

**SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**



**ITEM: 12.1
(ID # 13305)**

MEETING DATE:

Tuesday, September 01, 2020

FROM: DEPARTMENT OF WASTE RESOURCES:

SUBJECT: DEPARTMENT OF WASTE RESOURCES: Approval of Contract Documents, including plans and specifications, and Advertise for Bids for the Construction of C2P5 and C3P2 Liner Expansion Project at Badlands Sanitary Landfill, District 5. [\$0 – Department of Waste Resources Enterprise Funds](CEQA- Nothing Further Required)

RECOMMENDED MOTION: That the Board of Supervisors:

1. Find that Nothing Further is Required pursuant to the California Environmental Quality Act (CEQA) as all potentially significant effects of the Project have been adequately analyzed in Addendum No. 1 to the Environmental Assessment/Mitigated Negative Declaration (EA/MND) for the Badlands Landfill Solid Waste Facility Permit (SWFP) Revision Project, adopted December 15, 2015 (SCH No. 2010101090);
2. Approve the Contract Documents, including the plans and specifications, for the Construction of C2P5 and C3P2 Liner Expansion Project at Badlands Sanitary Landfill;
3. Authorize the General Manager-Chief Engineer of the Riverside County Department of Waste Resources (Department) to advertise for bids to be received in the Department Office located at 14310 Frederick Street, Moreno Valley, California, up to the time of 10:30 a.m. on Thursday, October 1, 2020 at which time the bids will be opened; and
4. Direct the Department to file the Notice of Determination (NOD) with the County Clerk and Office of Planning and Research upon approval of the Project.

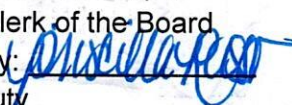
ACTION: Policy


Diana Kolinkamp, General Manager - Chief Engineer 8/18/2020

MINUTES OF THE BOARD OF SUPERVISORS

On motion of Supervisor Jeffries, seconded by Supervisor Spiegel and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Jeffries, Spiegel, Washington, Perez and Hewitt
Nays: None
Absent: None
Date: September 1, 2020
xc:

Kecia R. Harper
Clerk of the Board
By: 
Deputy

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,
STATE OF CALIFORNIA**

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost
COST	\$ 0	\$ 0	\$ 0	\$ 0
NET COUNTY COST	\$ 0	\$ 0	\$ 0	\$ 0
SOURCE OF FUNDS: Waste Resources Enterprise Funds			Budget Adjustment:	No
			For Fiscal Year:	20/21

C.E.O. RECOMMENDATION: Approve

BACKGROUND:

Summary

The proposed landfill liner expansion will provide countywide waste disposal capacity at the Badlands Landfill. Constructing a 7-acre lateral expansion, referred to as C2P5 and C3P2 Landfill liner expansion, will provide an estimated two (2) additional years of landfill airspace and complete the final expansion within the permitted refuse limits. A composite liner system will be constructed within the C2P5 and C3P2 expansion areas in order to comply with the requirements of the applicable State and Federal Regulations and the Waste Discharge Requirements issued by the California Regional Water Quality Control Board, Santa Ana Region.

Prev. Agn. Ref.: M.O. 12.1 of 01/25/11 (approved EA/MND)
M.O. 12.2 of 12/15/15 (approved Addendum to EA/MND)
M.O. 12.5 of 9/25/18 (approved studies/third party construction QA/QC)

CEQA Findings

On January 25, 2011 (M.O. 12.1), the County adopted the EA/MND for the Badlands Landfill SWFP Revision Project (SCH No. 2010101090) and adopted Addendum No. 1 to the EA/MND on December 15, 2015 (M.O. 12.2). Addendum No. 1 specifically evaluated construction of the Project and found it would not cause new significant environmental impacts or increase the severity of previously identified impacts.

This Project simply approves contract documents identifying the work previously analyzed with no new significant impacts identified, as such, nothing further is required under CEQA.

A NOD will be filed by the Department with the County Clerk and Office of Planning and Research upon Project approval.

Impact on Residents and Businesses

This Project extends the life of the Badlands Landfill, allowing the Department to continue to provide disposal service to the citizens and businesses of Riverside County and the region.

Additional Fiscal Information

The Project contemplated in this Form 11 merely approves contract documents identifying the work associated with the C2P5 and C3P2 Liner Expansion at Badlands Sanitary Landfill, as

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,
STATE OF CALIFORNIA**

well as authorizes the Department to advertise said contract documents. No expenses will be incurred as a result of this action.

Contract History and Price Reasonableness

The Engineer's estimate for this Project is \$2,400,000 and the action today, if approved, will authorize the Department to pursue competitive bids through the California Public Works Contract process. The Department will then return to the Board of Supervisors to seek approval to award the Contract to the lowest responsible bidder.

ATTACHMENTS:

- ATTACHMENT A. CONTRACT DOCUMENTS**
- ATTACHMENT B. CEQA NOD**



Jason Farin, Principal Management Analyst

8/25/2020



Gregory H. Priamos, Director County Counsel

8/25/2020

**COUNTY OF RIVERSIDE
DEPARTMENT WASTE RESOURCES
NOTICE OF DETERMINATION**

TO:

X Office of Planning and Research (OPR)
Submitted via online document portal

X County Clerk
County of Riverside

FROM:

Riverside County
Department of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

For County Clerk's Use Only:

Original Negative Declaration/Notice of
Determination was routed to County
Clerks for posting on.

9/14/20
Date

PR
Initial

Subject: Filing of Notice of Determination in Compliance with Section 21152 of the Public Resources Code

Project Title: Construction of the Badlands Landfill Liner Expansion (Project)

State Clearinghouse (SCH) No.: 2010101090 **Contact:** Ryan Ross **Phone:** 951-486-3200

Project Applicant/Property Owner & Address: Riverside County Department of Waste Resources
14310 Frederick Street, Moreno Valley, CA 92553

Project Location: The Badlands Landfill is located at 31125 Ironwood Avenue, Moreno Valley, CA 92555

Project Description: The Project involves approval of Contract Documents for the construction of the C2P5 and C3P2 liner expansion at the Badlands Landfill.

This is to advise that the Riverside County Board of Supervisors has approved the above-referenced Project on September 1, 2020 and has made the following determinations regarding that project:

1. Nothing further is required pursuant to the California Environmental Quality Act (CEQA), whereas all potentially significant effects of the Project have been adequately analyzed in Environmental Assessments/Mitigated Negative Declarations (EAs/MNDs) as follows: Badlands 2010-01, adopted January 25, 2011 (SCH No. 2010101090); Addendum No. 1 to Badlands 2010-01, adopted December 15, 2015 (SCH No. 2010101090).
2. Mitigation measures were not made a condition of approval for this Project.
3. A mitigation monitoring program was not adopted for this Project.
4. A statement of overriding considerations was not adopted for this Project.
5. Findings were made pursuant to the provisions of CEQA.

This is to certify that the adopted environmental documents and record of Project approval is available to the general public at: Riverside County Department of Waste Resources
14310 Frederick Street, Moreno Valley, CA 92553

Signature: 

Title: Planning Division Manager

Date: 9/1/2020

SEP 01 2020 12.1



CONTRACT DOCUMENTS

FOR

THE CONSTRUCTION OF

C2P5 AND C3P2 LINER EXPANSION PROJECT

AT

BADLANDS SANITARY LANDFILL

AUGUST 2020



FORM APPROVED COUNTY COUNSEL

BY: Synthia M. Gunzel 8-25-2020
SYNTHIA M. GUNZEL DATE

RIVERSIDE COUNTY DEPARTMENT OF
WASTE RESOURCES
14310 Frederick Street
Moreno Valley, CA 92553

By: _____
Hans W. Kernkamp
General Manager – Chief Engineer

Date: _____

COUNTY OF RIVERSIDE

By: _____
Chairman, Board of Supervisors

Date: _____

ATTEST:

By: _____
Kecia R. Harper, Clerk of the Board

By: _____
Deputy

Date: _____

(Seal)

CONTRACTOR

By: _____

Date: _____

Name: _____

Title: _____

(If corporation, attach corporate seal)



CONTRACT DOCUMENTS
FOR
THE CONSTRUCTION OF
C2P5 AND C3P2 LINER EXPANSION PROJECT
AT
BADLANDS SANITARY LANDFILL

AUGUST 2020



FORM APPROVED COUNTY COUNSEL
BY: Synthia M. Gunzel 8-25-2020
SYNTHIA M. GUNZEL DATE

(This page left intentionally blank.)

TABLE OF CONTENTS

ADMINISTRATIVE PROVISIONS

GENERAL PROVISIONS

TECHNICAL PROVISIONS

APPENDICES

APPENDIX A	QUALITY ASSURANCE/QUALITY CONTROL PLAN (QA/QC PLAN)
APPENDIX B	LANDFILL SITE RULES
APPENDIX C	SCAQMD FORM 403-N & RULE 403 DUST CONTROL REQUIREMENT TABLES 2 AND 3
APPENDIX D	BADLANDS TITLE V REFUSE EXCAVATION REQUIREMENTS
APPENDIX E	PROCEDURES FOR PLACEMENT OF PROTECTIVE COVER SOIL (PCS) MATERIAL
APPENDIX F	PROCEDURES FOR THE REMOVAL OF PROTECTIVE COVER SOIL (PCS) MATERIAL
APPENDIX G	PROJECT DRAWINGS

(This page left intentionally blank.)



ADMINISTRATIVE PROVISIONS

FOR

THE CONSTRUCTION OF

C2P5 AND C3P2 LINER EXPANSION PROJECT

AT

BADLANDS SANITARY LANDFILL

AUGUST 2020

(This page left intentionally blank.)

TABLE OF CONTENTS

ADMINISTRATIVE PROVISIONS

NOTICE INVITING BIDS TO CONTRACTORS 2

INSTRUCTIONS TO BIDDERS

ARTICLE 1 - GENERAL CONDITIONS..... V

ARTICLE 2 - BIDDING PROCEDURES IX

ARTICLE 3 - CONSIDERATION OF BIDSXII

ARTICLE 4 - POST NOTICE OF INTENT TO AWARD XIV

BID PROPOSAL

CONTRACTOR'S PROPOSAL..... 7

LIST OF SUBCONTRACTORS 19

PROJECT REFERENCE FORM..... 21

CONTRACTOR'S STATEMENT OF QUALIFICATIONS FORM..... 22

CONTRACTOR'S STATEMENT OF LICENSURE..... 23

NON-COLLUSION DECLARATION 24

IRAN CONTRACTING ACT CERTIFICATION 25

BID BOND 27

CONSTRUCTION AGREEMENT, BONDS, AND OTHER FORMS

CONSTRUCTION AGREEMENT..... 30

PERFORMANCE BOND 33

PAYMENT BOND 36

WORKERS' COMPENSATION CONTRACTOR CERTIFICATE 39

DECLARATION OF SUFFICIENCY OF FUNDS..... 40

(This page left intentionally blank.)

NOTICE INVITING BIDS TO CONTRACTORS

The Riverside County Department of Waste Resources, hereinafter called "County," invites sealed bids for:

C2P5 AND C3P2 LINER EXPANSION PROJECT
AT
BADLANDS SANITARY LANDFILL

On or after **September 1, 2020**, Contract Documents may be obtained upon request to the County. Contract documents will be mailed out upon payment to the County of \$35 per set if mailed by U.S. mail (mailing cost does not apply when using recipient's mailing account number). No refund will be made.

