bid Item 32 – Bonds**

1. Basis of Measurement: Lump Sum (LS)
2. Basis for Payment: Provide payment and performance bonds in accordance with Contract Documents.

**PART 2: PRODUCTS**

Not Used

**PART 3: EXECUTION**

Not Used

**END OF SECTION**

**SECTION 01035  
MODIFICATION PROCEDURES**

**PART 1: GENERAL**

**1.01 SECTION INCLUDES**

- A. Field Orders.
- B. Proposal Requests.
- C. Work Change Directive.
- D. Change Orders.

**1.02 CHANGE PROCEDURES**

- A. The OWNER will issue Field Orders for minor changes in the Work not involving an adjustment to Contract Price or Contract Time.
- B. The OWNER may issue a Proposal Request which includes a detailed description of a proposed change with supplementary or revised Construction Drawings and Specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required, and the period of time during which the requested price will be considered valid. CONTRACTOR must prepare and submit a Proposal with cost estimate within 5 business days after receiving proposal request.
- C. CONTRACTOR may request a change by submitting a Proposal to OWNER, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, the effect on the Contract Price and Contract Time, and a statement describing the effect on Work by separate or other CONTRACTORS.
- D. The OWNER may issue a Work Change Directive for any change which, if not processed expeditiously, might delay the Project. This is not a Change Order, but only a directive to proceed with Work that may be included in a subsequent Change Order.
- E. Changes affecting Contract Price or Contract Time, resulting under paragraphs 1.02.B, C, and D of this Section, will be processed as a Change Order.
- F. CONTRACTOR will prepare Change Orders for signature by all parties.

**PART 2: PRODUCTS**

Not Used

**PART 3: EXECUTION**

Not Used

**END OF SECTION**

**SECTION 01041  
PROJECT COORDINATION AND MEETINGS**

**PART 1: GENERAL**

**1.01 SECTION INCLUDES**

- A. Project coordination by the PROJECT MANAGER.
- B. Construction mobilization.
- C. Meetings.
- D. Schedules.
- E. Submittals.
- F. Coordination drawings.
- G. Closeout procedures.

**1.02 PROJECT MANAGER**

- A. The OWNER will provide a PROJECT MANAGER. The PROJECT MANAGER represents the OWNER. Any reference to coordination or communication, both written and verbal, with the OWNER, must be through the PROJECT MANAGER.
- B. The PROJECT MANAGER also represents the various engineers and consultants responsible for project design. All communication with the Engineers and consultants must go through the PROJECT MANAGER.
- C. PROJECT MANAGER: To be identified at the pre-construction meeting.

**1.03 CONSTRUCTION COORDINATION**

- A. Cooperate with the PROJECT MANAGER in allocation of mobilization areas of site; for field offices and sheds, for access, traffic, and parking facilities.
- B. During construction, coordinate use of site and facilities through the PROJECT MANAGER.
- C. Comply with PROJECT MANAGER's procedures for intra-project communications; submittals, reports and records, schedules, coordination of drawings, and recommendations; and resolution of ambiguities and conflicts.
- D. Comply with instructions of the PROJECT MANAGER for use of temporary utilities and construction facilities.
- E. Coordinate field engineering and layout work under instructions of the PROJECT MANAGER.



#### **1.04 SCHEDULES**

- A. Submit preliminary progress schedule in accordance with Section 01300.
- B. After the OWNER's review, revise and resubmit schedule to comply with revised progress schedule.
- C. During progress of work revise and resubmit in accordance with Section 01300.

#### **1.05 MEETINGS**

- A. Pre-construction meeting
  - 1. OWNER will schedule a preconstruction meeting and location after Notice of Award.
  - 2. Attendance:
    - a. CONTRACTOR's On-Site Field Superintendent.
    - b. Any Subcontractors or Supplier's representatives whom CONTRACTOR may desire to invite or OWNER may request.
    - c. DESIGN ENGINEER.
    - d. CQA ENGINEER, CQA Monitor.
    - e. OWNER's Representatives.
    - f. PROJECT MANAGER.
  - 3. An agenda will be prepared by the PROJECT MANAGER and include the following:
    - a. Presentation of a proposed construction progress schedule and submittals per Section 01300.
    - b. Review of critical work sequencing.
    - c. Required bonds and insurance certifications prior to Notice to Proceed.
    - d. Liquidated Damages.
    - e. Procedures for handling submittals and proposed substitutions.
    - f. Direction of correspondence, coordinating responsibility between CONTRACTOR and OWNER, and defining lines of communication and authority.
    - g. Weekly progress meetings.

- h. Establish procedures for reviewing test data and correcting non-conforming work.
  - i. Procedures for processing applications for payment.
  - j. Procedures for field decisions and change orders.
  - k. Health and safety.
  - l. Site security.
  - m. OWNER's site regulations.
  - n. Review the Construction Drawings, Construction Specifications, CQA plan, and related issues.
  - o. Provide all parties with relevant documents.
  - p. Review responsibilities for each party, and key personnel.
  - q. Define lines of communication and authority.
  - r. Establish reporting and documenting procedures.
  - s. Conduct a site inspection to discuss work area, stockpile areas, lay down areas, access roads, haul roads, and related items.
4. The meeting will be documented by the CQA ENGINEER in the form of meeting minutes. Copies of the minutes and relevant documents will be provided to all parties, following the meeting.

**B. Weekly Progress Meetings.**

- 1. PROJECT MANAGER will hold progress meetings at the project site once per week and additionally as required. PROJECT MANAGER will coordinate and schedule meeting dates and times and notify parties that need to attend.
- 2. Attendance:
  - a. CONTRACTOR's superintendent.
  - b. Subcontractors as appropriate to agenda.
  - c. Suppliers as appropriate to agenda.
  - d. CQA MONITOR.
  - e. PROJECT MANAGER.
- 3. Meeting requirements:

- a. PROJECT MANAGER will administer and document the following general requirements for progress meetings:
  - i. Prepare agenda for meetings.
  - ii. Make physical arrangements for meetings.
  - iii. Preside at meetings.
- b. The CQA MONITOR will record significant proceedings and decisions of meeting and reproduce and distribute copies of meeting record within 3 days after each meeting to participants in meeting and to parties affected by decisions made at meeting.
- c. CONTRACTOR shall prepare and distribute a brief report at each weekly meeting that includes:
  - i. Summary and progress to date.
  - ii. Potential problems and impacts to the project.
  - iii. Status of Submittals.
  - iv. Status of Requests for Information.
  - v. Summary of following week's activities.
  - vi. Updated schedule.

This report will form part of the meeting minutes.

4. Suggested Agenda:

- a. Review and approval of record minutes of previous meeting.
- b. Health and safety.
- c. Review of work progress since previous meeting with weekly quantities.
- d. Progress planned for next week.
- e. Field decisions.
- f. Problems which impede work schedule.
- g. Anticipated future problems.
- h. Maintenance of quality and work standards (QA/QC).
- l. Review of as-built documentation.
- j. Review of submittal schedule and status of submittals.

- k. Pending changes and substitutions.
- l. Review of off-site delivery schedules.
- m. Review and revisions to project schedule.
- n. Applications for payment.
- o. Erosion and sediment control.
- p. Other business.

**C. DAILY PROGRESS MEETINGS**

1. An informal progress meeting is suggested daily before the start of work. At a minimum, this meeting will be attended by the CQA MONITOR and CONTRACTOR. The purpose of this meeting is to:
  - a. Review scheduled work activities.
  - b. Discuss problems and resolutions.
  - c. Review test data.
  - d. Discuss the CONTRACTOR's personnel and equipment assignments for the day.
  - e. Document work quantities from the previous day.
  - f. Document CONTRACTOR and Subcontractor personnel on-site.
2. Review the previous day's activities and accomplishments. This meeting will be documented by the CQA MONITOR in his daily report.

**D. OTHER MEETINGS**

1. The PROJECT MANAGER will hold other meetings at his discretion during the Contract.

**1.06 SUBMITTALS**

- A. Submit preliminary shop drawings, product data and samples in accordance with Section 01300 for review and compliance with Contract Documents, for field dimensions and clearances, for relation to available space, and for relation to work of separate contracts. Revise and resubmit as required.
- B. Submit applications for payment for transmittal and review to OWNER.
- C. Submit requests for interpretation of Contract Documents, and obtain instructions through the PROJECT MANAGER.

- D. Process requests for substitutions, and change orders, through the PROJECT MANAGER.
- E. Deliver closeout submittals for review and preliminary inspection reports, for transmittal to OWNER.

**1.07 COORDINATION DRAWINGS**

- A. Provide information required by PROJECT MANAGER for preparation of coordination drawings.
- B. Review drawings prior to submission to OWNER.

**1.08 CLOSEOUT PROCEDURES**

- A. Notify PROJECT MANAGER when Work is considered ready for Substantial Completion. Accompany PROJECT MANAGER on preliminary inspection to determine items to be listed for completion or correction in CONTRACTOR's Notice of Substantial Completion.
- B. Comply with PROJECT MANAGER's instructions to correct items of work listed in executed Certificates of Substantial Completion and for access to OWNER occupied areas.
- C. Notify PROJECT MANAGER when Work is considered finally complete. Accompany PROJECT MANAGER on preliminary final inspection.
- D. Comply with PROJECT MANAGER's instructions for completion of items of Work determined by OWNER's final inspection.

**PART 2: PRODUCTS**

Not Used

**PART 3: EXECUTION**

Not Used

**END OF SECTION**

**SECTION 01051  
GRADES, LINES, AND LEVELS**

**PART 1: GENERAL**

**1.01 WORK INCLUDES**

- A. Vertical control for construction.
- B. Layout of areas of work.
- C. Location of existing utilities.

**1.02 QUALITY CONTROL**

- A. CONTRACTOR shall engage services of an independent surveyor, licensed in the state of California, to perform all survey work. Surveyor shall carry and supply documentation of legal and OWNER's minimum limits.

**PART 2: PRODUCTS**

**2.01 VERTICAL CONTROL**

- b. Vertical control shall be temporary benchmarks established around the site at locations to be agreed upon by the OWNER and CONTRACTOR.
- B. Promptly inform the OWNER when a temporary benchmark has been lost, destroyed, or damaged.

**2.02 AREAS OF WORK**

- A. Areas of work shall be clearly marked by flagged 4-ft high wooden stakes. A brief description of the spot that the stake is marking shall be written on the post.

**2.03 EXISTING UTILITIES**

- A. Call local utility location service a minimum of three days before starting construction to mark utilities.
- B. The location of the existing utilities shall be clearly marked by flagged 4-ft high wooden stakes at 100-ft intervals and paint on the ground surface.

**PART 3: EXECUTION**

**3.01 SURVEYING**

- A. Establish temporary benchmarks in locations agreed upon by the OWNER and CONTRACTOR. Protection of these benchmarks shall be the responsibility of the CONTRACTOR. If reestablishment of vertical or horizontal control is required, this shall occur at no cost to the OWNER.
- B. Use the temporary benchmarks for construction.
- C. Surveyor shall perform all surveying necessary to control all items of construction.
- D. Surveyor shall document construction of all bid items for record and payment purposes.

- E. OWNER may make additional independent surveys at any time. Such surveys will be at OWNER's expense.

**- END OF SECTION -**

**SECTION 01052  
LAYOUT OF WORK AND SURVEYS**

**PART 1: GENERAL**

**1.01 SUMMARY**

- A. Section includes general requirements for survey work to be performed by the CONTRACTOR.
  - 1. Set offset stakes, slope stakes, and grade stakes for field layout of features of the Work.
  - 2. Perform surveys for measurement of pay quantities and record as-built conditions.

**1.02 DESCRIPTION**

- A. Reference Points: Prior to construction, verify with the OWNER the locations of site reference points and survey control points. Notify OWNER if survey control points are damaged upon discovery. Also notify OWNER of any damage caused by CONTRACTOR, then repair or replace control points at no additional cost to OWNER.
- B. Verification: The OWNER reserves the right to perform any desired checking and correction of the CONTRACTOR's surveys but this does not relieve the CONTRACTOR of the responsibility for adequate performance of the Work.
- C. Equipment and Personnel: Provide instruments and other survey equipment that is accurate, suitable for the surveys required in accordance with recognized professional standards, and in proper condition and adjustment at all times. Perform work under the direct supervision of a surveyor licensed in the state of California. The licensed surveyor is required to sign and stamp each as-built record drawing and certify that the work was performed within the tolerances listed in the Construction Specifications. Provide OWNER with calibration certificates for all equipment utilized during construction. Submit certificates under provisions of Section 01300.
- D. Field Notes and Records: Record surveys in field notebooks and provide copies of such records to the OWNER at intervals required by the OWNER. Furnish each field notebook to the OWNER when filled or completed. Electronic notes may be used if printouts are furnished to the OWNER and if the format of the printed information is approved by the OWNER.
- E. Use by the OWNER: The OWNER may at any time use line and grade points and markers established by the CONTRACTOR. The CONTRACTOR's surveys are a part of the Work and may be checked by the OWNER or representatives of the OWNER at any time. The CONTRACTOR is responsible for (1) any lines, grades, or measurements which do not comply with specified design criteria or proper tolerances, or which are otherwise defective, and (2) for any resultant defects in the Work. The CONTRACTOR will be required to conduct re-surveys or check surveys to correct errors indicated by review of the field notebooks or otherwise detected.

**1.03 SURVEYS FOR LAYOUT AND PERFORMANCE OF WORK**

- A. Perform surveys for layout and performance of the Work, reduce the field notes, make necessary calculations, and prepare drawings necessary to carry out such work.

**1.04 SURVEYS FOR RECORD DRAWINGS AND MEASUREMENTS FOR PAYMENT**



- A. When the Specifications require items of work to be measured by surveying methods, the CONTRACTOR will perform the surveys and perform necessary calculations to determine payment quantities. The OWNER may perform independent checks.
- B. Items requiring surveys for determining pay quantities are given in Section 01025, Measurements and Payment.
- C. Provide record (as-built) drawings to the OWNER for the following items:
  - 1. Elevations and limits of subgrade excavation and engineered fills. Include all grade breaks and survey points on minimum 50-foot grid. Include elevations and limits along the floor and side slope survey on a 50-foot grid.
  - 2. Elevations and limits of the top of the compacted clay liner, ridges and valleys, drainage gravel, LCRS drainage layer, and operations soil layer. Include all grade breaks and survey points on a minimum 50-foot grid. Include elevations and limits along the floor on a 50-foot grid. The 50-foot grid points for each layer shall be on the same horizontal grid to allow direct calculation of each layer thickness.
  - 4. Limits of the geosynthetic liner components including anchor trench alignment.
  - 5. Riser pipe invert elevations at top, toe, and end of pipe
  - 6. HDPE pipe for the groundwater underdrain and LCRS. Include all grade breaks, changes in alignment and survey points for the invert elevations on a minimum 50-foot spacing.
  - 7. Perimeter ditch flow lines and grades. Lines and grades for surface water control features including the new stormwater pond.
  - 8. Lysimeter installation points and pipe alignment
  - 9. Top of pavement elevations for the Calpine Road realignment – minimum 50-foot survey along the pavement edges and road centerline.
- D. Provide as-built record survey drawings on a vellum print at same horizontal and vertical scale, same stationing, and same orientation for each element as shown on the Construction Drawings. Provide as-built survey information and associated point data on the same datum and coordinate basis as Construction Drawings. Provide survey point data on a maximum 50-foot grid, along all grade breaks, and/or along all changes in grade, orientation, alignment, and at termination points. All point data must have clear, easy to understand descriptions (e.g., such as a point number) and shall state the individual point elevation measurement. Provide a table of the point data on the record drawing (point designation, Northing, Easting, Elevation, etc.) and present all point data in ASCII format, printed and on CD/Diskette along with list of descriptor abbreviations. Present description or reference of the basis of horizontal and vertical control datums. Present coordinate system grid points at regular intervals on as-built record drawing. All information provided must be accompanied with a letter explaining what is being submitted and list of what information is given to each CD/diskette. Submit survey information to the OWNER before the constructed items are covered and within 7 days of completing respective work for any item listed above.
- E. Surveyor shall submit certified grading as-built drawings for the excavation and compacted clay liner within 2 calendar days of completion of each grading component. This submittal must be approved by the OWNER before geomembrane liner installation

begins.

- F. Provide information in AutoCad (most recent version) or Microstation format in accordance with OWNER's drafting standards.
- G. All final, stamped, as-built survey drawings are due on or before substantial completion date.

**1.05 SURVEYING ACCURACY AND TOLERANCES IN SETTING OF SURVEY STAKES**

- A. Perform control traverse field surveys and computations to an accuracy of at least 1:10,000.
- B. The tolerances applicable in setting survey stakes are set forth below. Such tolerances do not supersede stricter tolerances required by the Construction Drawings or Specifications, and do not otherwise relieve the CONTRACTOR of responsibility for compliance therewith.

<b>TABLE OF MARK</b>	<b>HORIZONTAL POSITION</b>	<b>ELEVATION</b>
Permanent reference points	1 in 10,000	± .01 ft
General excavation and earthwork	1 in 2,000	± .10 ft

- C. Tolerances for designed thicknesses shown on Construction Drawings and for elevations shown on the Drawings are +/- 0.10 foot unless otherwise specified.

**1.06 MONITORING DEVICE PROTECTION**

- A. Prior to beginning any site work, locate all monitoring wells, piezometers, utility boxes, valve boxes, or other utilities.
- B. Install markers identifying the location of these devices.
- C. The purpose of the work is to protect these items during construction.
- D. Any items damaged during construction by the CONTRACTOR will be repaired or replaced by the CONTRACTOR at no cost to the OWNER.
- E. An example replacement cost for a monitoring well is approximately \$25,000.

**1.07 COORDINATION WITH OWNER**

- A. Keep PROJECT MANAGER informed on progress of survey work to allow OWNER sufficient time and ample opportunity to verify survey work without inconvenience or delay to CONTRACTOR.

**PART 2: PRODUCT**

Not used.

**PART 3: EXECUTION**

Not used.

**- END OF SECTION -**

## **SECTION 01090 REFERENCES**

### **PART 1: GENERAL**

#### **1.01 SECTION INCLUDES**

- A. References and abbreviations of various industry associations, trade associations, societies, organizations, and regulatory agencies, as referenced in the Contract Documents.

#### **1.02 DESCRIPTION**

- A. The Contract Documents contain references to various standard specifications, codes, practices, and requirements for materials, workmanship, installation inspections, and tests, which references are published and issued by the organizations, societies, and associations listed below by abbreviation and name. Such references are hereby made a part of the Contract Documents to the extent cited.
- B. Any material, method, or procedure specified by reference to the number, symbol, or title of a specific specification or standard, such as a Commercial Standard, American National Standard, Federal or State Specification, Industry or Government Code, a trade association code or standard, or other similar standard, must comply with the requirements of the edition in effect on the date of Bid Opening.
- C. The code, specification, or standard referred to, except as modified in these Construction Specifications, will have full force and effect as though printed in these Construction Specifications. These codes, specifications, and standards are not furnished to Bidders since manufacturers and trades involved are assumed to be familiar with their requirements. The OWNER will furnish, upon request, information as to how copies of the standard specifications and other standards referred to may be obtained.

#### **1.03 ABBREVIATIONS**

- A. Whenever in the Contract the following abbreviations are used, their meanings shall be as follows:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ANSI	American National Standards Institute
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
COE	Corps of Engineers
CRSI	Concrete Reinforcing Steel Institute
GRI	Geosynthetic Research Institute
FS	Federal Specifications
NFPA	National Fire Protection Association
NSF	National Sanitation Foundation
CALTRANS	California Transportation Department
OSHA	Occupational Safety and Health Administration
PPI	Plastic Pipe Institute
SSPC	Steel Structures Painting Council
UL	Underwriters Laboratories

**PART 2: PRODUCTS**

Not Used

**PART 3: EXECUTION**

Not Used

**- END OF SECTION -**

**SECTION 01300  
SUBMITTALS**

**PART 1        GENERAL**

**1.01    SECTION INCLUDES**

- A.    Submittal procedures.
- B.    Health and Safety Plan.
- C.    Construction Surface Water Pollution Prevention Plan
- D.    Construction Progress Schedule.
- E.    Work Plan.
- F.    Proposed Products list.
- G.    Shop Drawings.
- H.    Product Data.
- I.    Soil samples.
- J.    Manufacturer's installation instructions.
- K.    Manufacturer's certificates.
- L.    Survey equipment certification.