A digital copy of the Contract Documents and Project Drawings in PDF format will be available on the Department's website <http://www.rcwaste.org>. The Project Drawings will also be available in digital Microstation (.dgn) format upon e-mailed request as stated on the Department's website. This digital data is to be used at the Contractor's own discretion. The County is not responsible for the manner in which the Contractor chooses to use the digital data. The County is not responsible for how this digital data might be converted by the Contractor to another format. The Contractor is solely responsible for its use of this digital data.

Each Bid Proposal must be accompanied by a Bid Security, in the form of cash, a certified check, cashier's check or Bid Bond, equal to ten percent (10%) of the amount Bid, payable to the County of Riverside as a guarantee that the Contractor will, if awarded the Contract, execute a satisfactory Contract and furnish the required bonds and provide the required certificates of insurance.

Bid Proposals must be placed in a sealed envelope clearly marked "Bid Proposal". Bid Proposals must be in accordance with the instructions and other Contract Documents and filed with the County by **10:30 AM on Thursday, October 1, 2020** at 14310 Frederick Street, Moreno Valley, CA 92553 which time and place are fixed for the public opening of bids. In the event County Public Buildings are closed to the public, the bid opening will be held outside, just in front of the aforementioned address. A **mandatory** pre-bid site review will be conducted at the Badlands Sanitary Landfill on **Wednesday, September 9, 2020 at 10:00 AM**. The Badlands Sanitary Landfill site address is 31125 Ironwood Avenue, Moreno Valley, A 92555. All questions and requests for clarification or interpretation of the Contract Documents must be submitted in writing by **5:00 PM on Friday, September 18, 2020** to Manuel Ruiz via e-mail to "manuelruiz@rivco.org" or fax no. (951) 486-3250.

Pursuant to Labor Code Section 1771.1, any Contractor bidding and subcontractors to be listed on a Bid Proposal are subject to Public Contract Code Section 4104 and shall not be eligible

ADMINISTRATIVE PROVISIONS

to bid unless currently registered with the Department of Industrial Relations and qualified to perform public works pursuant to Labor Code section 1725.5. No Contractor or subcontractor may be awarded a public works project or enter into a Contract without proof of current registration to perform public works.

General prevailing rate of per diem wages and general prevailing rate of per diem wages for holiday and overtime work, including employer payments for health and welfare, pension, vacation, apprentices and similar purposes for each craft, classification or type of workman needed for execution of Contracts under the jurisdiction of the County have been obtained by the County from the Director of Industrial Relations of the State of California for the area where the Work is to be done. These are on file at the County's office, and will be made available to any interested person upon request. THIS PROJECT IS SUBJECT TO COMPLIANCE MONITORING AND ENFORCEMENT BY THE DEPARTMENT OF INDUSTRIAL RELATIONS. The awarded prime Contractor shall post job site notices, including a copy of the prevailing rate of per diem wages determinations made by the Director for the Department of Industrial Relations and other notices prescribed by regulations and comply with the provisions of the California Labor Code, including, without limitation, Sections 1771.4, 1773.1, 1773.2, 1774, 1775, 1776, and 1777.5.

Contractor shall furnish the records specified in Labor Code Section 1776, including but limited to the certified payroll records, directly to the Labor Commissioner for the Department of Industrial Relations.

Substitution of securities for any moneys withheld by County shall be permitted as provided for by Section 22300 of the California Public Contract Code.

Contractors submitting Bid Proposals for this Project shall have an active and in good standing **Class A** Contractors license from the State of California in order to be considered eligible for the Contract award. The license(s) shall remain active and in good standing throughout the entire duration of the Project.

BIDDER QUALIFICATIONS:

A Bidder must satisfy the following requirements to bid on this Project:

1. Within the last five years, the Contractor shall have successfully completed at least two mass earthwork excavation projects each with a minimum quantity of 10,000 cubic-yards in comparable topographic features as exist at the project sites (that is, with canyons and valleys, and not just flat terrain).
2. Within the last five years, the Contractor and/or subcontractor shall have successfully completed a construction project(s) with at least 350,000 square feet of geosynthetics.
3. Within the last five years, the Contractor and/or subcontractor shall have successfully completed a landfill liner construction project with at least 350,000 square feet of finished subgrade surface preparation on slopes as steep as 1.5H:1V. Subgrade surface preparation shall have been in accordance with ASTM D6102 with no rocks or coarse particles projecting by more than 3/8-inch above the finished surface.

Bidders shall provide all the reference information requested on the Project Reference Form for the Bidder and for any and all subcontractor(s) listed to perform any work that requires the above qualifications.

SUBMITTAL REQUIREMENTS:

With the submittal of the Bid Proposal, the Contractor shall submit for approval by the County documented evidence of satisfaction of all of the Bidder Qualifications listed above, including the name and experience of the superintendent and lead personnel that will be responsible for each category of Work listed under the preceding paragraph "Bidder Qualifications". As part of this submittal, Project Reference Forms shall be completed indicating at a minimum, the name, address, and phone number of the project owner and owner's representative, the location of the project, the amount of material installed, and completion date.

Dated: _____

RIVERSIDE COUNTY
DEPARTMENT OF WASTE RESOURCES

Hans W. Kernkamp, General Manager - Chief Engineer

SUBMITTAL REQUIREMENTS:

With the submittal of the Bid Proposal, the Contractor shall submit for approval by the County documented evidence of satisfaction of all of the Bidder Qualifications listed above, including the name and experience of the superintendent and lead personnel that will be responsible for each category of Work listed under the preceding paragraph "Bidder Qualifications". As part of this submittal, Project Reference Forms shall be completed indicating at a minimum, the name, address, and phone number of the project owner and owner's representative, the location of the project, the amount of material installed, and completion date.

Dated: 8/27/20

RIVERSIDE COUNTY
DEPARTMENT OF WASTE RESOURCES



Hans W. Kernkamp, General Manager - Chief Engineer

INSTRUCTIONS TO BIDDERS

ARTICLE 1 - GENERAL CONDITIONS

1.1 DEFINITIONS

Capitalized terms used on the Contract Documents shall have the meanings assigned to them in the Construction Agreement, Bonds, other Forms, General Provisions, and Technical Specifications that are included in the Contract Documents. Capitalized terms not so defined shall have the meanings assigned to them in, or if none is assigned as reasonably interpreted according to the context of, the portion of the Contract Documents where such terms are used.

1.2 QUANTITIES

The amount of work to be done or materials to be furnished by the Contractor as stated in the Bid Proposal (except for lump sum items) are only estimates and are not to be taken as an expressed or implied statement that the actual amount of work or materials will correspond to the estimate. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

1.3 AGREEMENT OF FIGURES

If the unit prices and the total amounts named by the Bidder in the Bid Proposal do not agree, the unit prices alone will be considered as representing the Bidder's intention.

1.4 "OR EQUAL"

Pursuant to Division 2, Chapter 3, Article 5, commencing at Section 3400 of the Public Contract Code, all specifications shall be deemed to include the words "or equal," provided, however, that permissible exceptions or other requirements shall be specifically noted in the specifications. Any "equal" proposed by the Contractor must be described in the Contractor's Proposal.

1.5 INSPECTION OF SITE AND UNDERSTANDING OF CONTRACT PROVISIONS

Prior to submission of a Bid, Bidders must have examined the site and fully acquainted themselves with all conditions affecting the Work. Information derived from maps, plans or specifications, or from the County, will not relieve the successful Bidder from properly carrying out all the terms of the written Contract. By the submittal of a Bid Proposal, the Bidder will be held to have personally examined the site and the drawings, to have carefully read all of the specifications and other Contract Documents, and to have satisfied itself as to its ability to meet all the difficulties attending

the execution of the Work. The Bidder agrees that if it is awarded the Contract it will make no claim against the County based on ignorance or misunderstanding of the Contract provisions; and that the Bidder fully understands the payment method for the Work.

1.6 QUALIFICATIONS OF BIDDERS

No Bid Proposal will be accepted from a Contractor who is not licensed under laws of California, as evidenced by the submittal of the Statement of Licensure by Contractor with the Bid Proposal. No award will be made to any Bidder who cannot give satisfactory assurance to the County as to its ability to carry out the Contract, both from its financial standing and by reason of its previous experience as a Contractor on work of the nature contemplated in the Contract. If a Bidder is a corporation, limited partnership or limited liability company, such entity shall be 1) duly incorporated, formed, or organized; 2) authorized to transact and do business in the State of California; and 3) is current, active and in good standing under the laws of the State of California.

1.7 VENDOR REGISTRATION

Contractors must be registered with the County in order to be considered eligible for the Contract award. To register, Contractors may utilize "Vendor Self-Registration" web site at <http://www.purchasing.co.riverside.ca.us> and complete the on-line registration form.

Information needed in order to register:

1. User name (This person will be responsible for original registration and any future change.)
2. User Password
3. Company information including:
 - a. All Addresses (Corporate, Remit to, Sales, etc.)
 - b. Company type (Corporation, partnership, sole proprietorship, etc.)
 - c. Tax Identification Number (or social security number for individuals)
 - d. Banking Information for future electronic payment processes
4. Contact Information including:
 - a. Names
 - b. Titles/Positions
 - c. Contact Numbers (Phone, Fax, Cell phone, etc.)
 - d. E-Mail address for future correspondences
5. List of items/services you wish to provide to the County.

1.8 BALANCE BID

The Contractor is cautioned against unbalancing of its Bid by including its overhead and profit into one or two items only when there are a number of items on the schedule. The overhead and indirect charges should be prorated on all items in the schedule.

1.9 ANTI-DISCRIMINATION

It is the policy of the County that, in connection with all work performed under this Contract, there be no discrimination against any prospective or active employee engaged in the Work because of race, color, ancestry, national origin, religious creed, sex, age, marital status, or sexual preference. The Contractor agrees to comply with applicable Federal and California laws including, but not limited to, the California Fair Employment Practice Act, beginning with Labor Code Section 1410, and Labor Code Section 1735. In addition, the Contractor agrees to require like compliance by any subcontractors employed on the Work.

1.10 REQUIRED SUBMITTALS

There are a number of forms and other documents required as submittals by the Bidder during the various stages of the Project. **Table 1** provides a checklist of submittals required by the Bidder as requested in the Administrative and General Provisions. Bidders shall be made aware that the documents listed in the following table do not guarantee a complete submittal package.

Table 1: Required Submittal Checklist

	BID DOCUMENT	SUBMITTAL TIMEFRAME	CONTRACT DOCUMENT REFERENCE
<input type="checkbox"/>	Contractor's Proposal	with Bid Proposal	Administrative Provisions
<input type="checkbox"/>	List of Subcontractors	with Bid Proposal	Administrative Provisions: Instructions to Bidders, Article 2, Section 2.8
<input type="checkbox"/>	Contractor's Statement of Licensure	with Bid Proposal	Administrative Provisions: Instructions to Bidders, Article 1, Section 1.6
<input type="checkbox"/>	Non-Collusion Declaration	with Bid Proposal	Administrative Provisions, under Section "Bid Proposal"
<input type="checkbox"/>	Iran Contracting Act Certification	with Bid Proposal	Administrative Provisions, under Section "Bid Proposal"
<input type="checkbox"/>	Bid Bond (10% of Contract Price)	with Bid Proposal	Administrative Provisions: Instructions to Bidders, Article 2, Section 2.7
<input type="checkbox"/>	Project Reference Form(s) (Minimum of 5 References) Must provide all the information described on the Project Reference Form.	with Bid Proposal	Administrative Provisions: Notice Inviting Bids to Contractors, Submittal Requirements
<input type="checkbox"/>	Contractor's Statement of Qualifications Form(s)	with Bid Proposal	Administrative Provisions: Required Submittal Checklist (Table 1) and Article 3
<input type="checkbox"/>	Construction Agreement	within 5 days of Notice of Intent to Award	Administrative Provisions
<input type="checkbox"/>	Performance Bond (100% of Contract Price)	within 5 days of Notice of Intent to Award	Administrative Provisions: Instructions to Bidders, Article 4, Section 4.2
<input type="checkbox"/>	Payment Bond (100% of Contract Price)	within 5 days of Notice of Intent to Award	Administrative Provisions: Instructions to Bidders, Article 4, Section 4.2
<input type="checkbox"/>	Workers' Compensation Contractor Certificate	within 5 days of Notice of Intent to Award	Administrative Provisions, under Section "Construction Agreement, Bonds, and Other Forms"
<input type="checkbox"/>	Declaration of Sufficiency of Funds	within 5 days of Notice of Intent to Award	Administrative Provisions, under Section "Construction Agreement, Bonds, and Other Forms"
<input type="checkbox"/>	Certificates of Insurance	within 5 days of Notice of Intent to Award	Administrative Provisions: Article 4, Section 4.1.1
<input type="checkbox"/>	Construction Schedule	within 14 days of Notice of Intent to Award	Administrative Provisions: Article 4, Section 4.1.2
<input type="checkbox"/>	Schedule of Values	within 14 days of Notice of Intent to Award	Administrative Provisions: Article 4, Section 4.1.2
<input type="checkbox"/>	Affirmative Action Compliance Program (for Contractors with 50+ Employees)	within 30 days of Award of Contract	General Provisions: Section 5, Subsection 5.1.1

ARTICLE 2 - BIDDING PROCEDURES

2.1 PUBLIC OPENING OF BID PROPOSALS

Bid Proposals will be opened and read publicly at the time and place indicated in the Notice Inviting Bids to Contractors. Bidders or their authorized agents are invited to be present. Without limitation to the County's right to reject all bids received, if two or more responsive bids from bidders determined to be responsible are the same and the lowest bid received, then the successful bidder may be chosen by the County.

2.2 BID PROPOSAL FORMS

Attention of all Bidders is called to all Bid Proposal forms attached hereto and Bidders are cautioned that all Bid Proposals submitted must be accompanied by the proper declaration, properly executed and proof of acknowledgement. Bid Proposals must be made on the forms furnished by the County.

2.3 SUBMISSION OF BID PROPOSALS

All copies of the Contractor's Proposal, Bid Security, and other Bid Proposal Submittals shall be enclosed by the Bidder in a sealed opaque envelope. Said envelope, as well as any other, outer envelope or packaging in which said envelope may have been placed by Bidder or the carrier for delivery, shall be addressed and delivered as provided in the Notice Inviting Bids to Contractors.

2.4 TIMELY RECEIPT

The Bidder assumes full and sole responsibility for timely receipt of its Bid Proposal, including its Bid Security and all other Bid Submittals, at the location designated in the Notice Inviting Bids to Contractors.

2.5 DELIVERY METHOD

Submittal of Bid Proposals shall be by hand delivery or mail, only. Oral, telephonic, telegraphic, facsimile or other electronic transmission is not permitted.

2.6 INVALID BID PROPOSALS

Bid Proposals submitted by fax or e-mail and those which fail to reach the place fixed for opening of Bid Proposals prior to the date and hour set for opening same will not be considered.

2.7 BID SECURITY: BIDDER'S CASH, CHECK OR BOND

Each Bid Proposal must be accompanied by a Bid Security, in the form of cash, certified check, cashier's check, or by a Bid Bond only on the form supplied by the County, drawn in favor of the

County in an amount not less than ten percent (10%) of the Total Bid. This Bid Security shall be given as a guarantee that the Bidder, if identified on the Notice of Intent to Award, will execute and deliver the Agreement, the required Payment and Performance Bonds, and the required certificates of insurance in accordance with the Bid Proposal accepted by the County. In default of execution of the Agreement and/or delivery of said Payment and Performance Bonds and certificates of insurance, such Bid Security, the cash, Bid Bond or check, shall be held subject to payment to the County for the difference in money between the amount of the Contract with another party to perform the Work, together with the cost to the County of redrafting, redrawing and publishing documents and papers necessary to obtain new bids on said Work. The Bid Security, the cash, check or bond, shall, in addition, be held subject to all other actual damages suffered by the County. The Bid Security will be returned upon the close of the period mentioned in these instructions below and to the successful Bidder upon execution of the Agreement. NO BONDS WILL BE ACCEPTED UNLESS SUBMITTED ON THE FORM SUPPLIED BY THE COUNTY.

2.8 SUBLETTING AND SUBCONTRACTING

Bidders are required, pursuant to the Subletting and Subcontracting Fair Practices Act (commencing with Section 4100 of the Public Contract Code), to list in their Bid Proposal the name and location of place of business of each subcontractor who will perform work or labor or render services in or about the construction of the Work or improvement or a subcontractor who specially fabricates and installs a portion of the Work or improvement, in excess of one-half (½) of one percent (1%) of the prime Contractor's Total Bid. Failure to list a subcontractor for a portion of the Work means that the prime Contractor will do that portion of the Work.

2.9 DISCREPANCIES AND OMISSIONS

Discrepancies, omissions, ambiguities, or requirements likely to cause disputes shall be immediately brought to the attention of the County. When appropriate, Addenda will be issued by the County. No communication by anyone except by an Addendum affects the meaning or requirements of the Contract Documents. If at any time (before or after submittal of its Bid Proposal) the Contractor is of the opinion that there is or may be a discrepancy or inconsistency in the plans, drawings, specifications or other Contract Documents, it shall immediately report this in writing to the County and shall not proceed with any related work until ordered so to do.

2.10 ADDENDA

Interpretations, corrections, clarifications and changes to the Contract Documents will be made by Addenda. County reserves the right to issue Addenda to the Contract Documents at any time prior to the time set to open bids. Addenda will be transmitted by County to all prospective Bidders who (1) attended and signed in at the Mandatory Pre-Bid Site Review meeting (if any) or (2) have submitted a written request to County for notice of Addenda at [name and location where to be posted], including in such request the Bidder's name and address for mailing. Each potential Bidder shall leave with the County its name, address, and fax number for the purpose of receiving

Addenda. To be considered, a Contractor's Proposal must list and take into account all issued Addenda. Failure of the Bidder to receive any Addendum shall not relieve the Bidder from any of its obligations under its Contractor's Proposal. It is the Bidder's responsibility to actively check e-mail for the issuance of Addenda. The costs of performance by Bidder of all items of Work and other obligations contained in all Addenda issued by the County shall be deemed included in the amount of the Contractor's Proposal. The Bidder shall identify and list in its Contractor's Proposal all Addenda received and included by the County as a basis for determining its Bid Proposal non-responsive.

2.11 POSTPONEMENT

The County reserves the right to postpone the time and date for the public opening of bids as specified in the Notice Inviting Bids to Contractors by issuance of an Addendum to the Contract Documents at any time prior to the specified time and date for public opening of bids.

2.12 REJECTION OF BID PROPOSALS CONTAINING ALTERATIONS, ERASURES OR IRREGULARITIES

Bid Proposals may be rejected if they show any alterations of form, additions not called for, conditional Bid Proposals, incomplete Bid Proposals, erasures, or irregularities of any kind. Erasures or interlineations in the Bid Proposal must be explained or noted over the signature of the Bidder. The County may determine as unresponsive any Bid Proposal in which any statement or representation made or incorporated by reference in the Contractor's Proposal, including any Bid submittal comprising the Bid Proposal, is false, incorrect or materially incomplete and misleading.

2.13 DISQUALIFICATION OF BIDDERS

More than one Bid Proposal from an individual, a firm or partnership, a corporation or an association under the same or different names will not be considered. Reasonable ground for believing that any Bidder is interested in more than one Bid Proposal for the Work contemplated will cause the rejection of all Bid Proposals in which such Bidder is interested. If there is any reason for believing that collusion exists among the Bidders, none of the participants in such collusion will be considered in awarding the Contract. Bid Proposals in which the prices appear to be unbalanced may be rejected.

2.14 WITHDRAWAL OF BID PROPOSALS

Any Bid Proposal may be withdrawn at any time prior to the hour fixed in the Notice Inviting Bids to Contractors for the opening of Bid Proposals, provided that a request in writing, executed by the Bidder or its duly authorized representative, for the withdrawal of such Bid Proposal, is filed with the County. The withdrawal of a Bid Proposal shall not prejudice the right of a Bidder to file a new Bid Proposal.

ARTICLE 3 - CONSIDERATION OF BIDS

3.1 BASIS OF AWARD

It is the intent of the County to award the Contract, if it be awarded, to the lowest, responsible and qualified Bidder submitting a Bid in accordance with the requirements of the bidding documents based upon all Bid items.

A responsible Bidder is a bidder who has demonstrated the attributes of trustworthiness, as well as quality, fitness, capacity and experience of the bidder to satisfactorily perform the proposed work and satisfy the requirements of the contract. The County may determine a Bidder to be non-responsible for purposes of this proposed work, if the Board of Supervisors for the County, in its discretion, finds that the Bidder has done any such acts or omissions, including without limitation, that: (1) violated a term of a contract for any public works project, including one with the County; (2) reflects negatively on the Bidder's quality, fitness or capacity to perform a contract with the County or any public entity; (3) made any false statements or claims against the County or any public entity; (4) demonstrates or indicates a lack of business integrity or honesty including such acts or omissions that would demonstrate a pattern or practice of such negative business practices; or (5) has violated any law or regulation required of a contractor in the submission of bids to or performance under any contracts with any public entity.

3.2 NOTICE OF INTENT TO AWARD

Within five (5) to thirty (30) days following public opening and reading of Bids, the County will issue a Notice of Intent to Award identifying the name of the Bidder to whom the County intends to Award the Construction Contract. Such notice will be mailed to all Bidders submitting a Bid Proposal. The County may, in its sole and absolute discretion, elect to extend the time for its issuance of its Notice of Intent to Award.

3.3 BID PROTESTS

Any Bidder submitting a Bid Proposal to the County may file a protest of the County's proposed Award of the Construction Contract provided that each and all of the following are complied with:

1. The bid protest is in writing.
2. The bid protest is both filed with and received by Hans W. Kernkamp, General Manager – Chief Engineer at the following address, 14310 Frederick Street, Moreno Valley, CA 92553, not more than five (5) business days following the date of issuance of the Notice of Intent to Award. Failure to timely file and serve the bid protest as aforesaid shall constitute grounds for the County's denial of the bid protest without consideration of the grounds stated therein.

3. The written bid protest sets forth, in detail, all grounds for the bid protest, including without limitation all facts, supporting documentation, legal authorities and argument in support of the grounds for the bid protest. Any grounds not set forth in the bid protest shall be deemed waived. All factual contentions must be supported by competent, admissible and credible evidence. Any bid protest not conforming to the foregoing shall be rejected as invalid.
4. Provided that a bid protest is filed in conformity with the foregoing, the General Manager – Chief Engineer, or such individual(s) as may be designated by the General Manager – Chief Engineer in his/her discretion, shall review and evaluate the basis of the bid protest, and shall provide a written decision to the Bidder submitting the bid protest, either concurring with or denying the bid protest. The written decision of the General Manager -Chief Engineer or his/her designee shall be final, unless overturned by the Board of Supervisors.

3.4 AWARD OF CONTRACT

The County reserves the right to reject any and all Bid Proposals or to waive any irregularities. Prior to award of the Contract, and if requested by County, the Contractor agrees to meet with the County to review the details and calculations of the Contractor's Proposal and the Contractor's understanding of any aspect of the Work.