**1.02    RELATED SECTIONS**

- A.    Section 01400 - Quality Control and Quality Assurance: Manufacturer's field services and reports.
- B.    Section 01700 - Contract Closeout: Contract warranties, manufacturer's certificates, and RELATED closeout submittals.

**1.03    SUBMITTAL PROCEDURES**

- A.    CONTRACTOR shall submit a submittal register in duplicate within 10 days after Notice of Award and prior to preconstruction meeting. Submittal register shall identify all submittal requirements contained in the plans and Construction Specifications, with references to the plan or specification numbers.
- B.    Transmit each submittal with a transmittal form. Provide four copies of each submittal.
- C.    Sequentially number the transmittal forms. For revised submittals add an alphabetic suffix to the original number.

- D. Identify Project, CONTRACTOR, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate.
- E. Apply CONTRACTOR'S stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- F. Schedule submittals to expedite the Project and deliver in the time frame specified. Coordinate submission of related items.
- G. Allow 10 days review time for each submittal excluding delivery time to and from the CONTRACTOR.
- H. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- I. If necessary, revise and resubmit, and identify all changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with provisions.
- K. Submittals not requested by the Contract Documents will not be recognized or processed.

#### **1.04 HEALTH & SAFETY PLAN**

- A. The CONTRACTOR shall submit to the OWNER within 10 days following Notice of Award and prior to Pre-construction meeting a Site Specific Health & Safety Plan. The plan shall include all safety actions and measures to be implemented during Work in order to minimize the risk of occupational injuries and illnesses.
- B. The OWNER shall review the Health and Safety Plan and shall have the right to require the CONTRACTOR to amend it if necessary. The CONTRACTOR shall make the recommended corrections and resubmit to the OWNER for review and final acceptance. The CONTRACTOR shall under no circumstances commence work prior to the OWNER's full acceptance of the plan.
- C. Review and acceptance of the Site Specific Health & Safety Plan by the OWNER shall not in any way impart liability on the OWNER. The CONTRACTOR is solely responsible for his safety plan and its implementation.

#### **1.05 CONSTRUCTION PROGRESS SCHEDULES**

- A. CONTRACTOR shall submit initial schedule in duplicate within 10 days after date of Notice of Award and prior to the preconstruction meeting. The initial schedule, after approval by OWNER, will represent the project target schedule. All subsequent schedule revisions must detail the initial target schedule.
- B. Revise and resubmit as requested, but no less than every 7 calendar days.

- C. Update progress schedules weekly and, if greater detail is needed, present a two week “look ahead” schedule. The CONTRACTOR shall present updated schedules at weekly meetings.
- D. Submit a computer-generated graphic type schedule with a separate line for each item of Work or operation identifying first work day of each week.
- E. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration, critical items, and initial target schedule.
- F. Indicate estimated percentage of completion for each item of Work at each submission.
- G. Indicate submittal dates and review periods required for shop drawings, product data, samples, and product delivery dates, including those furnished by OWNER.
- H. Indicate surveys for layout, as-builts, and measurement for payment.

#### **1.06 WORK PLAN**

- A. Submit when specified.
- B. Describe personnel, equipment, and procedures required to accomplish specified item of work.

#### **1.07 PROPOSED PRODUCTS LIST**

- A. Within 10 days after date of Notice to Proceed, and prior to preconstruction meeting submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

#### **1.08 SHOP DRAWINGS**

- A. CONTRACTOR shall submit to OWNER shop drawings for any design changes proposed by CONTRACTOR.

#### **1.09 PRODUCT DATA**

- A. Submit four copies of submittal to the PROJECT MANAGER.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer’s standard data to provide information unique to this Project.
- C. Submit clean originals of all operation manuals and other relevant manufacturer supplied literature for all products installed at the site requiring site operation (e.g. pumps, level switches, electrical controls, etc.).



- D. Indicate Product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. After review, distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 01700 - CONTRACT CLOSEOUT.

#### **1.10 SOIL SAMPLES**

- A. Submit soil samples that represent specified products. Coordinate sample submittals for interfacing with work.
- B. For each sample, submit one sample in an air-tight sealed bucket and provide at least 50 pounds, unless otherwise stated in individual technical specification sections.
- C. Include identification on each sample, with full Project information.
- D. Submit the number of samples specified in individual specification sections. One may be retained by OWNER as a record of the submittal.

#### **1.11 MANUFACTURER INSTALLATION INSTRUCTIONS**

- A. When specified in individual specification sections, submit three copies of printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to OWNER.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

#### **1.12 MANUFACTURER CERTIFICATES**

- A. When specified in individual specification sections, submit manufacturer's certification in specified quantities.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, certifications, and quality control testing.
- C. Certificates must be specific to material or Product, delivered to the site.

#### **1.13 SURVEY EQUIPMENT CALIBRATIONS**

- A. Provide certificates of calibration for all survey equipment and air pressure gauges for geomembrane seam pressure testing and vacuum testing that are used during the project.
- B. Submit calibrations to OWNER 5 days prior to putting equipment into use.
- C. Re-calibrate as recommended by equipment manufacturer, then re-submit.

#### **1.14 CORRESPONDENCE**

- A. OWNER will provide a correspondence matrix identifying requirements for submitting and sharing correspondence among the parties involved in the project.

**PART 2 PRODUCTS**

Not Used.

**PART 3 EXECUTION**

Not Used.

**- END OF SECTION -**

**SECTION 01310  
CONSTRUCTION WORK PLAN**

**PART 1        GENERAL**

**1.01    PRELIMINARY WORK PLAN**

- A.     Prepare and submit with Bid a preliminary Work Plan.
- B.     The OWNER will review the preliminary Work Plan as part of the bid evaluation.
- C.     The CONTRACTOR may be interviewed by OWNER to determine the CONTRACTOR's understanding of the project, and ability to complete the work in a timely and efficient manner.
- D.     Submit final Work Plan 10 days after signing CONTRACTOR/OWNER Agreement.

**1.02    CONTRACTOR'S WORK PLAN CONTENTS**

- A.     Work Plan shall summarize personnel, equipment, and procedures required to accomplish specific items of work, including:
  - 1.     Organization chart, showing CONTRACTOR, Subcontractors, Subconsultants and key personnel.
  - 2.     Equipment and routes for moving and stockpiling materials on site.
  - 3.     Methods for moisture conditioning soils prior to using them for constructing earthfill and the compacted clay liner.
  - 4.     Methods and equipment for hauling and placing materials over geosynthetics.
  - 5.     Dewatering methods.
  - 6.     Methods for erosion prevention and sediment control.
  - 7.     Plans for maintaining as-built information.
  - 8.     Site Specific Health and Safety Plan.
  - 9.     Project Schedule as specified in Section 01300.
  - 10.    Methods of controlling quality of soil materials obtained on site.

**1.03    DELAYS AND RECOVERY**

- A.     If, at any time during Project, CONTRACTOR fails to complete an activity by its latest scheduled completion date, CONTRACTOR must submit, within two working days, a written statement which details the methods by which CONTRACTOR proposes to return to current construction schedule.

- B. The PROJECT MANAGER may require the CONTRACTOR to implement some or all of the following:
1. Increase construction staffing in such quantities and crafts.
  2. Increase number of working hours per shift, shifts per work day, work days per week, or amount of construction equipment, or combination of foregoing.
  3. Reschedule work items to achieve concurrence of accomplishment.
- C. Under no circumstances will the addition of equipment or construction resources, an increase in working hours or any other method, manner or procedure implemented to return the project to current Construction Progress Schedule be considered justification for a contract modification or treated as an acceleration.

**PART 2 PRODUCTS**

Not Used.

**PART 3 EXECUTION**

Not Used.

**- END OF SECTION -**

**SECTION 01400  
QUALITY CONTROL**

**PART 1        GENERAL**

**1.01    SECTION INCLUDES**

- A.    Quality control of installation.
- B.    Tolerances.
- C.    References.
- D.    Inspecting and testing laboratory services.
- E.    Manufacturer's field services and reports.

**1.02    RELATED SECTIONS**

- A.    Section 01090 – References.
- B.    Section 01300 - Submittals: Submission of manufacturer's instructions and certificates.
- C.    Section 01410 - Quality Assurance and Quality Control Testing and Certificates of Compliance.
- D.    Section 01600 - Materials and Equipment: Requirements for material and product quality.

**1.03    DEFINITIONS**

- A.    Construction Quality Control (CQC) are those actions that provide a means to measure and regulate the characteristics of an item or service to contractual and regulatory requirements.
- B.    CQC refers to those actions taken by the manufactures, fabricators, installers, or CONTRACTOR to ensure that the materials and the workmanship meet the requirements of the Construction Drawings and the Specifications.
- C.    Construction quality assurance (CQA) testing is the testing of materials, before their inclusion in the work, and materials and workmanship, after their inclusion in the work.
- D.    CQA testing will be performed by the OWNER at the OWNER's expense as a basis for acceptance of the completed work.

**1.04    CONSTRUCTION QUALITY CONTROL OF INSTALLATION**

- A.    Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

- B. Comply with manufacturer's instructions, including each step in sequence.
- C. Should manufacturer's instructions conflict with Contract Documents, request clarification from the OWNER before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship of specified quality.

#### **1.05 TOLERANCES**

- A. Monitor tolerance control of installed Products to produce acceptable Work.
- B. Comply with manufacturer's tolerances. Should manufacturer's tolerances conflict with Contract Documents, request clarification from OWNER before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

#### **1.06 REFERENCES**

- A. For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current as of date for receiving bids, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. Do not alter the contractual relationship, duties, and responsibilities of the parties in Contract nor those of the OWNER from the Contract Documents by mention or inference otherwise in any reference document.

#### **1.07 INDEPENDENT MONITORING AND TESTING LABORATORY SERVICES (QUALITY ASSURANCE)**

- A. OWNER will appoint a quality assurance engineer to perform quality assurance monitoring and testing.
- B. Monitoring, testing, and source quality assurance may occur on or off the project site.
- C. Reports will be submitted by the CQA ENGINEER indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- D. Cooperate with all inspection and testing; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
  - 1. Notify PROJECT MANAGER 24 hours prior to expected time for operations

requiring monitoring or testing services.

2. Make arrangements with OWNER and pay for additional samples and tests required for CONTRACTOR'S use.
- E. Testing or monitoring does not relieve CONTRACTOR to perform Work to contract requirements.
- F. Retesting required because of non-conformance with specified requirements will be performed by the OWNER. The costs of retesting will be paid by the CONTRACTOR.

#### **1.08 GENERAL SUMMARY OF INDEPENDENT MONITORING AND TESTING SERVICES**

- A. A project construction quality assurance (CQA) plan has been prepared for this project.
- B. Review this plan for testing frequencies and types that the CQA ENGINEER will perform during the project.

#### **1.09 MANUFACTURER'S FIELD SERVICES AND REPORTS**

- A. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment, and as applicable, to initiate instructions when necessary.
- B. Submit qualifications of observer to OWNER 14 days in advance of required observations.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
- D. Submit report to the OWNER within 14 days of observation.

#### **1.10 SUBMITTALS**

- A. At least two (2) days prior to the Preconstruction Meeting, CONTRACTOR shall prepare and submit to the OWNER a CQC Plan for the Project. The Plan shall: (i) identify the Quality Control Manager and his qualifications; (ii) identify CONTRACTOR's CQC Consultant, if required; and (iii) describe the proposed means and method for quality control to be implemented by CONTRACTOR.
- B. At least two (2) days prior to the Preconstruction Meeting, CONTRACTOR shall submit information to OWNER describing the qualifications and capabilities of the CQC Consultant, if required. The CQC Consultant shall be acceptable to both OWNER and ENGINEER.

### **PART 2 PRODUCTS**

Not used.

## **PART 3 EXECUTION**

### **3.01 GENERAL**

- A. CONTRACTOR shall be responsible for obtaining quality control documentation or performing quality control tests as described in the Construction Specifications.
- B. Quality control testing procedures and frequencies for individual products and material are described in the Specifications and CQA Plan.

### **3.02 CONSTRUCTION QUALITY CONTROLSAMPLING AND TESTING**

- A. CONTRACTOR shall perform all soils testing during construction and shall promptly provide all test results to DESIGN ENGINEER and/or the CQA ENGINEER, as required. CONTRACTOR shall be responsible for cooperating with DESIGN ENGINEER and the CQA ENGINEER during all testing activities and in resolving all problems identified during CQC testing. CONTRACTOR shall provide all equipment and labor for all required testing. CONTRACTOR shall repair any damage to finished Work caused by the sampling or testing activities.
- B. CONTRACTOR shall be responsible for geometric control of the Work. Any surveying that may be performed by OWNER, DESIGN ENGINEER, or CQA ENGINEER does not relieve CONTRACTOR of its responsibility to layout, control, and document its Work. Any additional CQC surveying that is required, if the initial CQC survey shows that the Work has not yet been completed to the lines and grades shown on the Drawings, shall be performed at the expense of CONTRACTOR.
- C. CONTRACTOR shall abide by all qualification requirements identified in these Specifications (for subcontractors, supplies, manufacturers, etc.).
- D. The work shall, at all times, be subject to the observation of the OWNER and/or CQA ENGINEER. Observation or non-observation by the OWNER and/or the CQA ENGINEER shall not relieve CONTRACTOR from his contractual obligation to furnish work and material as required, and properly complete the work in accordance with these Contract Documents. If OWNER or the DESIGN ENGINEER considers that the work is not being properly accomplished, he may condemn or reject all or any part of the work and any materials or equipment incorporated into it. If any material, equipment, or work is condemned or rejected by the OWNER or DESIGN ENGINEER, the CONTRACTOR shall bear all expenses for removal and proper replacement of such material, equipment, or work required to be provided by Contract Documents. The expense of replacing any work performed by Others that is adversely affected by removal and proper replacement of improper work performed by CONTRACTOR shall be borne by CONTRACTOR.
- E. The DESIGN ENGINEER's or CQA ENGINEER's presence does not include supervision or direction or the actual work by CONTRACTOR, his employees, or agents. Neither the presence of the DESIGN ENGINEER or CQA ENGINEER nor any observations and testing performed by either party shall excuse CONTRACTOR from defects discovered in his work.
- F. The OWNER or OWNER'S representative has the right to perform quality assurance testing and to observe the work at any time.



### **3.03 PROTECTION**

- A. CONTRACTOR shall use all means necessary to protect all prior Work, including all materials and completed Work of other Sections.

### **3.04 SUBSTANDARD WORK OR MATERIALS**

- A. Any defective or substandard work or materials furnished by CONTRACTOR that is discovered before the final acceptance of the work, as established by the PROJECT MANAGER's Certificate of Substantial Completion, or during the subsequent guarantee period, shall be removed immediately by CONTRACTOR even if it had been initially not detected by the PROJECT MANAGER, DESIGN ENGINEER, OR CQA ENGINEER and recommended for payment. Satisfactory work or materials shall be substituted by CONTRACTOR for that rejected.
- B. The ENGINEER may order tests on substandard or damaged work, equipment, or materials to determine the required functional capability for possible acceptance, if there is not other reason for rejection. The cost of such tests shall be borne by CONTRACTOR, and the nature, extent, and supervision of the tests will be as determined by the CQA ENGINEER. If the results of the tests indicate that the required functional capability of the work, equipment, or material is not impaired, consistent with the final general appearance of same, the work, equipment, or materials may be deemed substandard and shall be replaced by CONTRACTOR. The CONTRACTOR may elect to replace the substandard work or material in lieu of performing the tests.

**- END OF SECTION -**

**SECTION 01410  
QUALITY ASSURANCE TESTING, QUALITY CONTROL TESTING,  
AND CERTIFICATES OF COMPLIANCE**

**PART 1        GENERAL**

**1.01    SECTION INCLUDES**

- A.    Acceptance testing by OWNER (CQA testing).
- B.    Control testing by CONTRACTOR.
- C.    Certificates of compliance.

**1.02    RELATED SECTIONS**

- A.    Section 01300 - Submittals.

**1.03    SOURCE OF MATERIALS**

- A.    CONTRACTOR must notify the OWNER in writing of the sources from which it proposes to obtain material requiring OWNER approval, certification, or quality assurance testing. Such notification must be made as soon as possible after award of Contract but no later than 10 days after receipt of the Notice to Proceed.

**1.04    CONSTRUCTION QUALITY ASSURANCE TESTING**

- A.    Construction quality assurance (CQA) testing is the testing of materials, before their inclusion in the work, and materials and workmanship, after their inclusion in the work.
- B.    CQA testing will be performed by the OWNER at the OWNER's expense as a basis for acceptance of the completed work.
- C.    OWNER will perform CQA testing in accordance with the CQA Plan. However, OWNER reserves the option to perform additional CQA testing at any time to determine conformance of the materials and workmanship with the Contract Documents.
- D.    CQA testing performed by the OWNER does not relieve the CONTRACTOR or the Manufacturer of materials produced for the CONTRACTOR, of the obligation to perform and document quality control testing of materials and workmanship.

**1.05    CONSTRUCTION QUALITY CONTROL TESTING**

- A.    Construction Quality Control (CQC) testing is the testing of materials performed by the material supplier before their delivery or during construction, such as geomembrane manufacturing, geomembrane seam testing, and such other tests as are specified in the various sections of the Specifications to ensure compliance with the Contract Documents. CONTRACTOR must assume full responsibility for quality control testing and give sufficient notice to OWNER to permit OWNER to witness the tests. Control testing will be at the expense of CONTRACTOR and where specifically required, must be performed by

an independent testing firm.

- B. Submit the name, address, and qualifications, together with the scope of proposed services, of the proposed testing firm(s) to CQA ENGINEER for approval at least 14 days prior to the scheduled commencement of any work involving such testing.
- C. Within five days of completion of testing performed by or for CONTRACTOR, submit test results to OWNER. Identify test reports with the information specified for samples in Section 01300 and additionally, the name and address of the organization performing the test, and the date of the tests.

#### **1.06 CERTIFICATES OF COMPLIANCE**

- A. CONTRACTOR may use Certificates of compliance for certain materials and products in lieu of the specified sampling and testing procedures. However, Certificates of Compliance will not be accepted for any geosynthetic materials testing. Submit certificates required to demonstrate proof of compliance of materials with specification requirements in duplicate with each lot of material delivered to the Work site or prior to delivery as required by the Contract. The lots so certified must be clearly identified by the certificate. Certificates must be signed by an authorized representative of the producer or manufacturer and state that the material complies in all respects with the requirements of the Contract Documents. In the case of multiple shipments, each shipment must be accompanied or preceded by a Certificate of Compliance.
- B. The Certificate of Compliance must be accompanied by a certified copy of test results or state that such test results are on file with the producer or manufacturer and must be furnished to OWNER on request. The certificate must give the information specified for samples in Section 01300, the name and address of the organization performing the tests, the date of the tests, the quantity of material shipped, and a description of material.
- C. Materials used on the basis of a Certificate of Compliance may be sampled and tested at any time. The fact that material is used on the basis of a Certificate of Compliance does not relieve CONTRACTOR of responsibility for incorporating material in the Work which conforms to the requirements of the Contract and any such material not conforming to such requirements will be subject to rejection, whether in place or not.
- D. OWNER reserves the right to refuse the use of certain materials on the basis of a Certificate of Compliance.

#### **PART 2 PRODUCTS**

Not Used.

#### **PART 3 EXECUTION**

Not Used.