3.5 RETURN OF BID SECURITY

Upon an award of the Contract, the County will return the Bid Security accompanying those Bid Proposals that are not considered in making the award within a reasonable period of time, but not to exceed beyond 60 days from the time the award of the Contract is made by the County. All other Bid Securities will be held until the Contract has been fully executed and the required bonds and certificates of insurance have been provided by the successful Bidder, after which such Bid Securities will be returned to the respective Bidders whose Bid Proposal they accompany.

ARTICLE 4 - POST NOTICE OF INTENT TO AWARD

4.1 POST-NOTICE OF INTENT TO AWARD SUBMITTALS

Within the time periods set forth below, the successful Bidder identified in the Notice of Intent to Award as the successful Bidder shall submit the following additional Post-Notice of Intent to Award submittals, completed and signed in the manner required by the Contract Documents, to the County at 14310 Frederick Street, Moreno Valley, CA 92553:

4.1.1 Within **five (5) days** after issuance by County to Bidder of the Notice of Intent to Award and prior to contract award, such Bidder shall submit to the County the following:

- (1) Construction Agreement duly executed by the authorized delegate of the contractor;
- (2) Performance Bond and Payment Bond (issued by Surety), as set forth in Section 4.2 below;
- (3) Evidence of Insurance, as specified by the Contract Documents;
- (4) Workers' Compensation Certificate, in the form specified by the Contract Documents; and
- (5) Declaration of Sufficiency of Funds (required only if the Bidder has not entered into a collective bargaining agreement covering the workers to be employed for performance of the Work), in the form specified by the Contract Documents.

4.1.2 Within **fourteen (14) days** after issuance by County to Bidder of the Notice of Intent to Award and prior to commencement of the Work, such Bidder shall submit to the County the following:

- (1) Construction Schedule, prepared by Bidder in the manner required by the Technical Specifications; and
- (2) Schedule of Values, prepared by Bidder in the manner required by the Technical Specifications.

4.2 CONTRACT SECURITY - PERFORMANCE AND PAYMENT BONDS

The Contractor shall furnish two (2) surety bonds in duplicate, one as a security for the faithful performance of the Contract in the amount equal to one hundred percent (100%) of the Contract price, and one as security for the payment of all persons performing labor and furnishing materials in connection with the Contract in an amount equal to one hundred percent (100%) of the Contract price. Both the Performance Bond and Payment Bond shall be issued by an admitted surety. The

surety on the Performance Bond shall have an A.M. Best's Insurance Rating of A:VIII (A:8) or better. All bonds must be submitted on forms provided by the County. Notary acknowledgements of the signatures of the Contractor and Surety(ies) is required. The attorney-in-fact who executes the required Performance Bond and Payment Bond on behalf of the Surety shall affix thereto a certified and current copy of the power of attorney authorizing such attorney-in-fact to execute same on behalf of such Surety. Bonds submitted in any other form will not be accepted. Should any surety on the Payment Bond or Performance Bond be deemed unsatisfactory by the County, Contractor shall upon notice promptly substitute new bonds satisfactory to the County. All bonds must be issued by sureties which are licensed by the State of California to issue such bonds.

4.3 FORFEITURE FOR FAILURE TO POST SECURITY AND EXECUTE AGREEMENT

In the event the Bidder, to whom an award is made, fails or refuses to post the required bonds and provide the required certificates of insurance and fails to return executed copies of the Agreement within five (5) calendar days after the prescribed forms are presented to it for signature, the County may declare the Bidder's Bid deposit or bond forfeited as damages caused by the failure of the Bidder to post such security and execute such copies of the Agreement and may award the Work to the next lowest responsible Bidder, or may call for new bids.

(This page left intentionally blank.)

BID PROPOSAL

(This page left intentionally blank.)

CONTRACTOR'S PROPOSAL

TO THE BOARD OF SUPERVISORS OF THE COUNTY OF RIVERSIDE:

The undersigned hereby declares:

- (a) That the only persons or parties interested in this Bid Proposal as principals are the following:

(If the Contractor is a corporation, give the name of the corporation and the name of its president, secretary, treasurer, and manager. If a co-partnership, give the name under which the copartnership does business, and the names and addresses of all copartners. If an individual, state the name and address under which the Contract is to be drawn.)

- (b) That this Bid Proposal is made without collusion with any other person, firm or corporation.
- (c) That the Contractor has carefully examined the location of the proposed Work, and has familiarized itself with all of the physical, climatic or other conditions related to the Work.
- (d) That the Contractor has carefully examined all of the specifications, plans, and other Contract Documents, and makes this Bid Proposal in accordance therewith.
- (e) That, if this Bid Proposal is accepted, the Contractor will enter into a written Contract with the County of Riverside.
- (f) That the Contractor proposes to enter into such Contract and to accept in full payment for the Work actually done the prices shown in the attached schedule. It is understood that the quantities listed (except for those shown as "Final" or "Lump Sum (L.S.)") are but estimates only and final payment will be based on actual quantities whatever they may be, subject to such adjustments and alterations as elsewhere provided for in the Contract Documents.

As Bid Security, accompanying this Bid Proposal is cash, a certified check, cashier's check or Bid Bond payable to the order of the County of Riverside in the sum of:

_____ Dollars (\$_____).
[Write Out in Words Total Amount of Bid Security] [Numerical Value in Figures]

THE REQUIRED REFERENCES AND OTHER REQUIRED DOCUMENTS MUST BE ATTACHED TO THIS BID PROPOSAL

ADMINISTRATIVE PROVISIONS

(This page left intentionally blank.)

Contractor bids as follows for C2P5 And C3P2 Liner Expansion Project at the Badlands Sanitary Landfill located at 31125 Ironwood Avenue, Moreno Valley, A 92555 in Riverside County, California:

ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
1	Construction Schedule	L.S.	1		
2	Prepare and Implement NPDES SWPPP	L.S.	1		
3	Mobilization and Demobilization	L.S.	1		
4	Develop Water	L.S.	1		
5	Demolition	L.S.	1		
6	Engineered Fill	C.Y.	10,014		
7	Over-Excavation and Placement of Engineered Fill	C.Y.	2,000		
8	Refuse Excavation and Disposal	C.Y.	5,000		
9	Finished Subgrade Surface Preparation for Geosynthetics (FSSP)	S.F.	296,182		
10	Excavate and Backfill Anchor Trench (3'x2')	L.F.	2,395		
11	Excavate and Backfill Anchor Trench (1'x1')	L.F.	225		
12	Furnish and Install GCL	S.F.	310,000		
13	Furnish and Install 60-mil HDPE Liner	S.F.	310,000		
14	Furnish and Install 16 oz/sy geotextile	S.F.	310,000		
15	Construct PCS Layer	C.Y.	11,687		
16	Stockpile PCS Material	C.Y.	25,000		
17	Furnish and Install 8-mil Temporary Protective Membrane	S.F.	213,311		
18	Furnish and Install 2"-4" Rock	T	987		
19	Furnish and Install Crush Miscellaneous Base (CMB)	T	730		
20	Furnish and Install S-Fence	L.F.	40		
21	Furnish and Install 8" HDPE Cleanout Line	L.F.	95		
Optional Bid Items					

ADMINISTRATIVE PROVISIONS

22	Daily Cover Haul	C.Y.	80,000		
23	Authorized Time and Materials	L.S.	1	200,000	200,000

For the Total Bid Proposal of: **TOTAL COST (State in Figures)** \$ _____

 (Write out Total Bid Amount in Words)

Contractor Acknowledges Receipt of Addenda No(s): _____

Name of Contractor: _____

(This page left intentionally blank.)

Address: _____

Telephone: _____

Contractor's License No. and Classification: _____

Department of Industrial Relations (DIR) Registration Number: _____

Signature: _____

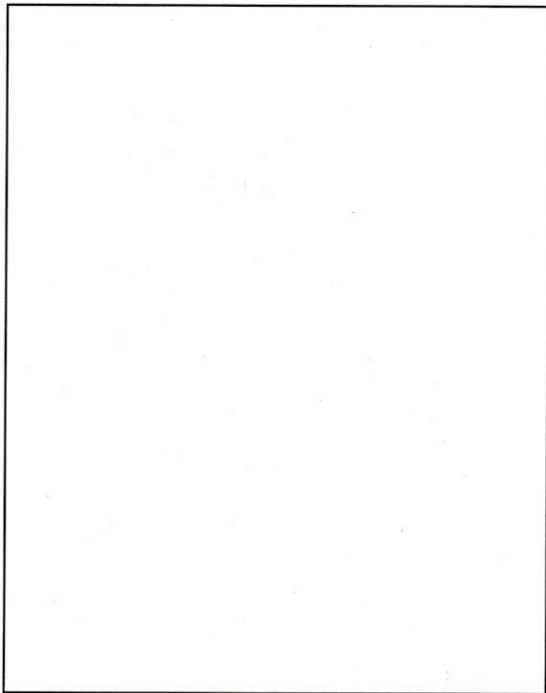
Name: _____

Title: _____

Dated: _____

If Bidder is a corporation, corporate seal and attestation shall be provided.

Space for Corporate Seal and Attestation:



(This page left intentionally blank.)

LIST OF SUBCONTRACTORS

The name and the location of the place of business of each subcontractor who will perform work or labor or render service to the Prime Contractor in or about the construction of the Work or improvement, or a subcontractor who specially fabricates and installs a portion of the Work or improvement, in an amount in excess of one-half (½) of one percent (1%) of the Prime Contractor's Total Bid and the portion of the Work by indicating the Item No. of the Work which will be done by each such subcontractor is as follows:

Item No. (s): _____

Name of Subcontractor: _____

Phone and Fax Numbers: _____

Address: _____

Subcontractor's License No. and Classification: _____

Department of Industrial Relations (DIR) Registration Number: _____

Item No. (s): _____

Name of Subcontractor: _____

Phone and Fax Numbers: _____

Address: _____

Subcontractor's License No. and Classification: _____

Department of Industrial Relations (DIR) Registration Number: _____

Item No. (s): _____

Name of Subcontractor: _____

Phone and Fax Numbers: _____

Address: _____

Subcontractor's License No. and Classification: _____

Department of Industrial Relations (DIR) Registration Number: _____

(This page left intentionally blank.)

Item No. (s): _____

Name of Subcontractor: _____

Phone and Fax Numbers: _____

Address: _____

Subcontractor's License No. and Classification: _____

Department of Industrial Relations (DIR) Registration Number: _____

Item No. (s): _____

Name of Subcontractor: _____

Phone and Fax Numbers: _____

Address: _____

Subcontractor's License No. and Classification: _____

Department of Industrial Relations (DIR) Registration Number: _____

Item No. (s): _____

Name of Subcontractor: _____

Phone and Fax Numbers: _____

Address: _____

Subcontractor's License No. and Classification: _____

Department of Industrial Relations (DIR) Registration Number: _____

Item No. (s): _____

Name of Subcontractor: _____

Phone and Fax Numbers: _____

Address: _____

Subcontractor's License No. and Classification: _____

Department of Industrial Relations (DIR) Registration Number: _____

(This page left intentionally blank.)

PROJECT REFERENCE FORM

Project Reference No. _____	
Project Name:	
Project Location:	
Scheduled Completion Date:	
Actual Completion Date:	
Contracted Project Cost: Final Project Cost: Reason for Difference:	
Did change orders exceed 10% of original contract sum? If yes, explain.	
Were any liquidated damages assessed against the Bidder on this project? If yes, explain.	
Project Owner:	
Owner's Mailing Address:	
Name of Owner's Representative:	
Representative's Email Address:	
Representative's Telephone Number:	
Name of Contractor's Superintendent/Lead:	
Brief Description of Work Performed (Describe how the Scope of Work met the Experience Criteria):	

Bidder shall provide all the project reference information requested on the Project Reference Form for the Bidder and also for any and all subcontractor(s) listed to perform any work that requires the qualifications described for this project in the Bidders Qualifications Section on page III of the Notice Inviting Bids to Contractors.

(This page left intentionally blank.)

CONTRACTOR'S STATEMENT OF QUALIFICATIONS FORM

Bidder shall complete the entire Statement of Qualifications Form and submit it with its Bid Proposal for the Project in accordance with the Instructions to Bidders. Failure to complete this Form would be grounds for immediate disqualification for this proposed work. Any explanation requested by a Bidder regarding the meaning or interpretation of this Statement of Qualification must be requested in writing and with sufficient time allowed for a written reply to reach Bidder before the submission of its Bid Proposal. Oral explanations or instructions will not be provided. Any information provided to any prospective Bidder concerning this Statement of Qualification will be furnished to all prospective Bidders as an Addendum to the Bidding Documents.

1	Has Bidder's Contractor's License been revoked or suspended by any governmental agency at any time in the last five (5) years?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
2	In the last five (5) years has the Bidder been denied an award of a public works contract based on a finding by a public agency that your company was not a responsible bidder? If YES, attach description of each instance including details and owner's name and phone number.	<input type="checkbox"/> YES	<input type="checkbox"/> NO
3	Has the Bidder defaulted on a contract or been terminated for cause by any public agency on any project in California within the past five (5) years?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
4	In the last five (5) years has the Bidder, or any firm with which any of your company's owners, officers or partners was associated, been debarred, disqualified, removed or otherwise prevented from bidding on, or completing, any government agency or public works project for any reason? If YES, attach description of each instance including details and owner's name and phone number.	<input type="checkbox"/> YES	<input type="checkbox"/> NO
5	Has the Bidder been assessed and paid liquidated damages pursuant to a contract for a project with a public owner within the past five (5) years? If YES, explain and indicate on a separate signed sheet(s) the project name(s), damage(s), and date(s).	<input type="checkbox"/> YES	<input type="checkbox"/> NO
6	Has a Surety completed a contract for Bidder, or paid for completion because your firm was in default or terminated on a public works project with any public agency within the last five (5) years?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
7	Has any insurer had to pay amounts to third parties that were in any way related to construction activities of the Bidder on a public works project for any public agency within the past five (5) years? If YES, explain and indicate on a separate signed sheet(s) the project name(s), damage(s), and date(s).	<input type="checkbox"/> YES	<input type="checkbox"/> NO
8	Has Bidder had any claims, litigation, or disputes ending in judgments, settlement, mediation or arbitration, or termination for cause associated with any project in the past five (5) years? If yes, attach description of each instance including details of total claim amount, settlement amount, and owner's name and phone number.	<input type="checkbox"/> YES	<input type="checkbox"/> NO
9	Has Bidder been cited, fined, penalized or otherwise found to have violated any prevailing wage or labor code provision within the past five (5) years? If YES, attach description of each occurrence.	<input type="checkbox"/> YES	<input type="checkbox"/> NO
10	In the past five (5) years, Has the Bidder or any of its owners or officers been charged and convicted of a crime under federal, state, or local law involving: <ul style="list-style-type: none"> (1) Bidding for awarding of, or performance of a contract with a public entity; (2) Making a false claim(s) to any public entity or government agency; or (3) Fraud, theft, or other acts of dishonesty to any contracting party within the past ten (10) years? 	<input type="checkbox"/> YES	<input type="checkbox"/> NO

(This page left intentionally blank.)

CONTRACTOR'S STATEMENT OF LICENSURE

The undersigned does certify under oath that the information provided herein is true and sufficiently complete as not to be misleading

1. Full Legal Name of Bidder: _____
2. Legal Capacity: Corporation Partnership Individual Joint Venture Other _____
3. Address of Bidder: _____
4. How many years has the Bidder been in business as a contractor? _____
5. How many years has the Bidder been in business under its present name? _____
6. Under what other or former name have you operated? _____
7. Bidder certifies that the pocket license/certificate of licensure presented to the County as of this date is my/its own license, being State of California Contractors License No. _____; said Contractors License is current and valid; and is of a classification appropriate to the Work to be undertaken for the County, a Class _____ license.
8. List other contractors license classifications in which the Bidder holds in California _____

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Dated: _____

Signature: _____

Name: _____

Title: _____

(This page left intentionally blank.)

**NON-COLLUSION DECLARATION
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID
(Public Contract Code Section 7106)**

The undersigned declares:

I am the _____ (Title) of _____ (Company),
the party making the foregoing Bid.

The Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The Bid is genuine and not collusive or sham. The Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham Bid. The Bidder has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham Bid, or to refrain from bidding. The Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the Bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the Bid price, or of that of any other Bidder. All statements contained in the Bid are true. The Bidder has not, directly or indirectly, submitted his or her Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, Bid depository, or to any member or agent thereof, to effectuate a collusive or sham Bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a Bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the Bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on

_____ [Date], at _____ [City], _____ [State].

Signature of Declarant: _____

Printed/Typed Name of Declarant: _____

Name of Bidder: (Company): _____

Note: Notarization of signature is required

Check here if attachment is included

ADMINISTRATIVE PROVISIONS

(This page left intentionally blank.)

IRAN CONTRACTING ACT CERTIFICATION
(Public Contract Code sections 2200-2208)

In accordance with Public Contract Code Section 2204(a), prior to bidding on, submitting a Bid Proposal or executing a Contract or renewal for a County of Riverside Contract for goods or services of \$1,000,000 or more, a CONTRACTOR must either:

a) Certification:

Certify it is not on the current list of persons engaged in investment activities in Iran created by the California Department of General Services (“DGS”) pursuant to Public Contract Code section 2203(b) and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person, for 45 calendar days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS;

OR

b) Exemption:

Demonstrate it has been exempted from the certification requirement for that solicitation or Contract pursuant to Public Contract Code section 2203(c) or (d).

To comply with this requirement, please insert your Contractor or financial institution name and Federal ID Number (if available) and complete one of the options below. Please note: California law establishes penalties for providing false certifications, including civil penalties equal to the greater of \$250,000 or twice the amount of the Contract for which the false certification was made; Contract termination; and three-year ineligibility to bid on Contracts. (Public Contract Code section 2205.)

Option #1 – Certification

I, the official named below, certify I am duly authorized to execute this certification on behalf of the Contractor/financial institution identified below, and the Contractor/financial institution identified below is **not** on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person/vendor, for 45 calendar days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

<i>Contractor Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		
<i>Date Executed</i>	<i>Executed in</i>	

(This page left intentionally blank.)

Option #2 – Exemption

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a Contractor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a Bid Proposal for, or enters into or renews, a Contract for goods and services.

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below, and attach documentation demonstrating the exemption approval.

<i>Contractor Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		
<i>Date Executed</i>	<i>Executed in</i>	

(This page left intentionally blank.)

BID BOND
(Public Work – Public Contract Code Section 20129(a))

Recitals:

1. _____ (Contractor) has submitted its Contractor's Proposal to the County of Riverside, by and for the Department of Waste Resources, for the construction of the public work known as C2P5 And C3P2 Liner Expansion Project at the Badlands Sanitary Landfill, AUGUST 2020, in accordance with a Notice Inviting Bids to Contractors dated _____.

2. _____ a _____ corporation, hereafter called Surety, is the surety, an Admitted surety insurer pursuant to Code of Civil Procedure Section 995.120, on this Bond. The Contractor is obligated as a condition of submittal of a Bid Proposal shall submit a Bid Security pursuant to Public Contract Code §20129 in the amount of ten percent (10%) of the Bid amount, which security may be in the form of a Bid Bond issued by an Admitted surety insurer pursuant to Code of Civil Procedure Section 995.120.

Agreement: We, Contractor as principal and Surety as surety, jointly and severally agree and state as follows:

1. The amount of the obligation of this Bond is 10% of the amount of the Contractor's Proposal and inures to the benefit of County.
2. This Bond is exonerated by (1) County rejecting said Bid Proposal or, in the alternate, (2) if said Bid Proposal is accepted, Contractor executes the Agreement and furnishes the Bonds and certificates of insurance as agreed to in its Bid Proposal, otherwise it remains in full force and effect for the recovery of loss, damage and expense of County resulting from failure of Contractor to act as agreed to in its Bid Proposal.
3. Surety, for value received, stipulates and agrees that its obligations hereunder shall in no way be impaired or affected by any extension of time within which County may accept the Bid Proposal and waives notice of any such extension.
4. This Bond is binding on our heirs, executors, administrators, successors and assigns.

Dated: _____

By: _____

By: _____

Title: _____

(Surety)

Title: _____

(Contractor)

NOTE: This Bond must be executed by both parties with corporate seal affixed. All signatures must be acknowledged by a notary (attach acknowledgments).

A power of attorney for the attorney-in-fact of the Surety must be attached.

ADMINISTRATIVE PROVISIONS

(This page left intentionally blank.)

**CONSTRUCTION AGREEMENT, BONDS,
AND OTHER FORMS**

(This page left intentionally blank.)

CONSTRUCTION AGREEMENT

THIS CONSTRUCTION AGREEMENT ("Agreement") is made as of _____ and is by and between the COUNTY OF RIVERSIDE, on behalf of its Department of Waste Resources, a political subdivision of the State of California, (County) and _____, (Contractor).

IT IS AGREED BY THE PARTIES AS FOLLOWS:

1. The Work. Contractor shall furnish all tools, equipment, apparatus, facilities, labor, supervision, services, transportation, materials and other required items necessary to perform the Work for the project, C2P5 And C3P2 Liner Expansion Project at the Badlands Sanitary Landfill, and Contractor shall do all things necessary to accomplish and complete the Work described in and in exact conformity with the Contract Documents, subject to such inspection as County deems appropriate.
2. Contract Documents. The Contract Documents for the project are:
 - (a) Notice Inviting Bids to Contractors;
 - (b) Instructions to Bidders;
 - (c) Contractor's Proposal, including List of Subcontractors, Contractor's Statement of Licensure, **Contractor's Statement of Qualifications**, Non-Collusion Declaration, Iran Contracting Act Certification;
 - (d) Bid Bond;
 - (e) Construction Agreement, including Exhibit A, Workers' Compensation Contractor Certificate, Declaration of Sufficiency of Funds, and Evidence of Insurance;
 - (f) Performance Bond;
 - (g) Payment Bond;
 - (h) General Provisions;
 - (i) Technical Specifications for C2P5 And C3P2 Liner Expansion Project at the Badlands Sanitary Landfill;
 - (j) Appendix A – QA/QC Plan;
 - (k) Appendix B – Landfill Site Rules;
 - (l) Appendix C – Fugitive Dust Control Requirements;
 - (m) Appendix D – Title V Refuse Excavation Requirements;
 - (n) Appendix E – Procedures for the Placement of Protective Cover Soil (PCS) Material
 - (o) Appendix F – Procedures for the Removal of Protective Cover Soil (PCS) Material
 - (p) Appendix G – Project Drawings for C2P5 And C3P2 Liner Expansion Project;
 - (q) Standard Specifications for Public Works Construction, Latest Edition, with Amendments;
 - (r) Any other documents included in or incorporated into the Contract Documents;
 - (s) Addenda Nos. _____;
 - (t) Orders, instructions, drawings and plans issued by County during the course

ADMINISTRATIVE PROVISIONS

of the Work in accordance with the provisions of the Contract Documents.