**- END OF SECTION -**

**SECTION 01500  
CONSTRUCTION FACILITIES**

**PART 1        GENERAL**

**1.01    SECTION INCLUDES**

- A.     Facilities required for the construction specified under the Scope of Work of this Contract.
- B.     Construction facilities include furnishing of all equipment, materials, tools, accessories, incidentals, labor, and performing all work for the installation of equipment and for construction of facilities, including their maintenance, operation, and removal, if required, at the completion of the Work under the Contract.
- C.     Mobilization consists of preparatory work and operations, including but not limited to, those necessary for the movement of personnel, project health and safety, project security including adequate personnel, equipment, supplies, and incidentals to the project site; for the establishment of offices, buildings and other facilities necessary for work on the project; for insurance premiums for the project, and for other work and operations the CONTRACTOR must perform or costs the CONTRACTOR must incur before beginning work on the project, which are not covered in other bid items. Demobilization consists of work and operations included, but not limited to, those necessary for movement of personnel, equipment, supplies, incidentals, and offices off-site. Demobilization also includes cleaning and restoration of the site.

**1.02    RELATED SECTIONS**

- A.     Section 01560 - Temporary Controls.
- B.     Section 01700 - Contract Closeout: Final Cleaning.

**1.03    DEFINITION**

- A.     Construction facilities may include, but are not be limited to, the following temporary offices, utilities, equipment, materials, facilities, areas, and services:
  - 1.     Field Office.
  - 2.     Parking Areas.
  - 3.     Temporary Roads.
  - 4.     Storage of Materials and Equipment.
  - 5.     Construction Equipment.
  - 6.     Temporary Sanitary Facilities.
  - 7.     Temporary Electric Power.

8. Temporary Water.
9. Temporary Heat.
10. First Aid Facilities.
11. Security.

#### **1.04 REFERENCES**

- A. Construct, install, maintain and operate construction facilities in accordance with the applicable federal, state, and local laws, rules, regulations, Construction Drawings and Construction Specifications.

#### **1.05 GENERAL REQUIREMENTS**

- A. CONTRACTOR is responsible for furnishing, installing, constructing, operating, maintaining, removing and disposing of the construction related facilities, as specified in this Specification, and as required by the OWNER for the completion of the Work under the Contract.
- B. Locate and maintain construction facilities in a clean, safe and sanitary condition at all times until completion of the Contract.
- C. The requirements specified herein are in addition to any requirements specified elsewhere in the Contract Documents. Construction facilities must meet the requirements for all-weather service.
- D. Minimize land disturbances related to the construction facilities to the greatest extent possible and restore land to the extent reasonable and practical, to its original contours by grading to provide positive drainage and by seeding the area to match with existing vegetation or as specified elsewhere.
- E. Design and construct utilities to provide uninterrupted service.

#### **1.06 FIELD OFFICE**

- A. CONTRACTOR may provide an office for his own staff.
- B. The location of the office must be approved by OWNER.
- C. Provide power for lighting and computers in the CONTRACTOR's trailer(s). Coordinate with OWNER.

#### **1.07 PARKING AREAS**

- A. CONTRACTOR is responsible for providing parking areas for maintenance and delivery vehicles, the OWNER's and CONTRACTOR's representatives, and other authorized visitors, as approved by OWNER. All employee and CONTRACTOR vehicles must sign in and out.

## **1.08 TEMPORARY ROADS**

- A. General.
  - 1. Temporary roads are existing roads that are improved or maintained, or new roads constructed by CONTRACTOR for convenience of CONTRACTOR in the performance of the Work under the Contract.
  - 2. Coordinate construction with OWNER.
  - 3. If applicable, coordinate all road construction activities with local utilities, fire and police departments.
  - 4. Keep erosion to a minimum and maintain suitable grade and radii of curves to facilitate ease of movement of vehicles and equipment.
  - 5. Furnish and install longitudinal and cross drainage facilities including, but not limited to, the ditches, structures, pipes, etc.
  - 6. Clean equipment so that mud or dirt is not carried onto public roads. Clean up any mud or dirt transported by its equipment on paved roads both on-site and off-site.

## **1.09 STORAGE OF MATERIALS AND EQUIPMENT**

- A. Make arrangements for material and equipment storage areas. Locations and configurations of such facilities are subject to the acceptance of OWNER.
- B. Confine all operations, including storage of materials, to approved areas. CONTRACTOR is liable for any and all damage caused during such use of property of the OWNER or others. Store materials in accordance with manufacturer's instructions when applicable.
- C. Store construction materials and equipment within boundaries of designated areas. Storage of gasoline or similar fuels must conform to state and local regulations and be limited to the areas approved for this purpose by the OWNER.

## **1.10 CONSTRUCTION EQUIPMENT**

- A. Erect, equip, and maintain all construction equipment in accordance with all applicable statutes, laws, ordinances, rules, and regulations of OWNER or other authority having jurisdiction.
- B. Provide and maintain scaffolding, staging, runways, hoists, barricades, and similar equipment required for performance of the Contract. Provide hoists or similar equipment with operators and signals, as required.
- C. Provide, maintain, and remove upon completion of the Work, all temporary rigging, dewatering devices, scaffolding, hoisting equipment, debris boxes, barricades around openings and excavations, fences, ladders, and all other temporary work, as required for

all work hereunder unless otherwise directed by OWNER.

- D. Construction equipment and temporary work must conform to all the requirements of state, county, and local authorities, OSHA, and underwriters which pertain to operation, safety, and fire hazard. Furnish and install all items necessary for conformity with such requirements, whether or not called for under separate sections of these Specifications.

#### **1.11 TEMPORARY SANITARY FACILITIES**

- A. Provide temporary sanitary facilities for use by all employees and persons engaged in the work, including subcontractors, their employees and authorized visitors.
- B. Sanitary facilities include enclosed chemical toilets and washing facilities. These facilities must meet the requirements of local public health standards. Open pit or trench latrines are not permitted.
- C. Locate sanitary facilities where approved by OWNER, and maintain in a sanitary condition throughout the performance of the work.

#### **1.12 TEMPORARY ELECTRIC POWER**

- A. Provide and maintain during the course and progress of the Work all electrical power and wiring requirements to facilitate the work of all trades and services associated with the work. Make arrangements with the applicable serving utility company or provide generators and pay all charges for providing and maintaining electrical service including usage costs at the site. Furnish all temporary wiring, feeders, and connections.
- B. Routing of temporary conductors, including welding leads, must not create a safety hazard nor interfere with operation and maintenance of existing facilities.
- C. Install all temporary wiring in accordance with the applicable requirements of the local electrical code.
- D. Provide power and lighting to field office, and for Work as required, at no extra cost to OWNER.

#### **1.13 TEMPORARY WATER**

- A. Make all arrangements for water needs for the project.
- B. OWNER has identified potential on-site water sources for use by CONTRACTOR on the Construction Drawings.

#### **1.14 TELEPHONE / FAX**

- A. CONTRACTOR shall provide telephone/fax service.

#### **1.15 FIRST AID FACILITIES**

- A. Provide first aid equipment and supplies to serve all CONTRACTOR personnel at the

site.

#### **1.16 SECURITY**

- A. Make all necessary provisions and be responsible for the security of the Work and the site until final inspection and acceptance of the Work.
- B. Coordinate with OWNER's site security program.

#### **1.17 SHUT-DOWN TIME OF SERVICES**

- A. Do not disconnect or shut down any part of the existing utilities and services, except by express permission of OWNER.

#### **1.18 MAINTENANCE**

- A. Maintain all construction facilities, utilities, temporary roads, services to office, and the like in good working condition as required by OWNER during the term of the Contract.

#### **1.19 STATUS AT COMPLETION**

- A. Upon completion of the Work, or prior thereto, when so required by OWNER:
  - 1. Repair damage to roads caused by or resulting from the CONTRACTOR's work.
  - 2. Remove and dispose of all construction facilities including office trailers, and other facilities and utilities including all concrete foundations. Similarly, return all areas utilized for temporary facilities to substantially their near original, natural state, or as otherwise indicated or directed.
  - 3. Obliterate temporary roads built for CONTRACTOR's convenience and restore the area to near original conditions to the extent practicable unless otherwise approved by the OWNER.

#### **1.20 TRAFFIC CONTROL**

- A. The CONTRACTOR will be responsible for traffic control where construction traffic may conflict with the ongoing operation of existing waste treatment facilities.
  - 1. Such traffic control shall include all costs for developing a traffic control plan to be prepared and submitted to the PROJECT MANAGER prior to the start of construction for review and acceptance.
  - 2. Providing all signage, flaggers, radios, temporary traffic signalization, etc. as required by the traffic control plan.
  - 3. Operations traffic, including site access for the landfill and waste handling, shall have priority access at all times unless prior communication and approval is given by the Onsite Facility Manager and/or PROJECT MANAGER (see Section 01560, Part 1.06)



**PART 2 PRODUCTS**

Not Used.

**PART 3 EXECUTION**

Not Used.

**- END OF SECTION -**

**SECTION 01560  
TEMPORARY CONTROLS**

**PART 1        GENERAL**

**1.01    SECTION INCLUDES**

- A.    Temporary controls required during the term of the Contract for the protection of the environment and the health and safety of workers and general public.
- B.    Furnishing all equipment, materials, tools, accessories, incidentals, and labor, and performing all work for the installation of equipment and construction of facilities, including their maintenance and operation during the term of the Contract.
- C.    This includes, but is not limited to, the following:
  - 1.     Dust Control.
  - 2.     Pollution Control.
  - 3.     Traffic and Safety Controls.
  - 4.     Temporary Erosion and Sediment Control.
- D.    Perform work as specified in this Specification and as required by the OWNER. Maintain equipment and accessories in clean, safe and sanitary condition at all times until completion of the Contract.

**1.02    RELATED SECTIONS**

- A.    Section 01500 – Temporary Construction Facilities.

**1.03    DUST CONTROL**

- A.    Provide dust control measures as specified in the Contract.
- B.    Dust control consists of transporting water, furnishing required equipment, additives, accessories and incidentals, and carrying out proper and efficient measures wherever and as often as necessary to reduce dust nuisance, and to prevent dust originating from construction operations throughout the duration of the Contract, as required by OWNER. No dust can leave the site boundary.
- C.    Apply water by means of pressure-type distributors or pipelines equipped with a spray system or hoses with nozzles that will provide a uniform application of water.
- D.    Equip all equipment used for the application of water with a positive means of shut-off.
- E.    Unless otherwise permitted by OWNER or unless all the water is applied by means of pipelines, provide at least one mobile unit with a minimum capacity of 3,500 gallons at the site in operating condition for applying water at the site during construction.

- F. To conserve water, CONTRACTOR may use chemical additives in dust control water, if specified chemicals are approved by OWNER. Chemical additive may not be changed without new approval.
- G. The use, location of application, and the amount and type of additives proposed for use by CONTRACTOR is subject to approval by OWNER and appropriate regulatory agencies.

#### **1.05 POLLUTION CONTROL**

- A. Erosion Control: Control sediment transport on sloped surfaces.
- B. Pollution of Waterways: Perform work using methods that prevent entrance or accidental spillage of solid or liquid matter, contaminants, debris and other objectionable pollutants and wastes into streams, watercourses, flowing or dry, and underground water sources. Such pollutants and wastes will include, but will not be restricted to, the following: refuse; earth and earth products; garbage; cement; concrete; sewage effluent; industrial waste; radioactive substances; hazardous chemicals; oil and other petroleum products; aggregate processing tailings; and mineral salts. Dispose of pollutants and wastes in accordance with applicable permit provisions or in a manner acceptable to and approved by the OWNER.
- C. Storage and Disposal of Petroleum Products:
  - 1. Petroleum products covered by this section include gasoline, diesel fuel, lubricants, heating oils, and refined and used oil. During project construction, store all petroleum products in such a way as to prevent contamination of all ground and surface waters. Provide storage with secondary containment greater than or equal to the volume of stored petroleum products.
  - 2. Lubricating oil may be brought into the project area in steel drums or other means, as CONTRACTOR elects. Store used lubricating oil in steel drums, or other approved means, and return to the supplier for disposal. Do not burn or otherwise dispose of at the project area.
  - 3. If the total volume of stored petroleum products is greater than 1,320 gallons and these products are stored above ground, prepare a spill prevention control and countermeasure plan in accordance with applicable EPA and other state regulations. Submit plan to OWNER.
- D. CONTRACTOR shall submit Spill Prevention, Control and Countermeasure (SPCC) Plan within 10 days of Notice of Award for approval by OWNER.

#### **1.06 TRAFFIC AND SAFETY CONTROLS**

- A. Develop a traffic control plan and submit three (3) copies to the PROJECT MANAGER for review and approval within 10 days of Notice of Award.

- B. Post construction areas and roads with traffic control signs or devices in accordance with the approved traffic control plan used for protection of workmen, the public and equipment. The signs or devices must conform to the California Manual on Uniform Traffic Control Devices (MUTCD) (2014 and most current addenda or most recent publication).
- C. Remove signs or traffic control devices as soon as they have served their purpose. It is particularly important to remove any markings on road surfaces which under conditions of poor visibility could cause a driver to turn off the road or into traffic moving in the opposite direction.
- D. Barricades for protection of employees must conform to the portions of the California Manual on Uniform Traffic Control Devices, relating to barricades.
- E. Material Haul on Public Roads: Follow all requirements stated in the permits for using public roads for hauling materials to the site.
- F. Provide flag persons, properly equipped with high visibility, OSHA-compliant protective clothing and flags, as necessary, to direct or divert pedestrian or vehicular traffic. Flagging may be required off site to control traffic associated with material delivery.
- G. Construct and maintain fences, planking, barricades, lights, shoring, and warning signs as required by local authorities and federal and state safety ordinances, and as required, to protect OWNER's property from injury or loss and as necessary for the protection of the public, and provide walks around any obstructions made in a public place for carrying on the Work covered in this Contract. Leave all such protection in place and maintained until removal is authorized.
- H. Guard and protect all workers, pedestrians, and the public from excavations, blasting operations, construction equipment, all obstructions, and other dangerous items or areas by means of adequate railings, guard rails, temporary walks, barricades, warning signs, sirens, directional signs, overhead protection, planking, decking, danger lights, etc.
- I. Control traffic associated with the contract work so that ongoing maintenance and operations of the landfill and its customers is not disrupted.

#### **1.08 MAINTENANCE**

- A. Maintain all temporary controls in good working conditions during the term of the Contract for the safe and efficient transport of equipment and supplies, and for construction of permanent works, as required by OWNER.

#### **1.09 STATUS AT COMPLETION**

- A. Upon completion of the Work, or prior thereto, when so required by OWNER, remove all temporary controls and restore disturbed areas as required by OWNER.

### **PART 2 PRODUCTS**

Not Used.

**PART 3 EXECUTION**

Not Used.

**- END OF SECTION -**

**SECTION 01600  
MATERIALS AND EQUIPMENT**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. General requirements for material and equipment including handling, transportation, and storage thereof.

**1.02 RELATED SECTIONS**

- A. Section 01300 - Submittals.

**1.03 QUALITY OF MATERIALS**

- A. Provide materials and equipment that are new, except as may be indicated in the Construction Specifications or shown on the Construction Drawings.
- B. Materials and equipment must be manufactured, handled, transported, stored, and used in accordance with the requirements of the manufacturer to ensure completed work meets the requirements of the Contract Documents.

**1.04 HANDLING AND TRANSPORTATION**

- A. Handling:
  - 1. Avoid bending, scraping, or over stressing materials and equipment. Protect projecting parts by blocking with wood, by providing bracing, or by other approved methods.
  - 2. Protect materials and equipment from soiling and moisture by wrapping or by other approved means, and support above ground.
  - 3. Protect small parts of equipment and accessories in containers such as boxes, crates, or barrels to avoid dispersal and loss. Firmly secure and weatherproof itemized list and description of contents to each such container.
- B. Transportation: Load, transport, unload, and store all materials and equipment such that they are kept clean and free from damage.

**1.05 STORAGE AND PROTECTION**

- A. Provide sheltered, weather tight, or heated weather tight storage as required for materials and equipment subject to weather damage.
- B. Provide blocking, platforms, or skids for materials and equipment subject to damage by contact with ground.
- C. Store packaged materials in their original unbroken package or container.

- D. Protect materials and equipment from damage during warehousing operations.
- E. Store rejected materials separately from accepted materials.

**PART 2 PRODUCTS**

Not Used.

**PART 3 EXECUTION**

Not Used.

**- END OF SECTION -**

**SECTION 01630  
PRODUCT OPTIONS AND SUBSTITUTIONS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. This Section describes product options available to the CONTRACTOR, plus procedures for securing approval of proposed substitutions.
- B. Related work:
  - 1. Make submittals in accordance with pertinent provisions of Section 01300.

**1.02 PRODUCT OPTIONS**

- A. The Contract is based on standards of quality established in the Contract Documents.
  - 1. In agreeing to the terms and conditions of the Contract, the CONTRACTOR has accepted a responsibility to verify that the specified products will be available and to place orders for all required materials in such a timely manner as is needed to meet his agreed construction schedule.
  - 2. The OWNER does not agree to the substitution of materials or methods called for in the Contract Documents, except those specifically stated in writing.
- B. Materials and/or methods specified by name:
  - 1. Where materials and/or methods are specified by naming one single manufacturer and/or model number, without stating that equal products will be considered, only the material and/or method named is approved for incorporation into the Work.
  - 2. Should the CONTRACTOR demonstrate to the satisfaction of the OWNER that a specified material or method was ordered in a timely manner and will not be available in time for incorporation into this Work, the CONTRACTOR must submit to the OWNER such data on proposed substitute materials and/or methods as are needed to help the OWNER determine suitability of the proposed substitution.
- C. Where materials and/or methods are specified by name and/or model number, followed by the words "or equal," or "or equal as approved by the OWNER" or similar wording:
  - 1. The material and/or method specified by name establishes the required standard of quality.
  - 2. Materials and/or methods proposed by the CONTRACTOR to be used in lieu of materials and/or methods so specified by name must in all ways equal or exceed the qualities of the named materials and/or methods;



3. Proposed substitutions must be described in the CONTRACTOR's General Contract bid.
- D. The following products do not require further approval except for interface within the Work:
1. Products specified by reference to standard specifications such as ASTM and similar standards;
  2. Products specified by manufacturer's name and catalog model number.
- E. Where the phrase "or equal," or "or equal as approved by the OWNER" occurs in the Contract Documents, do not assume that the materials, equipment, or methods will be accepted as equal unless the item has been specifically so approved for this Work by the OWNER.
- F. The decisions of the OWNER are final.

### **1.03 DELAYS**

- A. Delays in construction arising by virtue of the non-availability of a specified material and/or method will not be considered by the OWNER as justifying an extension of the agreed Time of Completion.

### **PART 2 PRODUCTS**

Not Used.

### **PART 3 EXECUTION**

Not Used.

**- END OF SECTION -**

**SECTION 01700  
PROJECT CLOSEOUT**

**PART 1        GENERAL**

**1.01    SECTION INCLUDES**

- A.    Closeout procedures.
- B.    Final cleaning.
- C.    Project record documents.

**1.02    RELATED SECTIONS**

- A.    Section 01300 - Submittals.
- B.    Section 01500 – Temporary Construction Facilities.

**1.03    CLOSEOUT PROCEDURES**

- A.    Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for the OWNER's inspection.
- B.    Submit documentation and lien releases from subcontractors and suppliers documenting payment to subcontractors and suppliers for all work performed under this Contract.
- C.    Provide submittals to OWNER that are required by governing or other authorities.
- D.    Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due. Use form provided by OWNER. Payment of final project application for payment will not be made until all record as-built drawings, warranties, guarantees, submittals, and similar documents have been received and approved by the OWNER.
- E.    OWNER will occupy all portions of the facility.

**1.04    FINAL CLEANING**

- A.    Execute final cleaning prior to final inspection.
- B.    Clean equipment and fixtures to a sanitary condition.
- C.    Clean and or replace filters of operating equipment.
- D.    Clean site; sweep paved areas, rake clean landscaped surfaces.
- E.    Remove waste and surplus materials, rubbish, and construction facilities from the construction site.

## **1.05 PROJECT RECORD DOCUMENTS**

- A. Maintain on site, one set of the following record documents; record actual revisions to the work.
  - 1. Contract Drawings.
  - 2. Construction Specifications.
  - 3. Addenda.
  - 4. Change Orders and other Modifications to the Contract.
  - 5. Reviewed shop drawings, product data, and samples.
- B. Store Record Documents separate from documents used for construction.
- C. Record as-built information concurrent with construction progress, and in accordance with Section 01052.
- D. Construction Specifications: Legibly mark and record in each product section (PART 2 of Specifications) the description of actual products installed, included the following:
  - 1. Manufacturer's name and product model and number.
  - 2. Product substitutions or alternates utilized.
  - 3. Changes made by Addenda and Modifications.
- E. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
  - 1. As-built survey grid and elevations as specified in Section 01052.
  - 2. Measured depths of foundations, sumps, drain pipes and manholes.
  - 3. Measured horizontal and vertical location of underground utilities and appurtenances, referenced to permanent surface improvements.
  - 4. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
  - 5. Field changes of dimension, detail, or materials.
  - 6. Details not shown on original Construction Drawings.

## **1.06 RELEASE OF LIENS AND CONSENT OF SURETY**

- A. No application for final payment will be accepted until satisfactory evidence of Release of Liens and Consent of Surety to Final Payment has been submitted to the OWNER.

**1.07 WARRANTIES**

- A. Submit manufacturer's warranties for products installed in the Work.

**1.08 SPARE PARTS AND MAINTENANCE MATERIALS**

- A. Provide products, spare parts, maintenance, and extra materials in quantities specified in individual specification sections.

**1.09 DOCUMENT SUBMITTAL**

- A. Complete closeout procedures, final cleaning, and submit project record documents, warranties, and spare parts before applying for final payment.
- B. Final payment will be withheld until work of this Section is complete and accepted by OWNER.

**PART 2 PRODUCTS**

Not Used.

**PART 3 EXECUTION**

Not Used.

**- END OF SECTION -**

**DIVISION 2**

**SITE WORK**

**SECTION 02110  
CLEARING, GRUBBING, AND STRIPPING**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. This section describes the general material and construction requirements for clearing, grubbing, and stripping of vegetation associated with the construction of the Module 6 liner system at the Monterey Peninsula landfill.

**1.02 RELATED SECTIONS**

- A. Section 01500 – Construction Facilities and Temporary Controls
- B. Section 02200 - Earthwork

**1.03 REFERENCES**

- A. Construction Quality Assurance (CQA) Plan.

**1.04 SUBMITTALS**

- A. Submit written notice of intent to perform clearing, grubbing, or stripping to the OWNER at least 7 days in advance of performing these activities.

**PART 2: PRODUCTS**

Not Applicable.

**PART 3: EXECUTION**

**3.01 PROTECTION**

- A. Protect plant growth and features remaining outside of construction areas.
- B. Maintain site access for disposal operations.
- C. Locate and protect any existing utilities and monitoring wells onsite. Damage caused to existing utilities or wells by CONTRACTOR or its subcontractors shall be repaired by the CONTRACTOR at no added cost to the OWNER.

**3.02 CLEARING, GRUBBING, AND STRIPPING**

- A. Clearing shall consist of cutting, removing, and disposing of all vegetation including trees, snags, stumps, shrubs, limbs, and other vegetative growth to a sufficient depth to remove all roots. Coordinate with OWNER to confirm OWNER has obtained any required tree removal permits.
- B. Grubbing shall consist of the removal and disposal of wood or root matter below the ground surface remaining after clearing and shall include stumps, trunks, roots, or root systems to a minimum depth of 6 inches below the ground surface.
- C. Stripping shall include the removal and disposal of all organic sod, topsoil, plant growth

and associated roots. Stripping shall extend to the bottom of the root zone.

- D. Coordinate disposal of clearing and grubbing debris with the OWNER. No burning of debris will be permitted.
- E. All cut and fill areas will be cleared, grubbed, and stripped prior to filling or grading to design elevations.
- F. Topsoil from the strippings will be stockpiled at a location designated by the OWNER.
- G. Conduct operations and maintain the project site so as to minimize dust creation and dispersion.

**- END OF SECTION -**

## **SECTION 02200 EARTHWORK**

### **PART 1: GENERAL**

#### **1.01 DESCRIPTION**

- A. This section describes the requirements for general earthworks including engineered fill, anchor trench backfill, operations layer and aggregate base placement, and excavation associated with the construction of the Module 6 base liner system at the Monterey Peninsula landfill.

#### **1.02 RELATED SECTIONS**

- A. Section 02222 – Compacted Clay Liner
- B. Section 02223 - Gravel
- C. Section 02751 - HDPE Geomembranes
- D. Section 02756 - Geosynthetic Clay Layer

#### **1.03 REFERENCES**

- A. Latest version of American Society for Testing and Materials (ASTM) standards:
  - 1. ASTM D422 - Standard Test Method for Particle Size Analysis of Soils
  - 2. ASTM D1140 - Standard Test Method for Amount of Material in Soils Finer than No. 200 Sieve
  - 3. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil In Place by the Sand-Cone Method
  - 4. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soils using Modified Effort
  - 5. ASTM D2216 - Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
  - 6. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes
  - 7. ASTM D2937 - Standard Test Method for Density of Soil in Place by the Drive-Cylinder Method
  - 8. ASTM D4220 - Standard Practices for Preserving and Transporting Soil Samples
  - 9. ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
  - 10. ASTM D4643 - Standard Test Method for Determination of Water (Moisture) Content of Soil by the Microwave Oven Method



11. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods

A. Construction Quality Assurance Plan

#### **1.04 SUBMITTALS**

A. CONTRACTOR shall notify the OWNER in writing a minimum of 7 days prior to starting work under this Section.

B. Submit copies of any permits that may be required to the OWNER prior to start of work.

C. Submit a Site Specific Health and Safety Plan to the OWNER.

#### **1.05 QUALITY ASSURANCE**

A. Observation, sampling and testing will be performed by the CQA ENGINEER or the OWNER's designee to confirm that the materials and construction are in compliance with the requirements of these Construction Specifications and the CQA Plan. Make allowances for sampling and testing by the CQA ENGINEER in both production and scheduling.

#### **1.06 SAFETY**

A. CONTRACTOR is solely responsible for performing work in a safe manner and complying with all applicable local, state, and federal codes, ordinances, laws, and regulations.

### **PART 2: PRODUCTS**

#### **2.01 ENGINEERED FILL**

A. Engineered fill placed beneath the base liner system or along the perimeter of the liner system shall consist of material meeting the requirements for the compacted clay liner – Section 02222 except that the permeability requirement shall not apply.

B. Engineered fill placed for the Calpine Road Realignment shall be predominantly comprised of soil with rock particle size less than 4 inches in diameter and free of organic debris, wastes, or other deleterious materials.

#### **2.02 ANCHOR TRENCH BACKFILL**

A. Anchor Trench Backfill shall consist of material meeting the requirements for the compacted clay liner – Section 02222 except that the permeability requirement shall not apply.

#### **2.03 OPERATIONS LAYER**

A. The operations layer shall consist of material meeting the requirements for the LCRS drainage layer – Section 02223 except that the permeability requirement shall not apply. The soil layer material shall consist of soil free of metal, wastes, organic debris, or other deleterious material.

#### **2.04 CLASS 2 AGGREGATE BASE AND RECYCLED BASE ROCK**

A. Aggregate Base shall be Class 2, 3/4-inch maximum grading and shall conform to the provisions in Section 26 – Aggregate Base of the CALTRANS Standard Specifications.

- B. Recycled Base Rock shall be provided by OWNER.

### **PART 3: EXECUTION**

#### **3.01 EXCAVATION**

- A. Take the necessary precautions to maintain the excavations in a condition that is relatively dry and free of standing water. CONTRACTOR shall be responsible for removing water that accumulates within the footprint of the excavation. The CONTRACTOR will be responsible for dewatering the excavation areas and for directing water encountered during the excavation to drain as directed by the OWNER.
- B. Excavation and dewatering shall be accomplished by methods which preserve the undisturbed state of the soils below the limits of the excavation. Soils which become soft, loose, or otherwise unsatisfactory for support of structures as a result of inadequate excavation, dewatering, or other construction methods shall be removed and replaced with suitable general fill at no additional cost to the OWNER.
- C. Excavated soils shall be placed in a stockpile as designated by the OWNER. The CONTRACTOR may segregate and use this material as engineered fill, anchor trench backfill, compacted clay liner, LCRS drainage layer, or operations layer if it meets the respective material specification requirements for these liner components.

#### **3.02 PREPARATION FOR FILL PLACEMENT**

- A. Maintain and operate proper and adequate surface drainage to the satisfaction of the CQA ENGINEER in order to keep the site dry and in such conditions that placement and compaction of fill may proceed unhindered by saturation of the area.
- B. Clear, strip, and grub prior to placing fill.

#### **3.03 ENGINEERED FILL PLACEMENT**

- A. Obtain engineered fill materials from the required excavation and which meet the material requirements of Part 2.01.
- B. The fill shall be placed to the lines, grades and elevations shown on the Construction Drawings (Plans) or as directed in the field by the DESIGN ENGINEER.
- C. Prior to engineered fill placement, the subgrade shall be inspected to confirm that it is a firm and non-yielding surface. Soft or excessively wet areas shall be over-excavated a minimum of two feet to firm material and shall be backfilled and compacted with engineered fill.
- D. The fill material shall be placed and compacted in loose lifts that result in a nominal compacted thickness of 6-inches.
- E. Each lift of engineered fill shall be compacted to at least 90 percent of the maximum dry density and to a moisture content within -3% to +3% of optimum as determined by ASTM D1557.
- F. For fill placed against an existing slope, each lift of fill shall be keyed into the existing slope.
- G. The CONTRACTOR is responsible for moisture conditioning the fill materials to the

required moisture range.

- H. Material not meeting specified compaction criteria shall be reworked or replaced, at no additional cost to the OWNER, and then retested prior to subsequent lift placement over the area.
- I. Grade and restore areas inadvertently disturbed during construction to their original grade and profile.
- J. Water used for moisture conditioning shall be obtained from sources approved by the OWNER.
- K. Fill areas shall be left in a manner to promote run-off at the end of each day.
- L. Final grading shall be completed to the lines and grades shown on the Construction Drawings and within the tolerances in Article 3.07. The final surface shall be smooth, firm, non-yielding, and free from debris or other deleterious material.

### **3.04 ANCHOR TRENCH BACKFILL**

- A. The first 12-inch lift of anchor trench backfill used to anchor the liner in a trench may be placed with a maximum loose thickness of 12 inches and shall be compacted to at least 85 percent of the maximum dry density according to ASTM D1557.). Each subsequent lift of anchor trench backfill fill shall be compacted to at least 90 percent of the maximum dry density and to a moisture content within -3% to +3% of optimum as determined by ASTM D1557.

### **3.05 OPERATIONS LAYER**

- A. The operations layer shall be placed as shown on the CONSTRUCTION DRAWINGS.
- B. Prior to the placement of the operations layer material over the geomembrane on the side slopes, final inspection of the geomembrane by the CQA ENGINEER will be made to verify integrity.
- C. Hauling equipment shall operate on a minimum of 24-inches of combined operations layer and LCRS drainage layer thickness over the geomembrane.

### **3.06 AGGREGATE BASE**

- A. Place aggregate base in 6-inch thick compacted lift and firmly compact with a small smooth drum, vibratory roller.
- B. Compact to a minimum relative compaction of 95 percent per ASTM D1557.

### **3.07 TOLERANCES**

- A. All subgrade excavation and fill limits shall be constructed within a tolerance of  $\pm 1.0$  ft for horizontal state plan coordinates, and within +0.1 to -0.1 ft vertical for reference to the design elevation. All grading shall be performed to maintain slopes and drainage as shown on the Construction Drawings.
- B. The final grade of the finished operations layer shall be within -0.0 to +0.1 ft of the design elevation. At the discretion of the OWNER, the thickness may exceed the plus tolerance provided that the minimum design thickness is achieved.
- C. A surveyor licensed in the State of California shall prepare as-built documentation to

confirm that the tolerances are as required. The as-built documentation shall be reviewed by the CQA ENGINEER for approval prior to placement of subsequent layers. As-built documentation is required for finished subgrade.

### **3.08 DUST CONTROL**

- A. The CONTRACTOR is required to implement dust control measures as necessary to minimize dust generation during all construction activities.

### **3.09 EROSION CONTROL**

- A. Throughout the construction period, the CONTRACTOR shall install adequate Best Management Practices (BMPs) whenever a precipitation event is forecast for the site.

### **3.10 STOCKPILING**

- A. Stockpile excess excavated soils in location designated by OWNER.
- B. Final side-slopes shall be inclined no steeper than 2H:1V.
- C. At the completion of the soil stockpiling, the top of the stockpile shall be graded to provided positive drainage.
- D. Track-walk side-slopes to provide a relatively firm and even surface.

**- END OF SECTION -**

**SECTION 02222  
COMPACTED CLAY LINER**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. This section describes the requirements for the production, placement, and trimming of the compacted clay liner associated with the construction of the Module 6 base liner system at the Monterey Peninsula landfill.

**1.02 RELATED SECTIONS**

- A. Section 02220 - Earthwork
- B. Section 02751 - HDPE Geomembranes
- C. Section 02756 – Geosynthetic Clay Liner

**1.03 REFERENCES**

- A. Latest Version of American Society for Testing and Materials (ASTM) standards:
  1. ASTM D422 – Standard Test Method for the Particle-Size Analysis of Soils
  2. ASTM D854 - Standard Test Methods for Specific Gravity of Soil Solids by Water Pycnometer
  3. ASTM D1140 - Standard Test Methods for Amount of Material in Soils Finer than No. 200 Sieve
  4. ASTM D1556 – Standard Test Method for Density and Unit Weight of Soil in Place by the Sand Cone Method
  5. ASTM D1557 – Standard Test Methods for Laboratory Compaction Characteristics of Soils Using Modified Effort
  6. ASTM D1587 - Standard Practice for Thin-Walled Tube Sampling of Soils for Geotechnical Purposes
  7. ASTM D2216 – Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
  8. ASTM D2937 – Standard Test Method for Density of Soil in Place by the Drive-Cylinder Method
  9. ASTM D4220 - Standard Practices for Preserving and Transporting Soil Samples
  10. ASTM D4318 – Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
  11. ASTM D4643 – Standard Test Method for Determination of Water (Moisture) Content of Soil by the Microwave Oven Method
  12. ASTM D5084 - Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
  13. ASTM D6391 - Standard Test Method for Field Measurement of Hydraulic Conductivity Limits of Porous Materials Using Two Stages of Infiltration from a Borehole.

14. ASTM D6938 – Standard Tests Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear-Methods (Shallow Depth)

B. Construction Quality Assurance (CQA) Plan

#### **1.04 SUBMITTALS**

- A. The CONTRACTOR shall submit a detailed plan for the preparation of the compacted clay liner material, including a description of the equipment and procedures to be used and methods for monitoring gradation and moisture conditioning. This plan shall be approved by the OWNER prior to the start of compacted clay liner production.
- B. Notify CQA ENGINEER in writing at least 7 days in advance of performing work under this section.

#### **1.05 QUALITY ASSURANCE**

- A. The CQA ENGINEER shall test compacted clay liner material during production and following placement in accordance with the CQA Plan. The CONTRACTOR shall make allowances for sampling and testing by the CQA ENGINEER in both production operations and schedule.

### **PART 2: PRODUCTS**

#### **2.01 COMPACTED CLAY LINER**

- A. The compacted clay liner shall consist of a relatively homogeneous fine-grained soil. The-low permeability soil shall be classified as an SC, CL, or CH material by the CQA ENGINEER unless otherwise directed by the OWNER. Material used for compacted clay liner material shall meet the following minimum requirements:
  - 1. Percent Passing No. 200 Sieve > 30
  - 2. Plasticity Index >10
  - 3. Maximum Particle Size - 3/8-inch
- B. The compacted clay liner shall have an in-situ permeability equal to or less than  $1 \times 10^{-7}$  cm/sec as measured by ASTM D5084. To achieve this permeability requirement, the material properties may need to be more stringent than indicated in Article 2.01.A of this Section.
- C. The compacted clay liner materials shall be prepared by the CONTRACTOR and tested by the CQA ENGINEER in compliance with the CQA Plan. Testing will be done to determine fines content, Atterberg limits, and permeability. The CONTRACTOR shall make the compacted clay liner borrow source available to the CQA ENGINEER at all times for sampling, testing, or visual observation.
- D. The compacted clay liner shall be free of organics, foreign debris, rocks greater than 3/8-inch in diameter, and other deleterious material.

### **PART 3: EXECUTION**

#### **3.01 PRELIMINARY COMPACTION WINDOW**

- A. Prior to construction, the CQA ENGINEER shall obtain samples of the proposed clay and complete laboratory hydraulic conductivity on remolded samples to define a preliminary moisture-density window. At a minimum, the moisture-density window is expected to be between 2 to 6 percent above the optimum moisture content and the minimum relative

compaction of 90 percent per ASTM D1557. More stringent compaction requirements may be required to achieve the specified field and laboratory permeability of  $1 \times 10^{-7}$  cm/sec.

### **3.02 COMPACTED SOIL LINER BORROW SOURCE**

- A. The CONTRACTOR is responsible for segregating soils suitable for compacted clay liner during excavation and/or obtaining suitable material from the OWNER designated stockpile.

### **3.03 TEST PAD**

- A. A test pad shall be constructed prior to full production of the compacted clay liner to assure that the specified compaction, moisture content, and field and laboratory permeability values (less than or equal to  $1 \times 10^{-7}$  cm/s) can be achieved in the final compacted clay liner product.
- B. The test pad minimum dimensions and thickness are described in the CQA Plan.
- C. The test pad shall be constructed using the same equipment and number of passes to be used during full production
- D. At the completion of the test pad construction, the CQA ENGINEER shall commence field permeability testing which is expected to take 2 to 4 weeks to complete.
- E. Full production of the compacted clay liner shall not begin until the CQA ENGINEER determines that the measured field and laboratory permeability of the test pad is  $1 \times 10^{-7}$  cm/s or less.
- F. The CQA ENGINEER shall finalize the moisture-density compaction window. Based on the results of the test pad, the CQA ENGINEER may modify the compaction window to be used during full production.

### **3.04 MOISTURE CONDITIONING**

- A. CONTRACTOR is responsible for moisture conditioning the clay to within the required moisture content range determined by the CQA ENGINEER.
- B. The moisture content of the material shall be uniform. If wet zones are encountered within the compacted clay liner soil materials, they shall be allowed to dry or mixed with surrounding material. Conversely, if dry zones are encountered within the compacted clay liner materials, they shall be moisture conditioned and mixed with the surrounding material.

### **3.05 SUBGRADE PREPARATION**

- A. The surface of the soil liner subgrade shall be graded to lines, grades, and tolerances shown on the Construction Drawings.

### **3.06 PLACEMENT AND COMPACTION**

- A. The compacted clay liner material shall be properly moisture conditioned prior to compaction.
- B. The compacted clay liner shall be placed and compacted in lifts not exceeding 8 inches loose or 6 inches compacted. The compacted clay liner shall be compacted to within the final moisture-density window which shall not be less than 90 percent of the maximum dry density as determined by ASTM D1557 and at least 2 percent above the optimum moisture content.
- D. The compacted clay liner distribution and gradation throughout the liner shall be free from lenses, pockets, streaks, layers, or material differing substantially in texture or gradation from surrounding material.
- E. The moisture content of the compacted clay liner shall be uniform throughout each lift prior to and during compaction of the material. The CONTRACTOR shall be responsible for meeting

moisture content, compaction, and material classification specifications. If the compacted clay liner material cannot be conditioned to meet the placement specifications, the material shall be removed and replaced with new compacted clay liner material.