Each of the above-mentioned documents presently in existence are by this reference incorporated into this Agreement and each of these documents not now in existence are incorporated herein as of the time of their issuance.

(This page left intentionally blank.)

3. Contract Time for Completion – The Work shall be commenced on a date to be specified in a written “Notice To Proceed” to be issued by the County and shall be completed within the duration specified in the Technical Specifications. It is expressly agreed that except for extensions of time duly granted in the manner and for the reasons specified in the General Provisions, time shall be of the essence.

4. Contract Price –

(a) Compensation to be paid to Contractor – The County agrees to pay and the Contractor agrees to accept in full consideration for the performance of the Agreement, the sum of:

(\$ _____), subject to additions and deductions as provided in this Agreement.

(b) Payment. Exhibit A is attached to and incorporated into this Agreement and states the basis for full payment to Contractor. Contractor represents that it fully understands the payment method for the Work.

(This page left intentionally blank.)

RIVERSIDE COUNTY DEPARTMENT OF
WASTE RESOURCES
14310 Frederick Street
Moreno Valley, CA 92553

By: _____
Hans W. Kernkamp
General Manager – Chief Engineer

Date: _____

COUNTY OF RIVERSIDE

By: _____
Chairman, Board of Supervisors

Date: _____

ATTEST:

By: _____
Kecia R. Harper, Clerk of the Board

By: _____
Deputy

Date: _____

(Seal)

CONTRACTOR

By: _____

Date: _____

Name: _____

Title: _____

(If corporation, attach corporate seal)

(This page left intentionally blank.)

EXHIBIT A

(Construction Agreement for the Riverside County Department of Waste Resources, C2P5 And C3P2 Liner Expansion Project at the Badlands Sanitary Landfill, located in Riverside County, California.)

It is understood that the quantities listed (except for those shown as "Final" or "Lump Sum (L.S.)") are but estimates only and final payment will be based on actual quantities whatever they may be, subject to such adjustments and alterations as elsewhere provided for in the Contract Documents.

ITEM NO.	ITEM OF WORK	UNIT	QUANTITY	UNIT COST	TOTAL COST
1	Construction Schedule	L.S.	1		
2	Prepare and Implement NPDES SWPPP	L.S.	1		
3	Mobilization and Demobilization	L.S.	1		
4	Develop Water	L.S.	1		
5	Demolition	L.S.	1		
6	Engineered Fill	C.Y.	10,014		
7	Over-Excavation and Placement of Engineered Fill	C.Y.	2,000		
8	Refuse Excavation and Disposal	C.Y.	5,000		
9	Finished Subgrade Surface Preparation for Geosynthetics (FSSP)	S.F.	296,182		
10	Excavate and Backfill Anchor Trench (3'x2')	L.F.	2,395		
11	Excavate and Backfill Anchor Trench (1'x1')	L.F.	225		
12	Furnish and Install GCL	S.F.	310,000		
13	Furnish and Install 60-mil HDPE Liner	S.F.	310,000		
14	Furnish and Install 16 oz/sy geotextile	S.F.	310,000		
15	Construct PCS Layer	C.Y.	11,687		
16	Stockpile PCS Material	C.Y.	25,000		
17	Furnish and Install 8-mil Temporary Protective Membrane	S.F.	213,311		
18	Furnish and Install 2"-4" Rock	T	987		

ADMINISTRATIVE PROVISIONS

19	Furnish and Install Crush Miscellaneous Base (CMB)	T	730		
20	Furnish and Install S-Fence	L.F.	40		
21	Furnish and Install 8" HDPE Cleanout Line	L.F.	95		
Optional Bid Items					
22	Daily Cover Haul	C.Y.	80,000		
23	Authorized Time and Materials	L.S.	1	200,000	200,000

For the Total Bid Proposal of:

TOTAL COST (State in Figures) \$ _____

 (Write out Total Bid Amount in Words)

(This page left intentionally blank.)

PERFORMANCE BOND

(Public Work – Public Contract Code Section 20129 (b))

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the Board of Supervisors (“Board”) for the County of Riverside, (“County”) and _____, (“Contractor”) have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

Construction of C2P5 And C3P2 Liner Expansion Project at Badlands Sanitary Landfill, AUGUST 2020

(“Contract”) which Contract dated as of the date of the last signature on the signature page and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof;

AND, WHEREAS, said Contractor, as Principal on this Bond, is required by the Contract and/or by California Public Contract Code, Section 20129 (b) to furnish a performance bond for the faithful performance of the Contract;

NOW THEREFORE, we, the Contractor and _____ (“Surety”), an admitted surety insurer pursuant to Code of Civil Procedure, Section 995.120, are held and firmly bound unto County in the penal sum of _____

Dollars (\$ _____), this amount being not less than one hundred percent (100%) of the total sum payable by County under the Contract at the time the Contract is awarded by County to the Contractor, lawful money of the United States of America, for the payment of which sum well and truly to be made, we, Contractor and Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents, to:

1. Perform all the work required to complete the Project; and
2. Pay to the County all damages the County incurs as a result of the Contractor’s failure to perform all the Work required to complete the Project.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Contractor, its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by and well and truly keep and perform all the undertakings, terms, covenants, conditions and agreements in the Contract, including, without limitation, all obligations during the original term and any extensions thereof as may be granted by County, with or without notice to Surety thereof (including, without limitation, the obligation for Contractor to pay liquidated damages), all obligations during the period of any warranties and guarantees of materials and workmanship

ADMINISTRATIVE PROVISIONS

(This page left intentionally blank.)

required under the Contract and all other obligations otherwise arising under the terms of the Contract (such as, but not limited to, obligations of indemnification), all within the time and in the manner therein designated in all respects according to their true intent and meaning, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

As a condition precedent to the satisfactory completion of the Contract, the above obligation shall hold good for a period equal to the warranty and/or guarantee period of the Contract, during which time Surety's obligation shall continue if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the County from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the County's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

Whenever Contractor shall be, and is declared by County to be, in default under the Contract, the Surety shall promptly either remedy the default, or, if the Contract is terminated by County or the Contractor's performance of the Work is discontinued, Surety shall promptly complete the Contract through its agents or independent contractors, subject to acceptance of such agents or independent contractors by County as hereinafter set forth, in accordance with its terms and conditions and to pay and perform all obligations of Contractor under the Contract (including without limitation, all obligations with respect to payment of liquidated damages) less the "Balance of the Contract Price" (as hereinafter defined); subject to the penal amount of this bond as set forth above. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable to Contractor by County under the Contract and any modifications thereto, less the amount previously paid by County to the Contractor and less amounts that County is authorized to withhold under the terms of the Contract.

If County determines that completion of the Contract by Surety or its agents or independent contractors must be performed by a lowest responsible bidder selected pursuant to a competitive bidding process, then Surety shall comply with such processes in accordance with the requirements of County and applicable laws. Unless otherwise approved by District, in the exercise of its sole and absolute discretion, Surety shall not utilize Contractor in completing performance of the Work.

No right of action shall accrue on this bond to or for the use of any person or entity other than County or its successors or assigns.

In the event any legal proceeding or arbitration is brought upon this bond by County and judgment or award is entered in favor of County as the prevailing party, Surety shall pay all costs and attorney's fees incurred by the County.

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

(This page left intentionally blank.)

**SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**



ITEM: 12.1
(ID # 13305)

MEETING DATE:

Tuesday, September 01, 2020

FROM: DEPARTMENT OF WASTE RESOURCES:

SUBJECT: DEPARTMENT OF WASTE RESOURCES: Approval of Contract Documents, including plans and specifications, and Advertise for Bids for the Construction of C2P5 and C3P2 Liner Expansion Project at Badlands Sanitary Landfill, District 5. [\$0 – Department of Waste Resources Enterprise Funds](CEQA- Nothing Further Required)

RECOMMENDED MOTION: That the Board of Supervisors:

1. Find that Nothing Further is Required pursuant to the California Environmental Quality Act (CEQA) as all potentially significant effects of the Project have been adequately analyzed in Addendum No. 1 to the Environmental Assessment/Mitigated Negative Declaration (EA/MND) for the Badlands Landfill Solid Waste Facility Permit (SWFP) Revision Project, adopted December 15, 2015 (SCH No. 2010101090);
2. Approve the Contract Documents, including the plans and specifications, for the Construction of C2P5 and C3P2 Liner Expansion Project at Badlands Sanitary Landfill;
3. Authorize the General Manager-Chief Engineer of the Riverside County Department of Waste Resources (Department) to advertise for bids to be received in the Department Office located at 14310 Frederick Street, Moreno Valley, California, up to the time of 10:30 a.m. on Thursday, October 1, 2020 at which time the bids will be opened; and
4. Direct the Department to file the Notice of Determination (NOD) with the County Clerk and Office of Planning and Research upon approval of the Project.


ACTION: Policy


Hans Kolkamp, General Manager - Chief Engineer 8/18/2020

MINUTES OF THE BOARD OF SUPERVISORS

On motion of Supervisor Jeffries, seconded by Supervisor Spiegel and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Jeffries, Spiegel, Washington, Perez and Hewitt
Nays: None
Absent: None
Date: September 1, 2020
xc:

Kecia R. Harper
Clerk of the Board
By: 
Deputy

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,
STATE OF CALIFORNIA**

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost
COST	\$ 0	\$ 0	\$ 0	\$ 0
NET COUNTY COST	\$ 0	\$ 0	\$ 0	\$ 0
SOURCE OF FUNDS: Waste Resources Enterprise Funds			Budget Adjustment:	No
			For Fiscal Year:	20/21

C.E.O. RECOMMENDATION: Approve

BACKGROUND:

Summary

The proposed landfill liner expansion will provide countywide waste disposal capacity at the Badlands Landfill. Constructing a 7-acre lateral expansion, referred to as C2P5 and C3P2 Landfill liner expansion, will provide an estimated two (2) additional years of landfill airspace and complete the final expansion within the permitted refuse limits. A composite liner system will be constructed within the C2P5 and C3P2 expansion areas in order to comply with the requirements of the applicable State and Federal Regulations and the Waste Discharge Requirements issued by the California Regional Water Quality Control Board, Santa Ana Region.

Prev. Agn. Ref.: M.O. 12.1 of 01/25/11 (approved EA/MND)
M.O. 12.2 of 12/15/15 (approved Addendum to EA/MND)
M.O. 12.5 of 9/25/18 (approved studies/third party construction QA/QC)

CEQA Findings

On January 25, 2011 (M.O. 12.1), the County adopted the EA/MND for the Badlands Landfill SWFP Revision Project (SCH No. 2010101090) and adopted Addendum No. 1 to the EA/MND on December 15, 2015 (M.O. 12.2). Addendum No. 1 specifically evaluated construction of the Project and found it would not cause new significant environmental impacts or increase the severity of previously identified impacts.

This Project simply approves contract documents identifying the work previously analyzed with no new significant impacts identified, as such, nothing further is required under CEQA.

A NOD will be filed by the Department with the County Clerk and Office of Planning and Research upon Project approval.

Impact on Residents and Businesses

This Project extends the life of the Badlands Landfill, allowing the Department to continue to provide disposal service to the citizens and businesses of Riverside County and the region.

Additional Fiscal Information

The Project contemplated in this Form 11 merely approves contract documents identifying the work associated with the C2P5 and C3P2 Liner Expansion at Badlands Sanitary Landfill, as

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,
STATE OF CALIFORNIA**

well as authorizes the Department to advertise said contract documents. No expenses will be incurred as a result of this action.