- F. The CONTRACTOR shall place lifts of the compacted clay liner to form a continuous monolithic material. If a lift of compacted clay liner dries out during placement operations, the CONTRACTOR shall moisture condition the dry soil and recompact the lift prior to placement of additional lifts. If a lift of compacted clay liner becomes overly wet due to precipitation or over watering, the CONTRACTOR shall allow the wet soil to dry or remove the material before placement of additional lifts. Each new lift shall be kneaded into the previously placed lift.
- G. The compacted clay liner shall be compacted with a self-propelled kneading, sheepsfoot or padfoot, compactor. Hauling and spreading equipment will not be considered as compaction equipment. The use of rubber-tired and/or smooth drum compaction equipment is not allowed.

### **3.07 GRADING**

- A. The surface of the compacted clay liner shall be graded to the lines and grades shown on the Drawings. The surface of the completed compacted clay liner shall be rolled with a smooth drum roller or other suitable device to remove all ridges and surface irregularities. The CQA ENGINEER shall determine if the surface preparation is sufficient to place the HDPE geomembrane.
- B. All wheel ruts on the surface of the compacted clay liner shall be repaired by the CONTRACTOR prior to placement of the HDPE geomembrane. Methods for repair of the compacted clay liner are specified in Part 3.08 of this Section. Alternate methods for repair of the compacted clay liner will be allowed if submitted by the CONTRACTOR and approved by the CQA ENGINEER.
- C. The CONTRACTOR shall maintain the compacted clay liner surface in a condition suitable for geomembrane installation until the surface is covered. CONTRACTOR shall apply water to the surface to prevent desiccation cracking. Desiccation cracks larger than 0.1 feet deep or 0.25 inches wide shall be excavated to the full depth of the crack and repaired.
- D. The maximum particle size that may be exposed on the compacted clay liner surface shall be 3/8-inch. Larger particles shall be removed by the CONTRACTOR and the compacted clay liner surface repaired in accordance with Article 3.08.
- E. CONTRACTOR shall repair all ruts, erosion rills or other damage that may occur prior to the placement of the geomembrane.

### **3.08 REPAIR OF THE COMPACTED CLAY LINER**

- A. The CONTRACTOR shall repair any areas of the clay liner identified by the CQA ENGINEER to be non-compliant with the Construction Specifications. Repair procedures consist of the following:
  - 1. Removing non-compliant material
  - 2. Scarify the excavation surface and spray with water
  - 3. Place additional approved compacted clay liner materials in lifts not to exceed 6-inches in thickness
  - 3. Compact the compacted clay liner with self-propelled sheepsfoot type compactor to the required moisture content and minimum dry density



4. Trim surface to design grades and tolerances
5. Roll surface with a smooth drum roller to remove irregularities

### **3.09 TOLERANCES**

- A. The compacted clay liner shall be constructed to tolerance of  $-0.0$  ft to  $+0.2$  feet of the design elevation. The contractor shall also ensure that the compacted clay liner has a minimum thickness of 2.0 feet and that positive drainage grades are retained throughout the liner.
- B. At the discretion of the OWNER, the plus tolerance may be exceeded provided the minimum thickness is achieved.
- C. A surveyor licensed in the State of California shall prepare an as-built survey record drawing to confirm that the tolerances are as required. The as-built record drawing shall be reviewed by the CQA ENGINEER for approval prior to placement of subsequent materials.

**END OF SECTION**

**SECTION 02223  
DRAINAGE GRAVEL AND LCRS DRAINAGE LAYER**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. This section describes the requirements for placement of the Drainage Gravel and LCRS Drainage Layer associated with construction of the Module 6 base liner system at the Monterey Peninsula landfill.

**1.02 RELATED SECTIONS**

- A. Section 02200 - Earthwork
- B. Section 02725 – HDPE Pipe and Fittings
- C. Section 02751 - HDPE Geomembranes
- D. Section 02752 - Geotextiles

**1.03 REFERENCES**

- A. Latest Version of American Society for Testing and Materials (ASTM) standards:
  - 1. ASTM C136 - Standard Test Method for Particle-Size Analysis of Fine and Coarse Aggregate
  - 2. ASTM D2434 - Standard Test Method for Permeability of Granular Soils (Constant Head)
  - 3. ASTM D5821 - Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
- B. Construction Quality Assurance (CQA) Plan.

**1.04 SUBMITTALS**

- A. Submit gravel samples at least 7 days prior to full-scale production for testing by CQA ENGINEER.

**1.05 QUALITY ASSURANCE**

- A. Perform in accordance with the CQA Plan.

**PART 2: PRODUCTS**

**2.01 DRAINAGE GRAVEL**

- A. Drainage Gravel shall be comprised of durable, sub-rounded gravel and shall meet the following gradation requirements.

US Sieve Size	Percent Passing
1"	100
No. 4	0-35
No. 20	50-100
No. 40	5-85
No. 200	0-2

- B. Drainage Gravel shall exhibit a permeability of 1 cm/sec or greater.

## 2.02 LCRS DRAINAGE LAYER

- A. Select on-site sand obtained from the excavation that has a maximum particle size of 3/8-inch and less than 5 percent of the particles passing the US No. 200 sieve by dry weight.
- B. Exhibit a minimum permeability of  $1 \times 10^{-3}$  cm/s.

## PART 3: EXECUTION

### 3.01 PLACEMENT OF DRAINAGE GRAVEL AND LCRS DRAINAGE LAYER

- A. Place Drainage Gravel and the LCRS Drainage Layer as shown in the Construction Drawings.
- B. Equipment operating and material placement requirements:
1. Grading equipment shall operate on a minimum thickness of 1.0 foot.
  2. Grading equipment for spreading the LCRS drainage layer shall be a low ground pressure dozer with a maximum track pressure of 6 psi.
  3. When operating over the geosynthetic liner, hauling equipment shall operate on a minimum combined thickness of 24 inches for the LCRS drainage layer and operations layer.
  4. Sharp turns by equipment shall not be permitted. If any hauling, placing, or grading equipment turns sharply or operates on less than required minimum thickness of gravel, the area below the equipment shall be carefully excavated to expose the underlying geomembrane. Damaged areas shall be repaired by CONTRACTOR in accordance with procedures described in Section 02751- HDPE Geomembranes at no cost to OWNER.
  5. Take precautions to prevent damage to underlying layers.
  6. Prevent excessive wrinkle development in the geosynthetic layers. LCRS drainage layer or gravel placement will stop of wrinkles greater than 4-inches in height develop. Wrinkles greater than 4-inches in height shall be cut out and repaired in accordance with procedures described in Section 02751- HDPE Geomembranes at

no cost to OWNER. To prevent wrinkles, the CONTRACTOR may place material in the early morning hours when the geosynthetic materials are cool and by monitoring and walking out wrinkles in the geosynthetic materials that appear at the leading edge of LCRS drainage layer or gravel placement.

7. Grading equipment shall be equipped with laser or global positioning satellite surveying technology that provides the operator real-time measurement of the dozer blade relative to the top of the liner.
- C. Protect HDPE pipe from mechanical damage.
  - D. The CONTRACTOR shall maintain the final surface of the gravel layer free of ruts, and depressions until the overlying materials are placed.

### **3.02 TOLERANCES'**

- A. The final grade of the finished Drainage Gravel and LCRS Drainage Layer shall be within -0.1 to +0.1 ft of the design thickness.

**- END OF SECTION -**

**SECTION 02510  
ASPHALTIC CONCRETE PAVING**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. This section applies to the asphalt concrete paving of the Calpine Road Realignment at the Monterey Peninsula Landfill.

**1.02 RELATED SECTIONS**

- A. Section 02200 - Earthwork

**1.03 REFERENCES**

- A. American Society for Testing and Materials (ASTM), latest editions:
  - 1. ASTM D5 - Standard Test Method for Penetration of Bituminous Materials
  - 2. ASTM D92 – Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
  - 3. ASTM D113 - Standard Test Method for Ductility of Bituminous Materials
  - 4. ASTM D2170 - Standard Test Method for Kinematic Viscosity of Asphalts (Bitumens)
  - 5. ASTM D2171 - Standard Test Method for Viscosity of Asphalts by Vacuum Capillary Viscometer
  - 6. ASTM D2042 - Standard Test Method for Solubility of Asphalt Materials in Trichloroethylene
- B. State of California Department of Transportation (CALTRANS) Standard Specifications, latest edition
- C. State of California Department of Transportation (CALTRANS) Laboratory Test Methods, latest editions:
  - 1. Test 305 - Swell of Bituminous Mixtures
  - 2. Test 307 - Moisture Vapor Susceptibility of Bituminous Mixtures
  - 3. Test 366 - Stabilometer Value
  - 4. Test 367 - Recommending Optimum Bitumen Content (OBC)

**1.04 SUBMITTALS**

- A. Written statement by asphalt supplier giving source and material certificates, including proportions by weight of asphalt and aggregates.
- B. Provide duplicate delivery tickets with each load of asphalt delivered, one for CONTRACTOR and one for CQA ENGINEER, with the following information:
  - 1. Date and serial number of ticket,
  - 2. Truck number, time loaded, and name of dispatcher,
  - 3. Amount of asphalt in load (in cubic yards or tons) delivered, and
  - 4. Maximum size aggregate.

**1.05 JOB CONDITIONS**

- A. Asphalt concrete shall not be placed if rain is forecasted within 24 hours of paving.

**PART 2: PRODUCTS**

**2.01 MATERIALS**

- A. Hot mix asphalt shall be Type A per Section 39-2.02 of the CALTRANS Standard Specifications. Aggregate for the asphalt mixture shall be 3/4-inch maximum (medium) gradation conforming to Section 39-2.02 of the CALTRANS Standard Specifications.

**PART 3: EXECUTION**

**3.01 SUBGRADE PREPARATION**

- A. Asphalt subgrade shall consist of compacted 3/4-inch Class 2 aggregate base conforming to Section 02200 of the Construction Specifications.
- B. Asphalt joints with existing asphalt shall be ground a minimum of 3 inches prior to new asphalt placement with approved asphalt recycling equipment.
- D. Existing asphalt concrete surfaces shall be prepared for new asphalt concrete placement by grinding the upper surface.
- E. Paint binder shall be applied to all asphalt joints with existing asphalt, construction joints, concrete foundations, posts, poles, and other vertical surfaces against which asphalt concrete is to be placed.
- F. Paint binder shall be applied to the prepared surface of existing asphalt concrete to receive new pavement.

**3.02 ASPHALT STORAGE, DRYING, PROPORTIONING, AND MIXING**

- A. Asphalt concrete shall be stored, dried, proportioned, and mixed in accordance with Section 39 of the CALTRANS Standard Specifications.

**3.03 ASPHALT CONCRETE PLACEMENT**

- A. Asphalt concrete shall be placed, spread, and compacted in accordance with Section 39 of the CALTRANS Standard Specifications.
- B. Spreading and compacting equipment shall conform to Section 39 of the CALTRANS Standard Specifications.

**3.04 TOLERANCES**

- A. Asphalt concrete elevations shall be placed to a tolerance of plus 0.05 to minus 0.00 feet of the design grades. Payment will be based on design plan area and thickness.

**- END OF SECTION -**

**SECTION 02720  
DRAINAGE AND EROSION CONTROL**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. This section describes the material and construction requirements for drainage facilities associated with the construction of the Module 6 base liner at the Monterey Peninsula landfill.

**1.02 RELATED SECTIONS**

- A. Section 02110 - Clearing, Grubbing, and Stripping
- B. Section 02200 – Earthworks

**1.03 REFERENCES**

- A. State of California Department of Transportation (CALTRANS), Standard Construction and Material Plans (Standard Plans), latest edition.
- B. State of California Department of Transportation (CALTRANS), Standard Construction and Material Specifications (Standard Specs), latest edition.
- C. American Association of State Highway and Transportation Officials (AASHTO), Standard Specifications for Transportation Materials, latest edition.

**PART 2: PRODUCTS**

**2.01 CORRUGATED METAL PIPE**

- A. Corrugated metal pipe shall be made from helically corrugated 16-gauge steel sheet. Corrugations shall be 2-2/3-inch pitch by 1/2-inch depth consistent with AASHTO M36. All pipes shall have at least two annular corrugations at each end of each pipe length.
- B. The corrugated metal pipe shall be manufactured using pre-coated galvanized sheet.
- C. Fittings shall be the same base material as the pipe and be molded or formed to suit pipe size and end design.

**2.02 COUPLING BANDS**

- A. Coupling bands shall be fabricated from the same base material as the pipe and conform to AASHTO M245.
- B. Coupling bands shall be Hugger Bands with O-rings or joint sealant per CALTRANS Standard Plans.

**2.03 ANCHORS**

- A. Pipe stakes, plates, bars, clip brackets, and hardware shall be hot-dip galvanized, after fabrication.

- B. CONTRACTOR may use either Alternative A or B anchor assembly per CALTRANS Standard Plan D87A.

**2.04 EROSION CONTROL BLANKET**

- A. Coir Erosion Mat shall be manufactured from 100% coconut fibers (COIR) that are held together by cotton stitched photodegradable polypropylene mesh on both sides. COIR erosion mats shall have a minimum weight of 450 grams per meter squared (g/m<sup>2</sup>), a thickness of at least 8 millimeters, and a minimum service life of 3 years.

**2.05 STRAW WATTLES**

- A. Straw Wattles shall be North American Green SediMax-SW Straw Wattles or an equivalent product accepted by the DESIGN ENGINEER.

**2.06 HYDROSEED**

- A. Fertilizer shall be commercial fertilizer used in a pelleted or granular form and shall be 16 percent nitrogen, 20 percent phosphoric acid, 0 percent soluble potash, and a minimum 12 percent sulfur. Apply at a rate of 300 pounds/acre.

- B. Tackifier shall be Terra Tack TR or equivalent applied at a rate of 150 lbs/acre.

C. Seed

1. Seed required to be labeled under the California Food and Agriculture Code, shall be labeled by the vendors supplying such seed. Seed shall have been tested for purity and germination not more than 15 months prior to the application of such seed. The test results from such seed testing shall be submitted to the CQA ENGINEER prior to applying the seed. Seed labels furnished by the seed vendors supplying such seed shall indicate the purity and germination as determined by such seed testing. Seed not required to be labeled under the California Food and Agricultural Code shall be tested for purity and germination by a seed laboratory certified by the Association of Official Seed Analysts, or a seed technologist certified by the Society of Commercial Seed Technologists. The percentage of seed germination shall include the germination percentage of any hard seed. Legume seed shall be pellet-inoculated with a viable bacteria compatible for use with that species of seed. All inoculated seed shall be labeled to show the weight of seed, the date of inoculation, and the weight and source of inoculant materials. Inoculant shall be added at the rate of 2 pounds of inoculant per 100 pounds of legume seed.

2. Seed shall consist of the following:

Vegetation Name (common)	Application Rate (lbs/acre)
Zorro Fescue Grass	21
Blando Brome Grass	4.7
Crimson Clover	4.7
Arroyo Lupine	0.3
California Poppy	0.14
Blue Flax	0.14

- D. Mulch shall consist of fiber mulch mixed at a rate of 1,500 lbs/acre.

**PART 3: EXECUTION**

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Monterey Peninsula landfill

**Golder Associates**

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### **3.01 CORRUGATED METAL PIPE INSTALLATION**

- A. Culverts placed below grade shall be supported on a minimum of 4-inches of pipe bedding shaped to provide uniform support beneath the pipe. Pipe bedding shall consist of Engineered Fill per Section 02200 except that the maximum particle size shall be one-inch.
- B. Place pipe as shown on the Construction Drawings. Join pipe sections with coupling bands and O-rings.
- C. Secure pipe to slope with anchor assembly per CALTRANS Standard Plan D87A. Pipe anchors to be placed along pipe at a distance not to exceed 25 feet.
- D. Install drain inlets as shown on the Construction Drawings.

### **3.02 DRAINAGE CHANNELS**

- A. Excavate drainage channels to the lines and grade indicated on the Drawings.

### **3.03 STRAW WATTLES**

- A. Install straw wattles per manufacturer's recommendations and as show on the plans. At a minimum, wattles shall be installed parallel to elevation contours, and be installed in a excavation depth of approximately 1/3 of the roll diameter. Staking shall follow manufacturer's recommendations.

### **3.04 EROSION CONTROL BLANKET**

- A. Install erosion control blanket at the locations show in the Construction Drawings and anchor/staple per manufacturer's recommendations.
- B. Place erosion control blanket after hydroseeding.

### **3.05 HYDROSEEDING**

- A. Apply seed to disturbed surface areas prior to the placement of the erosion control blanket.
- B. Mix seed and fertilizer per manufacturer's recommendations and apply at the specified rates using hydraulic methods. Seed shall be applied between October 1st and October 30th.
- C. Mulch and tackifier may be placed after the seed or applied simultaneously with the seed.

### **3.06 TOLERANCES**

- A. The CONTRACTOR shall be responsible for installing all culvert, pipes, and ditches within the following tolerances:
  - 1. Vertical tolerance: 0.15 ft
  - 2. Maintain positive grades - no reverse slopes allowed at any location.

**- END OF SECTION -**

**SECTION 02725  
HDPE PIPE AND FITTINGS**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. This section describes the material and construction requirements for the HDPE pipe and fittings associated with the construction of the LCRS and groundwater underdrain for the Module 6 base liner at the Monterey Peninsula landfill.

**1.02 RELATED SECTIONS**

- A. Section 02200 – Earthworks
- B. Section 02223 – Drainage Gravel and LCRS Drainage Layer
- C. Section 02751 - HDPE Geomembranes
- D. Section 02756 – Geosynthetic Clay Layer

**1.03 REFERENCES**

- A. Latest version of American Society for Testing and Materials (ASTM) standards:
  - 1. ASTM D1505. Density of Plastics by the Density - Gradient Technique.
  - 2. ASTM D1603. Standard Test Method for Carbon Black in Olefin Plastics
  - 3. ASTM D1693. Standard Test Method for Environmental Stress-Cracking of Ethylene Plastics
  - 4. ASTM D2657. Standard Practices for Heat-Joining for Polyolefin Pipe and Fittings
  - 5. ASTM D2837. Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials.
  - 6. ASTM D3350. Standard Specification for Polyethylene Plastics Pipe and Fittings Material
  - 7. ASTM F714. Standard Specification for Polyethylene (PE) Plastics Pipe (SDR-PR) Based on Outside Diameter
- B. Construction Quality Assurance (CQA) Plan.

**1.04 SUBMITTALS**

- A. Submit detailed shop drawings of all HDPE pipe and fittings, pipe bands, a list of materials to be furnished, and the names of the suppliers. Submittals shall be made at least 7 days before the start of work.
- B. Submit manufacturer's quality control certificate for the HDPE pipe product meets the minimum physical property requirements.

**PART 2: PRODUCTS**

## **2.01 HDPE MATERIALS**

- A. Specific gravity, as determined by ASTM D1505, shall be at least 0.94.
- B. Carbon black content, as determined by ASTM D1603, shall be at least 2.0 percent.

## **2.02 HDPE PIPE, PIPE FITTINGS, AND VALVES**

- A. All HDPE pipe and fittings shall comply with ASTM F714.
- B. All HDPE pipe and fittings shall be comprised of Type IV piping manufactured from resin with a cell classification of 345464C per ASTM D3350.
- C. HDPE pipe and fittings shall have a maximum Standard Diameter Ratio (SDR) as indicated on the Construction Drawings.
- D. HDPE solid pipe shall be furnished as specified on the Construction Drawings.
- E. HDPE pipe shall be furnished perforated as specified on the Construction Drawings. Perforations shall be drilled into the pipe after manufacture.
- F. HDPE pipes and fittings shall be homogeneous throughout and free of visible cracks, holes, (except as noted on the Construction Drawings), blisters, bubbles, undispersed raw materials, or any foreign inclusions or other deleterious effects.
- G. Fittings at the ends of pipes shall consist of HDPE end caps unless indicated otherwise on the Construction Drawings.
- H. Valves shall have wetted parts that are resistant to corrosion by leachate. Valves shall be either ball valves or butterfly valves unless otherwise called out on the Construction Drawings.