Contract History and Price Reasonableness

The Engineer's estimate for this Project is \$2,400,000 and the action today, if approved, will authorize the Department to pursue competitive bids through the California Public Works Contract process. The Department will then return to the Board of Supervisors to seek approval to award the Contract to the lowest responsible bidder.

ATTACHMENTS:

- ATTACHMENT A. CONTRACT DOCUMENTS**
- ATTACHMENT B. CEQA NOD**



Jason Farin, Principal Management Analyst 8/25/2020



Gregory L. Priamos, Director County Counsel 8/25/2020

**COUNTY OF RIVERSIDE
DEPARTMENT WASTE RESOURCES
NOTICE OF DETERMINATION**

TO:

X Office of Planning and Research (OPR)
Submitted via online document portal

X County Clerk
County of Riverside

FROM:

Riverside County
Department of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

For County Clerk's Use Only:

Original Negative Declaration/Notice of
Determination was routed to County
Clerks for posting on.
9/14/20
Date
PR
Initial

Subject: Filing of Notice of Determination in Compliance with Section 21152 of the Public Resources Code

Project Title: Construction of the Badlands Landfill Liner Expansion (Project)

State Clearinghouse (SCH) No.: 2010101090 **Contact:** Ryan Ross **Phone:** 951-486-3200

Project Applicant/Property Owner & Address: Riverside County Department of Waste Resources
14310 Frederick Street, Moreno Valley, CA 92553

Project Location: The Badlands Landfill is located at 31125 Ironwood Avenue, Moreno Valley, CA 92555

Project Description: The Project involves approval of Contract Documents for the construction of the C2P5 and C3P2 liner expansion at the Badlands Landfill.

This is to advise that the Riverside County Board of Supervisors has approved the above-referenced Project on September 1, 2020 and has made the following determinations regarding that project:

1. Nothing further is required pursuant to the California Environmental Quality Act (CEQA), whereas all potentially significant effects of the Project have been adequately analyzed in Environmental Assessments/Mitigated Negative Declarations (EAs/MNDs) as follows: Badlands 2010-01, adopted January 25, 2011 (SCH No. 2010101090); Addendum No. 1 to Badlands 2010-01, adopted December 15, 2015 (SCH No. 2010101090).
2. Mitigation measures were not made a condition of approval for this Project.
3. A mitigation monitoring program was not adopted for this Project.
4. A statement of overriding considerations was not adopted for this Project.
5. Findings were made pursuant to the provisions of CEQA.

This is to certify that the adopted environmental documents and record of Project approval is available to the general public at: Riverside County Department of Waste Resources
14310 Frederick Street, Moreno Valley, CA 92553

Signature:



Title: Planning Division Manager

Date: 9/1/2020

SEP 01 2020 12.1



CONTRACT DOCUMENTS

FOR

THE CONSTRUCTION OF

C2P5 AND C3P2 LINER EXPANSION PROJECT

AT

BADLANDS SANITARY LANDFILL

AUGUST 2020



FORM APPROVED COUNTY COUNSEL
BY: Synthia M. Gunzel 8-25-2020
SYNTHIA M. GUNZEL DATE

RIVERSIDE COUNTY DEPARTMENT OF
WASTE RESOURCES
14310 Frederick Street
Moreno Valley, CA 92553

By: _____ Date: _____
Hans W. Kernkamp
General Manager – Chief Engineer

COUNTY OF RIVERSIDE

By: _____ Date: _____
Chairman, Board of Supervisors

ATTEST:

By: _____
Kecia R. Harper, Clerk of the Board

By: _____ Date: _____
Deputy

(Seal)

CONTRACTOR

By: _____ Date: _____

Name: _____

Title: _____

(If corporation, attach corporate seal)

Surety, for value received, agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the Work to be performed thereunder, nor any rescission or attempted rescission of the Contract or this bond, nor any conditions precedent or subsequent in the bond or Contract attempting to limit the right of recovery of any claimant otherwise entitled to recover under the Contract or this bond shall in any way impair or affect Surety's obligation under this bond, and Surety does hereby waive notice of any such changes, extensions of time, alterations or additions.

Surety is not released from liability to those for whose benefit this bond has been given, by reason of any breach of the Contract by County or Contractor

Surety's obligations hereunder are independent of the obligations of any other surety for the performance of the Contract, and suit may be brought against Surety and such other sureties, joint and severally, or against any one or more of them or against less than all of them, without impairing County's rights against the others.

Signature provisions on following page:

(This page left intentionally blank.)

Affix Seal if Corporation

(Firm Name – Contractor)

(Business Address)

By _____

(Original Signature)

(Title)

(Corporation Name – Surety)

Affix Corporate Seal

(Business Address)

By _____

(Signature – Attached Notary’s Acknowledgment)

ATTORNEY-IN-FACT

(Title-Attach Power of Attorney)

Note: Notary acknowledgment of signatures of Bidder and Surety, and Surety’s Power of Attorney, must be included or attached

(This page left intentionally blank.)

WORKERS' COMPENSATION CONTRACTOR CERTIFICATE
(Labor Code Sections 1860, 1861 & 3700)

In accordance with the provisions of Section 3700 of the Labor Code, every Contractor shall secure compensation in one or more of the following ways:

- (a) By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this state.
- (b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees.
- (c) I For any county, city, city and county, municipal corporation, public district, public agency, or any political subdivision of the state, including each member of a pooling arrangement under a joint exercise of powers agreement (but not the state itself), by securing from the Director of Industrial Relations a certificate of consent to self-insure against workers' compensation claims, which certificate may be given upon furnishing proof satisfactory to the director of ability to administer workers' compensation claims properly, and to pay workers' compensation claims that may become due to its employees. On or before March 31, 1979, a political subdivision of the state which, on December 31, 1978, was uninsured for its liability to pay compensation, shall file a properly completed and executed application for a certificate of consent to self-insure against workers' compensation claims. The certificate shall be issued and be subject to the provisions of Section 3702.

Labor Code Section 1861 requires each Contractor to whom a public works Contract is awarded shall sign and file with the County the following certification prior to performing the Work of the public works construction Contract:

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

By signing this certification, the Contractor understands the requirements of and agrees to comply with the aforementioned requirements.

Name of Contractor: _____

By: _____

Title: _____

(This page left intentionally blank.)

**DECLARATION OF SUFFICIENCY OF FUNDS
(California Labor Code Section 2810)**

I, the undersigned, an authorized representative of _____ (“Bidder”) with authority to make the statements contained in this Declaration on behalf of Bidder, hereby declare the following:

1. The Bidder’s employer identification number for state tax purposes is:
_____.

2. The Bidder’s workers’ compensation insurance policy number is:
_____.

and the name, address, and telephone number of the insurance carrier providing said insurance is:

_____.

3. The following information is provided concerning any and all vehicles that are owned by the Bidder and that will be used for transportation in connection with any service provided for the performance of the Work that is the subject of the Bidder’s Bid [Insert information requested. Attach additional sheets, if needed.]:

<i>Vehicle</i>	<i>Vehicle ID #</i>	<i>Vehicle Liability Insurance Policy Number (of policy covering vehicle)</i>	<i>Name, Address and Telephone Number of Vehicle Liability Insurance Carrier (issuing policy covering vehicle)</i>

4. The following is the address of any real property that will be used to house workers in connection with the performance of the Work that is the subject of the Bidder’s Bid [If no such housing will be provided, enter “none”]:

_____.

(This page left intentionally blank.)

5. The actual or estimated number of workers that will be employed to perform the Work that is the subject of the Bidder's Bid, the total amount of wages to be paid to said workers, and the dates on which said wages will be paid are as follows [Attach additional sheets, if needed.]:

<i>Total Number of Workers</i>	<i>Total Amount of Wages</i>	<i>Date(s) for Payment of Wages</i>

6. Check only one of the following boxes, as applicable:

- The statement of number of workers declared in Paragraph 5, above, is a statement of the actual number of workers that will be employed.
- The actual number of workers requested in Paragraph 5, above, is unknown and therefore the statement of number of workers declared therein is based on the Bidder's best estimate available at the time of submitting its Bid, rather than the actual number of workers that will be employed and if and when the actual number of workers and the other information requested above is available, it will be reported to the County of Riverside by Bidder in writing.

7. The actual or estimated total number of persons who will be utilized as independent Contractors to perform the Work of the Project that is the subject of the Bidder's Bid (together with their known, current local, state, and federal Contractor license identification numbers that each is required to have under local, state or federal laws or regulations) are as follows [Attach additional sheets, if needed.]:

<i>List of Independent Contractors</i>	<i>Current Local, State and Federal Contractor License Identification Number</i>

(This page left intentionally blank.)

8. Check only one of the following boxes, as applicable:

- The statement of number of independent Contractors declared in Paragraph 7, above, is a statement of the actual number of independent Contractors that will be utilized.

- The actual number of independent Contractors requested in Paragraph 7, above, is unknown and therefore the statement of number of independent Contractors declared therein is based on the Bidder's best estimate available at the time of submitting its Bid, rather than the actual number of independent Contractors that will be utilized, and if and when the actual number of independent Contractors and the other information requested above is available, it will be reported to the County of Riverside by Bidder in writing.

I, the undersigned, declare under penalty of perjury that the foregoing statements are within my personal knowledge and are true and correct. Executed on this _____ day of _____, in the year 20__ at _____, California.

(Signature)

Type Name of Signer:

Type Name of Bidder:

(This page left intentionally blank.)



GENERAL PROVISIONS

FOR

THE CONSTRUCTION OF

C2P5 AND C3P2 LINER EXPANSION PROJECT

AT

BADLANDS SANITARY LANDFILL

AUGUST 2020

(This page left intentionally blank.)

TABLE OF CONTENTS

GENERAL PROVISIONS

SECTION 1 - DEFINITION OF TERMS	1-1
1.1. TERMS	1-1
1.2. SIMILARITY OF WORDS	1-2
SECTION 2 - SCOPE OF WORK	2-1
2.1. WORK TO BE DONE	2-1
2.2. CONSTRUCTION SCHEDULE	2-1
2.3. DRAWINGS AND SPECIFICATIONS ON THE WORK	2-1
2.4. ESTIMATE OF QUANTITIES	2-1
2.5. PROTESTS	2-1
2.6. ALTERATIONS	2-2
2.7. EXTRA WORK	2-2
2.7.1. <i>General</i>	2-2
2.7.2. <i>Procedure for Extra Work</i>	2-2
2.8. PAYMENT FOR EXTRA WORK	2-3
2.9. RIGHTS OF WAY	2-3
2.10. CLEANING UP	2-3
SECTION 3 - CONTROL OF THE WORK	3-1
3.1. AUTHORITY OF THE COUNTY	3-1
3.2. DETAIL DRAWINGS	3-1
3.3. CONFORMITY WITH PLANS AND ALL ALLOWABLE DEVIATIONS	3-1
3.4. INTERPRETATION OF PLANS AND SPECIFICATIONS	3-1
3.5. SUPERINTENDENCE	3-1
3.6. LINES AND GRADES	3-2
3.7. INSPECTION OF WORK	3-2
3.8. REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK	3-2
3.9. EQUIPMENT AND PLANT	3-2
3.10. FINAL INSPECTION	3-3
SECTION 4 - CONTROL OF MATERIAL	4-1
4.1. COUNTY FURNISHED MATERIALS	4-1
4.2. SOURCE OF SUPPLY AND QUALITY OF MATERIALS	4-1
4.3. SAMPLES AND TESTS	4-1
4.4. DIGGING TRENCHES OR OTHER EXCAVATIONS	4-2
4.5. STORAGE OF MATERIALS	4-3
4.6. DEFECTIVE MATERIALS	4-3
4.7. ASSIGNMENT OF CLAIMS	4-3
SECTION 5 - LEGAL RELATIONS AND RESPONSIBILITY	5-1
5.1. LAWS TO BE OBSERVED	5-1
5.1.1. <i>Compliance with Applicable Law</i>	5-1
5.1.2. <i>Labor Code</i>	5-1
5.1.3. <i>Equal Employment Opportunity</i>	5-1