## **PART 3: EXECUTION**

### **3.01 INSTALLATION**

- A. HDPE Pipe, Pipe Fittings, and Valves
  - 1. All HDPE pipe and fittings shall be installed in accordance with the manufacturer's recommendations.
  - 2. Foreign material shall be removed from the interior of all pipe and fittings prior to welding.
  - 3. All joining or coupling of new pipe sections shall be accomplished by thermal butt fusion in accordance with ASTM D2657. No solvent or adhesive welding will be allowed. Field-cutting of pipes, where required, shall be made with a machine specifically designed for cutting pipe. Cuts shall be carefully made, without damage to pipe or lining, so as to leave a smooth end at right angles to the axis of the pipe.
  - 4. Joining of new pipe to existing pipe shall be completed through mechanical joining with flange adapters and back-up rings secured with stainless steel nuts and bolts or with thermal fusion couplers.
  - 5. Grind off the inner fusion weld beads for the pan lysimeter and LCRS sump riser pipes.

6. All pipe and fittings shall be laid or placed to the lines, grades and elevations, with bedding and backfill, as shown on the Construction Drawings.
7. Blocking under piping shall not be permitted.

### **3.02 TOLERANCES**

- A. The CONTRACTOR shall be responsible for installing all HDPE piping within the following tolerances:
  1. Horizontal tolerance: 0.5 ft maximum
  2. Vertical tolerance: 0.15 ft maximum
  3. Maintain positive grades - no reverse slopes allowed at any location.

**- END OF SECTION -**

**SECTION 02751  
HDPE GEOMEMBRANES**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. This section describes the requirements for the manufacture, supply, installation, and quality control (QC) of High Density Polyethylene (HDPE) geomembranes associated with the construction of the Module 6 base liner at the Monterey Peninsula landfill.

**1.02 RELATED SECTIONS**

- A. Section 02200 – Earthwork
- B. Section 02223 – Gravel
- C. Section 02725 - HDPE Pipe and Fittings
- D. Section 02756 – Geosynthetic Clay Layer

**1.03 REFERENCES**

- A. Latest Version of American Society for Testing and Materials (ASTM) standards:
1. ASTM D638 Test Method for Tensile Properties of Plastics
  2. ASTM D746 Test Method for Determination of Low Temperature Brittleness Properties
  3. ASTM D1004 Test Method for Initial Tear Resistance of Plastic Film and Sheeting
  4. ASTM D1204 Test Method for Linear Dimensional Changes of Non-rigid Thermoplastic Sheeting or Film at Elevated Temperature
  5. ASTM D1238 Standard Test Method for Flow Rates of Thermoplastics by Extrusion Plastometer
  6. ASTM D1505 Standard Test Method for Density of Plastics by Density-Gradient Technique
  7. ASTM D1603 Test Method for Carbon Black in Olefin Plastics
  8. ASTM D1693 Test Method for Environmental Stress Crack Resistance
  9. ASTM D4833 Test Method for Puncture Resistance of Geotextiles, Geomembranes, and Related Products
  10. ASTM D5199 Standard Test Method for Measuring the Nominal Thickness of Geomembranes
  11. ASTM D5321 Test Method for Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Geosynthetic Friction by the Direct Shear Method

12. ASTM D5596 Microscopic Evaluation of the Dispersion of Carbon Black in Polyolefin Geosynthetics
  13. ASTM D5994 Standard Test Method for Measuring the Core Thickness of Textured Geomembrane
  14. ASTM D6392 Standard Test Method for Determining the Integrity of Nonreinforced Geomembrane Seams Produced Using the Thermo-Fusion Methods
  15. ASTM D7002 Standard Practice for Leak Location on Exposed Geomembranes Using the Water Puddle System
  16. ASTM D7007 Standard Practice Standard Practices for Electrical Methods for Locating Leaks in Geomembranes Covered with Water or Earth Materials
- B. Latest version of Geosynthetics Research Institute (GRI) testing methods:
1. GRI-GM10 The Stress Crack Resistance of HDPE Geomembrane Sheet
  2. GRI-GM13 Test Properties, Testing Frequency and Recommended Warranty for High Density Polyethylene (HDPE) Smooth and Textured Geomembranes
  3. GRI-GM19 Seam Strength and Related Properties of Thermally Bonded Polyolefin Geomembranes.
- C. Construction Quality Assurance (CQA) Plan

#### 1.04 SUBMITTALS

- A. Production Data: Furnish the following in writing to the CQA ENGINEER a minimum of seven calendar days prior to geomembrane shipment to the site:
1. Resin:
    - a. Statement of production dates and origin of resin used to manufacture the geomembrane for the project.
    - b. Copies of the quality control certificates issued by the manufacturer and resin supplier indicating that the resin used to manufacture the geomembrane meets these Construction Specifications.
  2. Quality Control: A copy of the Manufacturer's quality control program shall be submitted to the CQA ENGINEER a minimum of seven calendar days prior to geomembrane shipment to the site. Quality control testing shall be performed by the Manufacturer in accordance with the test procedures, and frequency listed in the Quality Control Program and as approved by the CQA ENGINEER. Prior to delivery the following shall be submitted to the CQA ENGINEER for Review:
    - a. Certificates for each shift's production of geomembrane, statements of production dates.
    - b. Certification stating all geomembrane rolls are furnished by one manufacturer, and all rolls are manufactured from one resin type obtained from one resin supplier.

- c. Copies of quality control certificates issued by the Manufacturer. The quality control certificates shall include:
      - i. Roll numbers and identification;
      - ii. Sampling procedures; and
      - iii. Results of quality control tests, including descriptions of the test methods used.
    - d. The results of the manufacturing quality control tests shall meet or exceed the property values listed in Table 02751-1.
    - e. Geomembrane delivery, storage, handling and installation instructions.
  - 3. Extrudate Beads and/or Rod:
    - a. Statement of production dates.
    - b. Certification stating all extrudate is from one manufacturer, is the same resin type, and was obtained from the same resin supplier as the resin used to manufacture the geomembrane rolls.
    - c. Copies of quality control certificates issued by the Manufacturer.
- B. Prior to mobilization of the INSTALLER to the site, the INSTALLER shall submit the following information:
  - 1. Shop drawings indicating panel layout and field seams 14 calendar days prior to installation of geomembrane.
  - 2. Installation schedule.
  - 3. Copy of INSTALLER's letter of approval or license by the Geomembrane Manufacturer.
  - 4. Installation capabilities, including:
    - a. Information on equipment proposed for this project;
    - b. Average daily production anticipated for this project; and
    - c. Quality control procedures.
  - 5. Provide copies of the quality control/quality assurance program for the manufacturer of the geomembrane liner.
  - 6. Resume of the superintendent to be assigned to this project, including dates and duration of employment.
  - 7. Resumes of all personnel who will perform seaming operations on this project, including dates and duration of employment.
  - 8. The installation crew shall have the following experience.
    - a. The superintendent shall have supervised the installation of a minimum

of 2,000,000 ft<sup>2</sup> of polyethylene geomembrane and 500,000 ft<sup>2</sup> of geotextile.

- b. The master seamer shall have experience seaming a minimum of 1,000,000 ft<sup>2</sup> of polyethylene geomembrane using the same type of seaming apparatus to be used at this site.
  - c. All other seaming personnel shall have seamed at least 100,000 ft<sup>2</sup> of polyethylene geomembrane using the same type of seaming apparatus to be used at this site. Personnel who have seamed less than 100,000 ft<sup>2</sup> of polyethylene geomembrane shall be allowed to seam only under the direct supervision of the master seamer or Superintendent.
- C. During the installation, the INSTALLER shall be responsible for the timely submission to the CQA ENGINEER of subgrade acceptance certificates, signed by the INSTALLER, for each area to be covered by geomembrane.
  - D. Prior to seam testing, submit calibration certificates for all vacuum and air-pressure gauges used for non-destructive seam testing.
  - E. The following shall be furnished to the OWNER upon completion of the project:
    - 1. A 20-year written warranty provided by the Manufacturer against defects in material. Warranty conditions concerning limits of liability will be evaluated and must be acceptable to the OWNER.
    - 2. A 1-year warranty provided by the GEOSYNTHETICS INSTALLER against defects in workmanship. Warranty conditions concerning limits of liability will be evaluated and must be acceptable to the OWNER.
    - 3. As-built Panel Drawings provided by the GEOSYNTHETICS INSTALLER.

## **1.05 QUALITY ASSURANCE**

- A. Perform work in accordance with the INSTALLER's Quality Control Program and the Construction Quality Assurance Plan.
- B. Attend a pre-installation conference one week prior to commencing work of this section. Require attendance of parties directly affecting the work of this section.

## **PART 2: PRODUCTS**

### **2.01 DELIVERY, STORAGE AND HANDLING**

- A. Conform to the Manufacturer's requirements to prevent damage to geomembrane.
- B. Delivery:
  - 1. Deliver materials to the site only after the CQA ENGINEER and the OWNER approve required submittals.
  - 2. All rolls of geomembrane delivered to the site shall be identified at the factory with the following:
    - a. Manufacturer's name
    - b. Product identification



- c. Lot number
  - d. Roll number
  - e. Roll dimensions
3. Separate damaged rolls from undamaged rolls and store at locations designated by the OWNER until proper disposition of material is determined by the OWNER and the CQA ENGINEER.
  4. The OWNER will be the final authority regarding damage.
  5. Separate rolls without proper documentation and store until the CQA ENGINEER approval is received.
  6. The CONTRACTOR shall be responsible for offloading all geosynthetic materials
- C. On-Site Storage:
1. Store in space allocated by the OWNER.
  2. Protect from puncture, dirt, grease, water, moisture, mud, mechanical abrasions, excessive heat or other damage.
  3. Store on level prepared surface (not on wooden pallets).
  4. Stack per Manufacturer's recommendation but no more than three rolls high.
- D. On-Site Handling:
1. Use appropriate handling equipment to load, move or deploy geomembrane rolls. Appropriate handling equipment includes cloth chokers and spreader bar for loading, spreader and roll bars for deployment. Dragging panels on ground surface will not be permitted.
  2. Do not fold geomembrane material; folded material shall be rejected.
  3. The GEOSYNTHETICS INSTALLER is responsible for storage, and transporting material from storage area to liner facility.
- E. Damaged Geomembrane:
1. Geomembrane damage will be documented by the CQA ENGINEER.
  2. Damaged geomembrane shall be repaired, if possible, in accordance with these Construction Specifications or shall be replaced at no additional cost to the OWNER.

## 2.02 MATERIALS

- A. The geomembrane shall be comprised of high-density polyethylene (HDPE) material as indicated on the Construction Drawings, manufactured of new, first-quality products designed and manufactured specifically for the purpose of liquid containment in hydraulic structures.
- B. The geomembrane shall be produced free of holes, blisters, undispersed raw materials,

or any sign of contamination by foreign matter. Any such defect shall be repaired in accordance with the repair procedures in Article 3.06.

- C. The geomembrane shall be manufactured with a minimum of 20.0 feet seamless width. There shall be no factory seams.
- D. The geomembrane liner shall be 60-mil HDPE and shall consist of single-sided textured geomembrane on the northwest side slope and double-sided textured geomembrane on the floor as shown in the Construction Drawings.
- E. The sacrificial geomembrane liner shall consist of smooth 40-mil HDPE geomembrane.
- F. The geomembrane shall be supplied in rolls; folds will not be permitted. Identify each roll with labels indicating lot number, roll number, thickness, length, width, manufacturer, and plant location.
- G. Specifications for HDPE geomembrane properties are presented in Table 02751-1 included at the end of this section. Supplied material shall conform to these properties based upon the Manufacturer's QC testing and CQA conformance testing.
- H. Extrudate Rod or Bead:
  - 1. Shall be made from same resin as the geomembrane.
  - 2. Additives shall be thoroughly dispersed.
  - 3. Shall be free of contamination by moisture or foreign matter.
- I. The textured geomembrane shall exhibit minimum shear strength characteristics along the textured geomembrane/compacted clay liner interface. These characteristics shall be demonstrated with direct shear testing (ASTM D5321) by an independent CQA laboratory.
  - 1. The minimum residual shear strength shall correspond to an internal friction angle of 12 degrees with no cohesion as determined by the following test conditions:
    - a. Perform direct shear test (ASTM D5321) at normal stresses of 2,000, 6,000, 10,000 and 15,000 psf.
    - b. Compact clay to 90 percent relative compaction at moisture content of 4 to 6 percent above optimum.
    - c. Allow compacted clay to consolidate under each load.
    - d. Use a shearing rate of 0.04 in./min
  - 2. The texturing shall remain intact under the above test conditions (no peeling or shearing of the texturing).

## **2.03 EQUIPMENT**

- A. Welding equipment and accessories shall meet the following requirements:
  - 1. Equipped with gauges showing temperatures both in apparatus and at nozzle (extrusion welder) or at wedge (fusion welder).
  - 2. All welding equipment shall be capable of welding conductive geomembrane.

3. Maintain adequate number of welding apparatus to avoid delaying work.
  4. Use power source capable of providing constant voltage under combined-line load.
  5. Provide secondary containment to catch spilled fuel under electric generator, if located on geomembrane.
- B. Provide calibrated tensiometer capable of quantitatively measuring geomembrane strength:
1. Equipped with gauge accurate to  $\pm 2$  lbs per inch of geomembrane width and capable of pulling at 2 inches per minute and 20 inches per minute.
  2. Provide one inch die for cutting sample specimens.
  3. Provide certificate of tensiometer calibration within the past 12-months.

#### **2.04 CONFORMANCE TESTING**

- A. Material that arrives at the site will be sampled and conformance tested by the CQA ENGINEER at a minimum frequency of one per 150,000 square feet of material continuously produced and supplied to the project, with a minimum of one sample per production lot. The Manufacturer shall pay for shipping the conformance samples by the CQA ENGINEER. Materials may be sampled at the plant at the option of the OWNER.
- B. As a minimum, the following tests will be performed by a geosynthetics CQA laboratory and shall meet the requirements outlined in Table 02751-1.
1. Thickness (ASTM D5994)
  2. Specific Gravity (ASTM D1505)
  3. Carbon Black Content (ASTM D1603)
  4. Carbon Black Dispersion (ASTM D5596)
  5. Tensile Properties (ASTM D6693)
  6. Puncture Resistance (ASTM D4833)
- C. If a test result is in non-conformance with the Construction Specifications, all material from that production lot represented by the failed test shall be rejected. Rejected material may be minimized by bounding the nonconformance material with additional passing tests conducted by the geosynthetics CQA laboratory. Additional tests shall be conducted at no additional cost to the OWNER.
- D. Rejected material shall be replaced at no additional cost to OWNER.
- E. A minimum of one large-scale direct shear test shall be performed (ASTM D5321) to verify the material requirements in Paragraph 2.02.H. Additional tests shall be performed at the discretion of the CQA ENGINEER and/or if the geomembrane texturing appears to vary.
- F. Sacrificial geomembrane does not require conformance testing.

## **PART 3: EXECUTION**

### **3.01 EXAMINATION**

- A. Verify in writing that the surface on which the geomembrane will be installed is acceptable. In so doing, the INSTALLER shall assume full liability for the accepted surface.
- B. The beginning of installation means acceptance of existing conditions. The INSTALLER shall be responsible for maintenance of the geomembrane covered subgrade once installation of geomembrane begins.

### **3.02 PREPARATION**

- A. Maintain the surface suitability and integrity until the lining installation is completed and accepted.
- B. Repair rough areas and any damage to the subgrade caused by installation of the liner.
- C. To avoid sharp bends in the geomembrane, bevel the leading edges of the anchor trench.
- D. Subgrade shall be smooth, uniform, firm and free from rocks or other debris. For deployment over soil subgrade, no rocks or protrusions greater than 3/8-inch in diameter shall be exposed at the subgrade surface.

### **3.03 DEPLOYMENT**

- A. Geomembrane shall not be deployed:
  - 1. During precipitation
  - 2. In the presence of excessive moisture
  - 3. In areas of ponded water
  - 4. In the presence of excessive winds
  - 5. In excessive heat or cold
- B. Each panel shall be marked with an "identification code" (number or letter) consistent with the layout plan. The identification code shall be simple and logical. The number of panels deployed in one day shall be limited by the number of panels which can be seamed on the same day. All deployed panels shall be seamed to adjacent panels by the end of each day.
- C. The following is the acceptable method of deployment:
  - 1. Use equipment which will not damage geomembrane by handling, trafficking, leakage of hydrocarbons or other means.
  - 2. Do not allow personnel working on geomembrane to wear damaging shoes, or engage in activities that could damage geomembrane.
  - 3. Smoking or vaping on the liner is prohibited.
  - 4. Round sharp corners of clamps and other metal tools used in the work area.

5. Do not allow clamps and other metal tools to be tossed or thrown.
  6. Unroll panels with a method that protects geomembrane from scratches and crimps and protects soil surface and underlying geotextile from damage.
  7. Use a method to minimize wrinkles, especially differential wrinkles between adjacent panels.
  8. Place adequate hold-downs to prevent uplift by wind.
  9. Use hold-downs that will not damage geomembrane such as sandbags.
  10. Use continuous hold-downs along leading edges to minimize risk of wind flow under panels.
  11. Panels shall be deployed perpendicular to slope elevation contours and the generation of seams shall be minimized.
  12. Protect geomembrane in heavy traffic areas by geotextile, extra geomembrane or other suitable materials.
  13. Do not allow vehicular traffic on geomembrane surface.
  14. Panels deployed on grades steeper than 12% shall extend a minimum of 3 feet beyond the crest or toe of that grade.
- D. Visually inspect sheet surface during unrolling of geomembrane and mark faulty or suspect areas for repair or test. Replace faulty (requires more than one patch per 200 square feet) geomembrane stock at no additional cost to the OWNER.
- E. Deploy geomembrane in ambient temperatures less than 104°F (40°C) and greater than 32°F (0°C), measured 6 inches above geomembrane surface. In prevailing warm or cold weather conditions deployment may be acceptable if the provisions for sampling in such conditions is satisfied (see Section 3.5 below). The geomembrane shall not be deployed during precipitation, in the presence of excessive moisture, in area of ponded water, or in the presence of excessive winds.

### **3.04 FIELD SEAMING**

- A. Orient seams perpendicular to slope elevation contours, i.e., orient down (not across) slope and use seam numbering system compatible with panel number system.
- B. Minimize the number of field seams in corners, odd-shaped geometric locations and outside corners.
- C. Overlap panels by a minimum of 3 inches for extrusion welding and 4 inches for fusion welding. Use procedures to temporarily bond adjacent panels together that do not damage the geomembrane and that are not detrimental to seam weld material for extrusion welding.
- D. Do not use solvent or adhesive unless product is approved in writing by the OWNER.
- E. No horizontal seams shall be allowed on grades steeper than 12% or within 3 feet of the crest or toe of slopes. A horizontal seam is defined as more than half of the panel width.
- F. Clean surface of grease, moisture, dust, dirt, debris or other foreign material.

- G. Prior to any extrusion welding, the geomembrane seam or repair shall be prepared as follows:
1. Clean surface of oxidation by disc grinder or equivalent not more than one hour before seaming; use number 80 grit sandpaper for the disc grinder. Bevel edges of geomembrane before bonding and provide continuous tacking in repair areas.
  2. Repair area where excessive grinding substantially reduces sheet thickness by more than 4 mils beyond extents of weld.
  3. Clean grinding dust around weld area after grinding.
  4. The following procedure shall be followed for wrinkles and fishmouths.
    - a. Cut along the ridge of the wrinkle or fishmouth.
    - b. Overlap a minimum of 3 inches and seam.
    - c. Any portion where the overlap is less than 3 inches shall be patched with an oval or round patch of geomembrane that extends a minimum of 6 inches beyond the cut in all directions.
  5. If required, a firm, dry substrate (piece of geomembrane or other material) may be placed directly under the seam overlap to achieve proper support.
  6. Keep water from intercepting the weld during and immediately after welding the seam.
  7. For existing welds, or welds that are over 3 minutes old, grind the existing weld two inches back from point of termination and restart welding on ground weld.
- H. At least one spare operable seaming apparatus shall be maintained for every three seaming teams. Place protective fabric or piece of geomembrane beneath hot welding apparatus when resting on geomembrane lining and use an electric generator capable of providing constant voltage under combined line load. The electric generator shall generally be located outside of liner. Provide protective lining and secondary containment large enough to catch spilled fuel under electric generators when located on the liner. The welding apparatus shall be equipped with gauges giving temperatures in apparatus and at nozzle.
- I. For extrusion welding, purge welding apparatus of heat-degraded extrudate before welding if extruder is stopped for longer than five minutes. All purged extrudate shall be disposed of off the geomembrane. Each extruder shoe shall be inspected daily for wear to assure that its offset is the same as the geomembrane thickness. Repair or replace worn shoes, damaged or misaligned armature brushes, nozzle contamination, or other worn or damaged parts. Avoid stop-start welding. Remove extrudate rod from welder when not using welder for long period (over two hours). No welding may commence on the liner until the field trial seam sample, made by that equipment and seamer, passes destructive testing.
- J. Test and set "hot air system" using scrap material at least each day prior to commencing seaming and adjust hot air velocity to preclude wind effects. Adjust contact pressure rollers to prevent surface ripples in sheet. No equipment shall be used for welding the geomembrane until a field trial seam sample made by that equipment has passed destructive testing.

- K. In performing hot wedge welding, the welding apparatus shall be automated vehicular mounted devices equipped with gauges giving applicable temperatures and pressures. The edge of cross seams shall be ground to smooth incline (top and bottom) prior to welding. A smooth insulating plate or fabric shall be placed beneath the hot welding apparatus after usage. Protect against moisture buildup between sheets. If welding across cross seams, conduct field test seams at least every two hours, otherwise once prior to start of work and once at mid-day. No equipment is allowed to commence welding on geomembrane until the field trial seam sample made by that equipment has passed destructive testing.
- L. Field trial seams shall be conducted, per seaming apparatus and per seamer, on pieces of geomembrane liner to verify adequate seaming conditions at the following frequency:
1. At beginning of each seaming period.
  2. At least once every five hours.
  3. At the discretion of the CQA ENGINEER.
- M. Make the trial seams at area of seaming and in contact with subgrade or GCL (same condition as the liner to be seamed). The seam sample shall be at least 42 inches long and 12 inches wide with the seam centered lengthwise. A one foot length of each trial seam sample shall be submitted to the CQA ENGINEER for archive. Cut three 1-inch wide specimens and test two for peel adhesion, and one for bonded seam strength (shear). Each double wedge fusion seam specimens shall be tested for peel on both sides of the weld. A specimen passes when:
1. The locus-of-break is not one of the following failing modes as defined by ASTM D6392:
    - a. An adhesion failure (code AD, AD1 or AD2),
    - b. Greater than 25% adhesion failure on an adhesion-break (code AD-BRK), or
    - c. An adhesion-weld break through an extrusion weld which exhibits a strength less than required by Table 02751-2
  2. The break is ductile.
  3. The strength of breaks for the trial seam testing shall conform to the values listed in Table 02751-2, included at the end of this section.
- N. A trial seam sample passes when all specimens have passing results in peel and shear tests. If a specimen fails (one of the specimens fails in either peel or shear mode), the trial seam procedure shall be repeated in its entirety. If the repeated trial seam fails, the seaming apparatus or operator may not weld until the deficiencies or conditions are corrected and two consecutive passing field trial seams are achieved.
- O. The following procedures shall be followed during cold weather conditions.
1. Geomembrane surface temperatures shall be determined by the CQA ENGINEER at intervals of at least once per 100 feet of seam length to determine if preheating is required. For extrusion welding, preheating is required if the surface temperature of the geomembrane is below 32° F (0° C).
  2. For fusion welding, preheating may be waived by the OWNER based upon a recommendation by the CQA ENGINEER, if the installer demonstrates to the

CQA ENGINEER's satisfaction that welds of equivalent quality may be obtained without preheating at the expected temperature of installation.

3. If preheating is required, the CQA ENGINEER will observe all areas of geomembrane that have been preheated by a hot air device prior to seaming, to ensure that they have not been overheated.
  4. Care shall be taken to confirm that the surface temperatures are not lowered below the minimum surface temperatures specified for welding due to winds or other adverse conditions. It may be necessary to provide wind protection for the seam area.
  5. All preheating devices shall receive approval by the CQA ENGINEER prior to use.
  6. Additional destructive tests will be taken at an interval between 250 and 500 feet of seam length, at the discretion of the CQA ENGINEER.
  7. Sheet grinding may be performed before preheating, if applicable.
  8. Trial seaming shall be conducted under the same ambient temperature and preheating conditions as the production seams. Under cold weather conditions, new trial seams shall be conducted if the ambient temperature drops by more than 10° F from the initial trial seam test conditions. Such new trial seams shall be conducted upon completion of seams in progress during the temperature drop.
- P. The following procedures shall be followed during warm weather conditions.
1. At ambient temperatures above 104° F (40° C), no seaming of the geomembrane shall be permitted unless the INSTALLER can demonstrate to the satisfaction of the CQA ENGINEER that the geomembrane seam quality is not compromised. Trial seaming shall be conducted under the same ambient temperature conditions as the production seams. At the option of the CQA ENGINEER, additional destructive testing may be required for any suspected areas.

### **3.05 FIELD QUALITY CONTROL**

- A. The INSTALLER shall designate a full-time quality control (QC) technician who shall be responsible for supervising and/or conducting the field quality control program. The QC technician may not be replaced without written authorization by the OWNER.
- B. Non-Destructive Seam Testing
  1. The INSTALLER shall non-destructively test field welds for continuity over their full length. The non-destructive testing shall be performed concurrently with seaming work progress, not at the completion of all seaming. Any defects located in the seam shall be repaired in accordance with Article 3.06. The following non-destructive testing procedures shall be used to test the field seams for continuity.
    - a. Vacuum box testing for extrusion welds.
    - b. Air pressure testing for double fusion seams.
  2. Vacuum Box Testing



- a. The vacuum box testing equipment shall comprise the following.
  - i. Rigid housing; transparent viewing window, a soft rubber gasket attached to bottom of housing; porthole or valve assembly, and a vacuum gauge. Only calibrated vacuum gauges shall be used.
  - ii. A vacuum pump capable of applying 5 psi gage pressure of vacuum to the box.
  - iii. A bucket of soapy solution and applicator.
- b. The procedure for vacuum testing is as follows:
  - i. Clean window, gasket surfaces, and check for leaks.
  - ii. Energize vacuum pump and reduce tank pressure to approximately 5 psi.
  - iii. Wet a strip of geomembrane approximately 12 inches by 30 inches (or length of box) with soapy solution.
  - iv. Place box over wetted area and compress.
  - v. Close bleed valve and open vacuum valve.
  - vi. Ensure that a leak tight seal is created.
  - vii. Examine length of weld through viewing window for presence of soap bubbles for a period of not less than 10 seconds,
  - viii. If no bubbles appear after 10 seconds, close vacuum valve and open bleed valve, move box over next adjoining area with minimum three inches overlap and repeat process.
  - ix. Areas where soap bubbles appear will be marked by the CQA ENGINEER with a defect code. The INSTALLER shall then repair the area in accordance with Article 3.06 and retest the repaired area.

3. Air Pressure Testing (Double Fusion Seams Only)

- a. The air pressure testing equipment shall comprise the following:
  - i. An air pump, equipped with a calibrated pressure gauge with an accuracy of 1 psi, capable of generating and sustaining a pressure between 25 to 30 psi and mounted on a cushion to protect geomembrane. Only calibrated pressure gauges shall be used.
  - ii. Rubber hose with fittings and connections.
  - iii. Sharp hollow needle or other pressure feed device approved by the OWNER.
- b. To perform the test:
  - i. Seal both ends of the seam to be tested.

- ii. Insert a needle or other approved pressure feed device into tunnel created by double hot wedge seaming and insert a protective cushion between air pump and geomembrane.
- iii. Energize air pump to 25 to 30 psi, close valve, and sustain pressure for a minimum of five minutes.
- iv. If loss of pressure exceeds 2 psi or does not stabilize, locate faulty area and repair in accordance with Article 3.06.
- v. Release pressure at opposite end of seam from gauge to verify that the seam is not blocked.
- vi. Remove approved pressure feed device and seal penetration holes by extrusion welding.

C. Destructive Seam Testing

1. For destructive seam testing, the CQA ENGINEER shall be provided with a minimum of one sample per 500 feet of seam length by each welding apparatus. The location will be selected by the CQA ENGINEER and the installer will not be informed of the sample location in advance. The INSTALLER shall visually observe, mark and repair suspect welds before release of a section to the CQA ENGINEER for destructive sample marking. Cut destructive samples as seaming and nondestructive testing progresses, prior to completion of liner installation. The CQA ENGINEER will mark destructive samples with consecutive numbering, location, apparatus I.D., technician I.D., CQA ENGINEER I.D., and apparatus settings and date. Record, in written form, weld and test date, time, location, seam number, ambient temperatures, machine settings, technician I.D., apparatus I.D., and pass or fail description. The INSTALLER shall immediately repair holes in geomembrane resulting from obtaining destructive samples and vacuum test patches. The size of destructive samples shall be 12 inches wide by 48 inches long with seam centered lengthwise.
2. The sample shall be cut into three 14-inch long pieces and distributed as follows:
  - a. To the CQA ENGINEER for destructive testing.
  - b. To the CQA ENGINEER for archive.
  - c. To the INSTALLER for its use.
3. Ten 1-inch wide specimens shall be taken from one piece. Five specimens shall be tested for peel and five for shear strengths in accordance with the CQA Plan, with test results meeting the requirements of Table 02751-2, included at the end of this section. All five specimens must meet Table 02751-2 and the requirements of Paragraph 3.04.M.1 of this section. In the event of failure, the procedures for failed seam tracking are:
  - a. Retrace welding path a minimum of 10 feet in both directions from the failed test location and remove (at these locations) a one inch wide specimen for testing. Repeat tracking procedures until the INSTALLER is confident of seam quality.
  - b. Obtain destructive samples from each side of the welding path and give

- samples to the CQA ENGINEER for destructive testing.
  - c. Repeat process if additional tests fail.
  - d. Reconstruct seam between passing test locations to satisfaction of the CQA ENGINEER.
  - e. Reconstruction may be one of the following:
    - i. Cut out old seam, reposition panel and re-seam.
    - ii. Add cap strip.
  - f. Cut additional destructive samples from reconstruction at discretion of CQA ENGINEER.
  - g. If additional destructive sample results are not acceptable, repeat process until reconstructed seam is judged satisfactory by the CQA ENGINEER.
- D. For final seaming inspection, check the seams and surface of geomembrane for defects, holes, blisters, undispersed raw materials, or signs of contamination by foreign matter. Brush, blow, or wash geomembrane surface if dirt inhibits inspection. The CQA ENGINEER shall decide if cleaning of geomembrane surface and welds is needed to facilitate inspection. Distinctively mark repair areas and indicate required type of repair.

### **3.06 REPAIR PROCEDURES**

- A. The geomembrane will be inspected before and after seaming for evidence of defects, holes, blisters, undispersed raw materials, and any sign of contamination by foreign matter. The surface of the geomembrane shall be clean at the time of inspection. The geomembrane surface shall be swept or washed by the INSTALLER if surface contamination inhibits inspection. The INSTALLER shall ensure that an inspection of the geomembrane precedes any seaming of that section.
- B. Remove damaged geomembrane and replace with acceptable geomembrane materials if damage cannot be satisfactorily repaired.
- C. Repair, removal, and replacement shall be at the INSTALLER's expense if the damage results from the INSTALLER's activities.
- D. Repair any portion of the geomembrane exhibiting a flaw, or failing a destructive or non-destructive test. The INSTALLER shall be responsible for repair of damaged or defective areas. Agreement upon the appropriate repair method shall be decided between the CQA ENGINEER and the INSTALLER. Procedures available include:
  - 1. Patching: Used to repair holes (over 1/4-inch diameter), tears (over 1/4 inch long), undispersed raw materials, and contamination by foreign matter.
  - 2. Grinding and welding: Used to repair pinholes, blemishes and over-grinding.
  - 3. Capping: Used to repair large lengths of failed seams.
  - 4. Removing the seam and replacing with a strip of new material.
- E. In addition, the following procedures shall be observed.

1. Geomembrane surfaces to be repaired shall be abraded (extrusion welds only) no more than 1/2 hour prior to the repair.
  2. All geomembrane surfaces shall be clean and dry at the time of repair.
  3. The repair procedures, materials, and techniques shall be approved in advance of the specific repair by the CQA ENGINEER.
  4. Extend patches or caps at least 6 inches beyond the edge of the defect, i.e., be a minimum of 12 inches in diameter, and round all corners of material to be patched.
  5. Bevel the edge of the patch and do not cut patch with repair sheet in contact with geomembrane. Temporarily bond the patch to the geomembrane with an approved method, extrusion weld the patch, and then vacuum test the repair.
- F. Repair Verification:
1. Number and log each patch repair (performed by the CQA ENGINEER).
  2. Non-destructively test each repair using methods specified in this Section.
  3. Provide daily documentation of non-destructive and destructive testing to the CQA ENGINEER. The documentation shall identify seams that initially failed the test and include the evidence that these seams were repaired and retested successfully.

### **3.07 BALLAST OF SACRIFICIAL COVER**

- A. The sacrificial geomembrane cover shall be secured by sandbag ballast as follows:
1. Sandbags shall be UV resistant bags filled with a minimum of 30 pounds of sand.
  2. Sandbags shall be tied to nylon ropes. The nylon ropes shall be secured to a steel post located at the top of the slope and driven into the anchor trench. Sandbags shall be installed at a maximum 5-foot interval along each nylon rope (sandbag line).
  3. Nylon sandbag lines shall be spaced a maximum horizontal distance of 15 feet.
  4. Nylon rope cross-ties shall join adjacent sandbag lines. The cross-ties shall be spaced a minimum of 25 feet along the length of the sandbag lines.

### **3.08 ACCEPTANCE**

- A. The INSTALLER shall retain ownership and responsibility for the geomembrane until acceptance by the OWNER.
- B. Acceptance Criteria: The following shall be completed:
5. Verification of adequacy of field seams, repairs and testing by the CQA ENGINEER.
  6. Successful completion of the geoelectric leak survey and completion of the repair of all defects identified by the survey.

7. All submittals.
8. "As-built" Drawings, approved and final Construction Drawings submitted.
9. Construction area cleaned.
10. Final field inspection.
11. Warranty signed over to the OWNER.
12. Field Inspections: Inspect the completed work with the OWNER; defects, wrinkles, suspicious looking welds shall be noted and marked; document, correct and arrange further field inspections until no corrective action is necessary. ....

**TABLE 02751-1  
HDPE GEOMEMBRANE PROPERTIES**

Property	Qualifier	Units	Specification				Test Method
Texturing Thickness	min. avg.	mils	Smooth 40	Text. 40	Smooth 60	Text. 60	ASTM D5994 / ASTM D5199 <sup>(1)</sup>
	min.	mils	36	36	54	54	
Asperity Height	min.	mils		16		16	ASTM D7466
Specific Gravity	min.	g/cc	0.940	0.940	0.940	0.940	ASTM D1505
Carbon Black Content	range	%	2 - 3	2 - 3	2 - 3	2 - 3	ASTM D1603
Carbon Black Dispersion	rating	-	Note 2	Note 2	Note 2	Note 2	ASTM D5596 <sup>(2)</sup>
<b>Tensile Properties</b>							
1. Yield Strength	min. avg.	lb/in	84	84	126	126	ASTM D6693 <sup>(3)</sup>
2. Break Strength	min. avg.	lb/in	152	60	228	90	
3. Elongation at Yield	min. avg.	%	12	12	12	12	
4. Elongation at Break	min. avg.	%	700	100	700	100	
Tear Resistance	min. avg.	lb	28	28	42	42	ASTM D1004 <sup>(4)</sup>
Puncture Resistance	min. avg.	lb	72	60	108	90	ASTM D4833
<b>Oxidative Induction Time</b>							
1. Standard, or	min. avg.	min.	100	100	100	100	ASTM D3895
2. High Pressure	min. avg.	min.	400	400	400	400	ASTM D5885
Stress Crack Resistance	min. avg.	hours	300	300	300	300	ASTM D5397 <sup>(5)(6)</sup>

- 10 measurements across the width of the roll (perpendicular to the machine direction) and report average and lowest individual readings.
- At least 9 specimens will be Category 1 or 2. No more than one specimen shall be Category 3. No specimen shall be Category 4 or 5.
- Type IV die. ASTM D638 test specimen shall be used.
  - The grip separation shall be 2.5 inches. This test does not require the use of extensometers. The rate of grip separation will be 2 inches per minute.
  - Machine Direction (MD) and Transverse Direction (TD) average values should be on the basis of 5 test specimens in each direction.
  - Yield elongation is based on a gauge length of 1.3 inches. Break elongation is based on a gauge length of 2.0 inches.
- Die C
- P-NCTL test is not appropriate for testing geomembranes with textured or irregular rough surfaces. Test should be conducted on smooth edges of textured rolls or on smooth sheets made from the same formulation as being used for the textured sheet materials.
  - The yield stress used to calculate the applied load for the SP-NCTL test should be the Manufacturer's mean value via MQC testing.
- Stress Crack Resistance shall be a minimum of 500 hours if GRI-GM-10 is the test method used.

**TABLE 02751-2  
HDPE GEOMEMBRANE SEAM PROPERTIES  
FOR SMOOTH AND TEXTURED MATERIAL**

<b>PROPERTY</b>	<b>QUALIFIER</b>	<b>UNITS</b>	<b>SPECIFICATION</b>		<b>METHOD</b>
Thickness	nominal	mils	40	60	
Shear Seam Strength	minimum	lb/in.	80	120	ASTM D6392 <sup>(1)</sup>
Shear Seam Elongation	minimum	%	50	50	ASTM D6392 <sup>(1)</sup>
Peel Adhesion Fusion	minimum	lb/in.	60	91	ASTM D6392 <sup>(1)</sup>
Extrusion	minimum	lb/in.	52	78	ASTM D6392 <sup>(1)</sup>

1. For shear tests, the sheet shall yield before failure of the seam. For peel adhesion, seam separation shall not extend more than 25% into the seam. For either test, testing shall be discontinued when the sample has visually yielded. Sample break shall conform to a passing locus-of-break as described in paragraph 3.04.M.1 this Section.

**- END OF SECTION -**

**SECTION 02752  
GEOTEXTILE**

**PART 1: GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. This section includes furnishing and installing geotextile fabric in accordance with the construction of the Module 6 base liner at the Monterey Peninsula Landfill.

**1.02 RELATED SECTIONS**

- A. Section 02200 –Earthwork
- B. Section 02750 – HDPE Pipe and Fittings
- C. Section 02751 –HDPE Geomembrane

**1.03 REFERENCES**

- A. Latest version of the American Society for Testing and Materials (ASTM) standards:
  - 1. ASTM D4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity
  - 2. ASTM D4533 - Standard Test Method for Trapezoid Tearing Strength of Geotextiles
  - 3. ASTM D4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
  - 4. ASTM D4751 - Standard Test Method for Determining Apparent Opening Size of a Geotextile
  - 5. ASTM D5199 - Standard Test Method for Measuring the Nominal Thickness of Geosynthetics
  - 6. ASTM D5261 - Standard Test Method for Measuring Mass Per Unit Area of Geotextiles
  - 7. ASTM D6241 – Standard Test Method for Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe

**1.04 SUBMITTALS**

- A. Quality Control Submittals:
  - 1. A copy of the Manufacturer's quality control (QC) plan.
  - 2. Manufacturing QC certificates for each production run. The certificates shall identify the origin and the manufacturer of the resin. The certificates shall be signed by responsible parties employed by the Manufacturer (such as the production manager). Tests shall be performed at the frequency indicated in the Manufacturer's QC Plan.
  - 3. The QC certificates shall include roll numbers and identification, sampling procedures, and results of quality control tests verifying that each of the properties listed in Table 02752-1 are met. The Manufacturer quality control tests to be performed include the tests specified in Article 2.1 of this section.
  - 4. Manufacturer's certification that the geotextile products meet or exceed specified requirements and are 100% free of needles.



B. The INSTALLER shall submit the following.

1. Installation plan
2. Proposed seam stitching methods

#### **1.05 QUALITY ASSURANCE**

A. Perform work in accordance with the Construction Quality Assurance (CQA) plan.

#### **1.05 DELIVERY, STORAGE AND HANDLING**

- A. The geotextile shall be labeled, delivered and stored in accordance with ASTM D4873 unless otherwise agreed upon by the CQA ENGINEER. The protective wrapping shall be maintained during periods of shipment and storage.
- B. Roll numbers, Manufacturer's name, product identification, lot number and roll dimensions shall be marked on protective covering.
- C. During shipment and storage, the geotextile rolls shall be elevated off the ground and adequately covered to protect them from the following:
1. Site construction
  2. Damage precipitation
  3. Extended ultraviolet radiation including sunlight
  4. Chemicals that are strong acids or strong bases
  5. Flames including welding sparks
  6. Temperatures in excess of 160°F (71°C)
  7. Any other environmental condition that may damage the property values of the geotextile.
- D. Manufacturer shall provide unloading straps with rolls delivered to the site.
- E. If the CQA MONITOR determines material is damaged or has excessive sunlight (UV) exposure, the CONTRACTOR shall immediately make all repairs and replacements at no additional cost to the OWNER.
- F. Geotextile damaged during transportation, loading, unloading, delivery, and storage shall be documented by the CQA MONITOR and the CONTRACTOR.
- G. Damaged geotextile shall be repaired, if possible, to the satisfaction of the CQA ENGINEER.
- H. Damaged geotextile rejected by the CQA ENGINEER shall be replaced at no cost to the OWNER.
- I. The CONTRACTOR shall be responsible for offloading all of the geosynthetic materials delivered to the site.

#### **1.06 QUALITY CONTROL**

- A. Use adequate numbers of skilled workman who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Render assistance as necessary for CQA MONITOR to collect product samples for Quality Assurance testing.

**1.07 WARRANTY**

- A. Geotextile and thread shall be provided with Manufacturer and INSTALLER's warranties and the material and workmanship shall meet the warranty provisions of this Contract.

**PART 2: PRODUCTS**

**2.01 GEOTEXTILE**

- A. The non-woven geotextile shall have the following minimum properties:

**Table 02752-1  
Geotextile Minimum Properties**

<b>Property</b>	<b>Test Designation</b>	<b>8 oz. Non-Woven</b>
Mass per Unit Area	ASTM D5261	Min. 8.0 oz/yd <sup>2</sup>
Grab Tensile Strength <sup>1</sup>	ASTM D4632	Min. 210 lbs
Grab Tensile Elongation <sup>2</sup>	ASTM D4632	50%
Trapezoid Tear <sup>1</sup>	ASTM D4533	95 lbs
CBR Puncture Resistance	ASTM D6241	135 lbs
Apparent Opening Size	ASTMD4751	#80 US Sieve
Permittivity/Flow rate	ASTMD4491	110 gal/min/ft <sup>2</sup>

*Notes:*

- 1. *Measured in weakest direction.*
- 2. *Measured in direction of lower elongation.*
- 3. *Non-woven, geotextile shall be continuous-filament needle-punched polypropylene or polyester, or staple-filament needle-punched polyester; yarn oriented into a stable network that maintains its structure during handling, placement, and long-term service.*

**2.02 MANUFACTURER SOURCE QUALITY CONTROL**

- A. The Manufacturer shall certify that quality control tests have been performed on the geotextile, at a minimum frequency of one per 150,000 square feet of material continuously produced and supplied to the project with a minimum of one sample per production lot.
- B. The Manufacturer shall provide the CQA ENGINEER with quality control certificates from the Manufacturer for each lot and each shift's production of geotextile. The quality control certificates shall include:
  - 1. Roll numbers and identification.
  - 2. Sampling procedures.
  - 3. Results of quality control tests, including a description of test methods used.

**2.03 CONFORMANCE TESTING**

- A. Conformance Testing (Performed by the CQA ENGINEER or a representative of the Third-Party Laboratory):

1. Conformance samples shall be obtained at a frequency of one sample every 150,000 sf. The CQA MONITOR shall obtain samples and forward the samples to the Third Party Laboratory. Samples shall be obtained across the entire roll width, excluding the first 2 feet of the roll. Sample size shall be 3-feet long by the roll width. The CQA MONITOR shall mark the machine direction on the sample. The Geosynthetic Manufacturer shall pay for shipping the conformance samples to the geosynthetics CQA Laboratory specified by the CQA ENGINEER.
2. The following tests shall be performed on the conformance samples to determine geotextile characteristics and results shall be evaluated according to ASTM D4759.
  - a) Mass per unit area (ASTM D5261)
  - b) Grab tensile strength (ASTM D4632)
  - c) Apparent Opening Size ASTM D4751
  - d) Permittivity/Flow rate ASTM D4491

## **2.04 EQUIPMENT**

- A. Sewing equipment and accessories shall meet the following requirements:
  1. Maintained in adequate number in order to avoid delaying work.
  2. Supplied by a power source capable of providing constant voltage under a combined-line load.
  3. Provided with a protective lining and splash pad large enough to catch spilled fuel under an electric generator, if used on geotextile.

## **PART 3: EXECUTION**

### **3.01 SURFACE CONDITIONS**

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Notify the CQA ENGINEER of such conditions and proposed corrective actions before correcting unsatisfactory conditions. Do not proceed until unsatisfactory conditions are corrected.

### **3.02 APPROVAL TO DEPLOY**

- A. Prior to installation of geotextile, approval from the CQA MONITOR shall be obtained. If required, deficiencies in the underlying materials shall be corrected as applicable.

### **3.03 DEPLOYMENT**

- A. The geotextile shall be secured during deployment by placing sandbags as ballast. Ballast shall be left in place until the geotextile is covered. INSTALLER shall be responsible for the geotextile until the geotextile is covered. Material used to fill sandbags shall be the same as the material to be placed over the geotextile. The CONTRACTOR shall be responsible for removing the sandbags. No separate payment will be provided for this work.
- B. Care shall be taken to protect other in-place geosynthetic materials when cutting geotextile. INSTALLER shall repair, or replace, at the CQA ENGINEER's discretion, underlying geosynthetic components damaged during geotextile installation at no cost to the OWNER.
- C. During deployment, the INSTALLER shall not entrap excessive dust, stones, or moisture in geotextile that could damage or clog drains or filters, or hamper subsequent seaming.

- D. The geotextile shall be examined over its entire surface to ensure that no potentially harmful foreign objects, such as needles, are present. Foreign objects, if encountered, shall be removed.
- E. Unless ultraviolet-light stabilized, geotextiles shall be covered within a time frame acceptable to the Manufacturer or within 48 hours.

### **3.04 SEAMS AND OVERLAPS**

- A. Seam geotextile by sewing. Geotextile shall be overlapped 6 inches prior to seaming. The INSTALLER shall not seam horizontally on slopes greater than 10 horizontal to 1 vertical (i.e., seam up and down, not across slopes).
- B. The INSTALLER shall ensure that no soil materials are present within the seams.
- C. Polymeric thread with chemical resistance properties equal to or exceeding those of the geotextile, shall be used if the geotextile is joined by sewing. The geotextile shall be sewn with a 401 two-thread chain stitch, or CQA ENGINEER approved equivalent.

### **3.05 REPAIRS**

- A. Holes or tears in geotextiles shall be repaired as follows:
  - 1. On 10 horizontal to 1 vertical (10:1) or steeper slopes: patch from the same geotextile material and continuously sew or heat bond in place.
  - 2. Remove all sheets with tears exceeding 20 percent of the roll width and replace with new material.
  - 3. On slopes flatter than 10:1 patch from the same geotextile material, spot-seam in place with a minimum overlap of 24 inches in all directions.
- B. Remove soil and other material which may have penetrated through the torn geotextile before repairing.

### **3.06 FIELD QUALITY ASSURANCE**

- A. General:
  - 1. The Manufacturer and INSTALLER shall participate in and conform with all terms and requirements of the OWNER's quality assurance program. The INSTALLER shall be responsible for assuring this participation. Quality assurance requirements are as specified in this Section.

### **3.07 ACCEPTANCE**

- A. INSTALLER shall retain ownership and responsibility for geotextile until acceptance by the OWNER.
- B. The OWNER will accept the geotextile installation when:
  - 1. The installation is finished.
  - 2. All required documentation from the Manufacturer and INSTALLER has been received and approved.
  - 3. Verification of the adequacy of all field seams and repairs, including associated testing, is complete.
  - 4. Written certification documents have been received by the OWNER from the CQA Officer.

- END OF SECTION -

**SECTION 02756  
GEOSYNTHETIC CLAY LINER**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. This section describes the requirements for the manufacture, supply, installation, and quality control of the geosynthetic clay liner (GCL) associated with the construction of the Module 6 base liner at the Monterey Peninsula landfill.

**1.02 RELATED SECTIONS**

- A. Section 02200 - Earthwork
- B. Section 02751 - HDPE Geomembranes

**1.03 REFERENCES**

- A. American Society of Testing and Materials (ASTM), latest edition:
  - 1. ASTM D4632 - Grab Breaking Load and Elongation of Geotextiles
  - 2. ASTM D5084 - Measurement of Hydraulic Conductivity of Saturated Porous Materials using a Flexible Wall Permeameter
  - 3. ASTM D5888 - Standard Guide for Storage and handling of Geosynthetic Clay Liners
  - 4. ASTM D5889 - Standard Practice for Quality Control of Geosynthetic Clay Liners
  - 5. ASTM D5890 - Swell Index of Mineral Component of Geosynthetic Clay Liners
  - 6. ASTM D5993 - Measuring Mass per Unit of Geosynthetic Clay Liners
- B. Latest version of Geosynthetics Research Institute (GRI) testing methods:
  - 1. GRI-GCL3 - Test Methods, Required Properties, and Testing Frequencies for Geosynthetic Clay Liners (GCLs)

**1.04 SUBMITTALS**

- A. Quality Control Submittals:
  - 1. A copy of the Manufacturer's quality control plan.
  - 2. Quality control (QC) certificates containing the Manufacturer's QC testing results. At a minimum, QC certifications shall include the requirements listed in Part 2.01 B of this section. QC certificates shall be submitted at a the frequency indicated in the Manufacturer's QC Plan for GCL continuously produced and supplied to the project and at least one per lot.
  - 3. Manufacturer's certificate that products meet or exceed specified requirements.
- B. As-built GCL Panel Drawings

## **1.05 QUALITY ASSURANCE**

- A. Perform work in accordance to the Construction Quality Assurance Plan.

## **1.06 QUALIFICATIONS**

- A. The GEOSYNTHETIC INSTALLER shall be experienced in this installation of geosynthetic clay liners. In the event the GEOSYNTHETIC INSTALLER is not experienced, a Representative of the Geosynthetic Clay Liner Manufacturer shall be on site to train the GEOSYNTHETIC INSTALLER, at no additional cost to the OWNER.

## **PART 2: PRODUCTS**

### **2.01 GEOSYNTHETIC CLAY LINER (GCL)**

- A. GCL Materials. The GCL shall consist of Bentomat DN or equivalent and shall include internal stitching reinforcement through the material that joins the backing fabrics.
- B. The GCL shall meet or exceed the product specifications below:
  - 1. Maximum moisture content of 12% at the time of manufacture per ASTM D4643. The GCL shall not be installed with a moisture content greater than 40%.
  - 2. Maximum fluid loss of 18 ml per ASTM D5891.
  - 3. Nominal Thickness: 0.25 inches.
  - 4. Maximum permeability of  $5 \times 10^{-9}$  cm/sec per ASTM D5084.
  - 5. Bentonite mass per unit area of 0.75 lbs/ft<sup>2</sup> at 0% moisture (0.95 lbs/ft<sup>2</sup> at 20% moisture) per ASTM D5993.

### **2.02 DELIVERY, STORAGE, AND HANDLING**

- A. Handling, storage, and care of the geosynthetic clay liner, prior to and following installation, is the responsibility of the GEOSYNTHETIC INSTALLER, until Final Acceptance of the liner system by the OWNER.
- B. Store and protect the geosynthetic clay liner. GCL shall be protected from ultraviolet light exposure, moisture, puncture, cutting, or other damaging or deleterious conditions. Any additional storage procedures required by the Manufacturer shall be the GEOSYNTHETIC INSTALLER's responsibility.
- C. Protect GCL from rain and moisture at all times.
- D. All rolls of GCL shall be identified at the factory with the following:
  - 1. Manufacturer's name
  - 2. Product identification
  - 3. Lot number
  - 4. Roll number

- 5. Roll dimensions
- E. GCL rolls shall be shipped and stored in relatively opaque and water tight wrappings.
- F. The CONTRACTOR shall be responsible for offloading all of the geosynthetic materials delivered to the site.

## **2.03 CONFORMANCE TESTING**

- A. Conformance testing shall be completed at a frequency of 1 test per 150,000 square feet of material delivered to the site, and a minimum of 1 test per lot. The Geosynthetic Manufacturer shall pay for shipping the conformance samples by the CQA ENGINEER.
- B. Conformance tests shall include permeability (ASTM D 5084) and mass per unit area (ASTM D 5993).

## **PART 3: EXECUTION**

### **3.01 INSTALLATION**

- A. Repair rough areas and any damage to the subgrade caused by installation of the lining and fill any ruts caused by equipment prior to overlying geomembrane deployment.
- B. Install the GCL so that panel seams are parallel to the dip of the slope.
- C. Pull GCL panels from roll suspended at the crest of the slope and install with the non-woven geotextile side up or as recommended by the Manufacturer.
- D. Do not install the GCL over wet subgrade, in standing water, or during precipitation events. Geomembrane shall not be placed on a GCL that is hydrated.
- E. The GCL shall be overlapped a minimum of 1.0 foot along the sides of the GCL panels.
- F. Place only as much GCL each day as can be covered with HDPE liner. The GCL shall be covered by HDPE liner at the end of each working day.
- F. Use single panels of bentonite mat from anchor trench over crest of slope down to lower limit of mat on an intermediate bench or cell floor.
- H. End-to-end seams only allowed on slopes of 10 percent or less.
- I. Do not drag textured geomembranes across previously installed bentonite mat. Use a smooth rub sheet between mat and geomembrane, or other methods, to prevent damage. Remove rub sheet when geomembrane is in position.
- J. All hydrated GCL shall be removed and replaced by the GEOSYNTHETIC INSTALLER at no additional cost to the OWNER.

### **3.02 GCL SEAMING**

- A. Pull GCL panel tight to smooth out creases or irregularities in the panels.
- B. Remove all dirt and debris from the overlap area.
- C. Bentonite seam enhancement, consisting of the placement of 0.50 lbs/ft<sup>2</sup> of dry bentonite between overlapped panels, shall be completed for all seams except for the following

conditions:

1. The edge-to-edge panel seams consist of Bentomat DN with super groove seams.
- D. The GCL seams shall be heat bonded with hot air apparatus ("Leistering").

### **3.03 REPAIR**

- A. Repair cuts, tears, or holes in the GCL by covering with a geosynthetic clay liner patch. On slopes greater than 5 percent, the patch shall overlap the edges of the hole or tear by a minimum of 2 ft in all directions. On slopes 5 percent or flatter, the patch shall overlap the edges of the hole by a minimum of 1 ft in all directions and 0.50 lbs. / ft<sup>2</sup> of raw bentonite.
- B. Attach patch to panel using either non-hazardous, non-toxic adhesive as recommended by GCL Manufacturer or by spot welding with hot air apparatus ("Leistering"). Attachment method shall be approved by PROJECT MANAGER (based on recommendations of the CQA ENGINEER) prior to use.
- C. All repairs shall be made at no additional cost to the OWNER.

**- END OF SECTION -**



**SECTION 02810  
VACUUM LYSIMETERS**

**PART 1: GENERAL**

**1.01 DESCRIPTION**

- A. This section describes the requirements for the manufacture, supply, and installation of the vacuum Lysimeter Installation associated with the construction of the Module 6 base liner at the Monterey Peninsula landfill.

**1.02 RELATED SECTIONS**

- A. Section 02200 - Earthwork
- B. Section 02222 – Compacted Clay Liners

**1.03 REFERENCES**

- A. Soil Moisture Equipment Corporation Operating Instructions, 1920F1 Pressure-Vacuum Soil Water Samplers, March 2017

**1.04 QUALIFICATIONS**

- A. The vacuum lysimeters shall be installed by a qualified firm experienced in the installation and operation of vacuum lysimeters.

**PART 2: PRODUCTS**

**2.01 VACUUM LYSIMETERS**

- A. Model 1920F1 manufactured by Soil Moisture Equipment Corporation.

**PART 3: EXECUTION**

**3.01 INSTALLATION**

- A. Install vacuum lysimeters in the upper 6-inches of the subgrade soils and below the bottom of the compacted clay liner as shown on the Construction Drawings.
- B. Pressure test the vacuum lysimeter prior to installation per Manufacturer's recommendations.
- C. Complete install of the vacuum lysimeter per Manufacturer's recommendations including the backfilling of silica flour slurry around the sampler. Backfill the remaining portion of the vacuum lysimeter with compacted clay liner material.
- E. Encase the 1/4-inch tubing in 2-inch diameter PVC pipe casing. Use long sweep PVC elbows in place of 90 degree elbows.
- F. Do not crimp or pinch the 1/4-tubing between the vacuum lysimeter and the termination of the tubing. Provide a clamp to temporarily pinch the end of the tubing such that they are not directly accessible to the atmosphere.
- H. Verify that the lysimeter is capable of obtaining water samplers following installation.

**- END OF SECTION -**

## SECTION 02850

### WATER SUPPLY WELL ABANDONMENT

#### PART 1: GENERAL

##### 1.01 DESCRIPTION

- A. This section describes the requirements for the abandonment of the water supply well located within the footprint of the Module 6 base liner at the Monterey Peninsula landfill.

##### 1.02 RELATED SECTIONS

- A. Section 02200 - Earthwork

##### 1.03 REFERENCES

- A. Monterey Peninsula Landfill Work Plan to Abandon and Relocate Monitoring and Water Supply Wells, June 2018.

##### 1.04 SUBMITTALS

- A. Water Supply Well Abandonment Permit Application.

##### 1.06 QUALIFICATIONS

- A. The Water Supply Well Abandonment shall be performed by a California licensed well drilling company.

#### PART 2: NOT USED

#### PART 3: EXECUTION

##### 3.01 WELL ABANDONMENT

- A. Pressure grouting may be completed prior to or following the subgrade excavation but must be completed prior to the placement of the compacted clay liner. In either case, CONTRACTOR is responsible for maintaining survey records of the location of the water supply well so that it is abandoned properly.
- B. Comply with all applicable well abandonment requirements including those provided by County of Monterey Health Department. Submit well abandonment permit and coordinate with County Health Department Inspectors during abandonment.
- C. Well Abandonment shall follow the requirements outlined in Monterey Peninsula Landfill Work Plan to Abandon and Relocate Monitoring and Water Supply Wells, June 2018 with the following modifications:
  - 1. Overdrill the upper 10 feet of the remaining well in the subgrade excavation and cut and remove the upper 10 feet of steel well casing.
  - 2. Backfill the uppermost 4 feet of the overdrilled boring with bentonite chips. Hydrate the bentonite chips with clean water prior to placement of the compacted clay liner.
- D. Submit well abandonment as-built record report.

- END OF SECTION -