5.1.4.	<i>Registration of Contractors</i>	5-3
5.1.5.	<i>Accident Prevention</i>	5-3
5.2.	CONTRACTOR'S RESPONSIBILITY	5-3
5.3.	CONTRACTOR'S RESPONSIBILITY FOR WORK.....	5-3
5.4.	PROPERTY RIGHTS IN MATERIALS	5-4
5.5.	PERMITS AND LICENSES	5-4
5.6.	ROYALTIES AND PATENTS.....	5-4
5.7.	SANITARY PROVISIONS	5-4
5.8.	PUBLIC SAFETY.....	5-4
5.9.	USE OF EXPLOSIVES	5-4
5.10.	PROVISIONS FOR EMERGENCIES.....	5-4
5.11.	UNFORESEEN DIFFICULTIES	5-5
5.12.	ACCESS TO THE WORK.....	5-5
5.13.	GUARANTEE OF WORK.....	5-5
5.14.	SURETY OF GUARANTEE.....	5-6
5.15.	DAMAGES BY ACT OF GOD	5-6
SECTION 6 - PROSECUTION AND PROGRESS.....		6-1
6.1.	PROGRESS OF THE WORK.....	6-1
6.2.	OVERTIME WORK AND WORK AT NIGHT	6-1
6.3.	SUBCONTRACTING	6-1
6.4.	CHARACTER OF WORKMEN	6-1
6.5.	TEMPORARY SUSPENSION OF THE WORK.....	6-2
6.6.	TIME FOR COMPLETION AND LIQUIDATED DAMAGES	6-2
6.7.	DELAYS AND EXTENSION OF TIME.....	6-3
6.8.	ASSIGNMENT.....	6-3
6.9.	TERMINATION OF CONTRACT	6-3
SECTION 7 - PAYMENT		7-1
7.1.	SCOPE OF PAYMENTS	7-1
7.1.1.	<i>Measurement and Computation of Quantities</i>	7-1
7.1.2.	<i>Payment at Contract Prices</i>	7-1
7.2.	PAYMENT AND COMPENSATION FOR ALTERED QUANTITIES	7-1
7.3.	FORCE ACCOUNT PAYMENT.....	7-1
7.3.1.	<i>Work Performed by Contractor</i>	7-1
7.3.1.1.	Labor	7-2
7.3.1.1.1.	<i>Actual Wages</i>	7-2
7.3.1.1.2.	<i>Labor Surcharge</i>	7-2
7.3.1.1.3.	<i>Subsistence and Travel Allowance</i>	7-2
7.3.1.2.	Materials	7-2
7.3.1.3.	Equipment Rental.....	7-3
7.3.1.3.1.	<i>Equipment on the Work</i>	7-4
7.3.1.3.2.	<i>Equipment not on the Work</i>	7-4
7.3.2.	<i>Work Performed by Special Forces or Other Special Services</i>	7-5
7.3.3.	<i>Records</i>	7-6
7.3.4.	<i>Payment</i>	7-7
7.4.	ACCEPTANCE	7-7
7.5.	PARTIAL PAYMENTS	7-7

7.6.	DELAYED PAYMENTS.....	7-7
7.7.	FINAL PAYMENT	7-7
7.8.	CLAIMS RESOLUTION – CLAIMS UP TO \$375,000	7-8
7.8.1.	<i>Submission of Claims</i>	7-8
7.8.1.1.	Claims under \$50,000.00	7-8
7.8.1.2.	Claims over \$50,000.00 but less than or equal to \$375,000.00	7-8
7.8.2.	<i>Meet and Confer</i>	7-9
7.8.3.	<i>Filing of Claims</i>	7-9
7.8.4.	<i>Mediation and Judicial Arbitration</i>	7-9
7.8.5.	<i>Location for Filing of Claims, Jurisdiction</i>	7-9
7.9.	CLAIMS RESOLUTION – ALL CLAIMS (PUBLIC CONTRACT CODE SECTION 9204)	7-9
7.9.1.	<i>Claim</i>	7-9
7.9.2.	<i>Form and Contents of Claim(s)</i>	7-10
7.9.3.	<i>Claims Procedure</i>	7-10
7.9.4.	<i>Subcontractor Claim(s)</i>	7-12
7.9.5.	<i>Venue</i>	7-12
7.9.6.	<i>Consistency with Public Contract Code Sections 9204 and 20104</i>	7-13
SECTION 8 - GENERAL		8-1
8.1.	COOPERATION BETWEEN CONTRACTORS.....	8-1
8.2.	HOLD HARMLESS / INDEMNIFICATION	8-1
8.3.	INSURANCE	8-2
8.3.1.	<i>Workers' Compensation:</i>	8-2
8.3.2.	<i>Commercial General Liability:</i>	8-2
8.3.3.	<i>Vehicle Liability:</i>	8-2
8.3.4.	<i>Environmental Impairment Insurance:</i>	8-2
8.3.5.	<i>General Insurance Provisions - All lines:</i>	8-2
8.4.	PUBLIC UTILITIES	8-4
8.5.	PROTECTION OF EXISTING STREET FACILITIES	8-5
8.6.	DIVERSION AND CONTROL OF WATER	8-5
8.7.	DUST ABATEMENT.....	8-5
8.8.	PROJECT SIGNS	8-5
8.9.	EXAMINATION OF PLANS, SPECIFICATIONS, CONTRACT, AND SITE OF WORK	8-5
SECTION 9 - WATERING.....		9-1
9.1.	DESCRIPTION	9-1
SECTION 10 - PUBLIC CONVENIENCE, TRAFFIC CONTROL AND DETOURS		10-1
10.1.	GENERAL	10-1
10.2.	SIGNS	10-1
10.3.	MATERIALS STORAGE.....	10-1

(This page left intentionally blank.)

SECTION 1 - DEFINITION OF TERMS

1.1. TERMS

Whenever in these specifications, or in any documents or instruments where these specifications govern, the following terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:

- a) AGENCY: Whenever used in the Standard Specifications shall refer to County.
- b) BOARD OF SUPERVISORS: The Board of Supervisors of the County, also sometimes referred to as the Board.
- c) CONTRACT DOCUMENTS. The Contract Documents shall mean to contain and include all the documents listed in the Construction Agreement entered into between the County and the Contractor.
- d) DEPARTMENT, COUNTY, OR OWNER: The County of Riverside, by and for the Department Of Waste Resources.
- e) ENGINEER: The General Manager - Chief Engineer of the Riverside County Department of Waste Resources, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.
- f) LABORATORY: The laboratories authorized by the County to test materials and work involved in the contract.
- g) BIDDER: Any individual, firm or corporation submitting a proposal for the work contemplated, acting directly or through a duly authorized representative.
- h) CONTRACTOR: The person or persons, co-partnership or corporation, private or municipal, who have entered into the Agreement with the County, or his or their legal representatives.
- i) SUPERINTENDENT: The executive representative of the Contractor, present on the work at all times during progress, authorized to receive and execute instruction from the County.
- j) PLANS or PROJECT DRAWINGS: The official plans, profiles, typical cross sections, general cross sections, working drawings, and supplemental drawings, or exact reproductions thereof, approved by the County, which show the location, character, dimension and details of the work to be done, and which are to be considered a part of the Contract Documents.
- k) SPECIFICATIONS: The directions, provisions, and requirements contained in the Contract Documents as to the method and manner of performing the work or to the quantities and qualities of materials to be furnished under the contract.
- l) CONTRACT: The written Agreement covering the work.
- m) CONTRACT PRICE: Shall mean either the lump sum, unit price, or unit prices named in the Agreement, or the total of all payments under the contract at the lump sum, unit price, or unit prices, as the case may be.

- n) SURETY OR SURETIES: The bondsmen or party or parties, approved by the County, who may guarantee the fulfillment of the contract by bond, and whose signatures are attached to said bond.
- o) RIGHT OF WAY: The whole right of way which is reserved for and secured for use in constructing the improvement.
- p) THE WORK: All the work specified in the Contract Documents.

1.2. SIMILARITY OF WORDS

Wherever in the specifications or upon the plans the words directed, required, permitted, ordered, designated, prescribed, or words of like import are used, it will be understood that the direction, requirements, permission, order, designation, or prescription of the County is intended, and similarly the words approved, acceptable, satisfactory, or words of like import, shall mean approved by, or acceptable to, or satisfactory to, the County, unless otherwise expressly stated.

SECTION 2 - SCOPE OF WORK

2.1. WORK TO BE DONE

The Contractor shall provide all labor, power, light, water, materials, equipment, tools, scaffolding, machinery, transportation, insurance, permits, bonds, temporary protection, watchmen, and superintendence necessary to construct and complete all work, and to furnish all materials included in the contract, except those furnished by the County as specifically stated in the Contract Documents.

The Contract Documents are complementary, and the work called for by any one shall be as binding as if called for by all.

2.2. CONSTRUCTION SCHEDULE

The Contractor shall submit to the County at least monthly, or at such times as may be requested by the County, a schedule which shall show the order and dates in which the Contractor proposes to carry on the various parts of the work, including estimated completion dates. The County's receipt of such schedule(s) shall not indicate any concurrence by the County in the items or dates described in the schedule(s).

2.3. DRAWINGS AND SPECIFICATIONS ON THE WORK

The Contractor shall keep one copy of all drawings and specifications on the work, in good order, available to the County and its representatives.

2.4. ESTIMATE OF QUANTITIES

It is understood that the quantities listed (except for those shown as "Final" or "Lump Sum") are but estimates only and final payment will be based on actual quantities for the work whatever they may be, subject to such adjustments and alterations as elsewhere provided for in the Contract Documents. The County is not to be held responsible for the accuracy of the estimate of quantities. The Contractor shall judge for himself, after considering all circumstances and conditions, the costs and quantities of materials involved in the work.

The Contractor shall not at any time assert that there was any misunderstanding in regard to the nature of the work or the kind or amount of materials to be furnished for the work. The Contractor shall not ask, demand, sue for, or seek to recover compensation in excess of the costs or charges for the work as stated in the Agreement.

2.5. PROTESTS

If the Contractor considers any work demanded of it to be outside of the requirements of the contract, the Contractor shall immediately and before the start of such work state this in writing to the County. In such writing, the Contractor shall clearly and in detail state the basis of its protest. Except for such protests as are made of record in the manner herein specified, the records, rulings, instruction, or decisions of the County shall be final and conclusive. Written protest by the Contractor shall not in any way relieve the Contractor from proceeding with the work as directed by the County.

2.6. ALTERATIONS

The Contractor agrees that reasonable alterations and modifications may be made by the County and that this may be done without notice to the sureties on the Contractor's bonds. If such changes result in increased or decreased quantities under the items specified in the Agreement, the Contractor will be paid on the basis of actual quantities as measured by the County; and such changes shall not affect the unit prices bid by the Contractor.

2.7. EXTRA WORK

2.7.1. General

The County reserves and shall have the right to revise the details of the contemplated work, or to add work of a different character or function, and have the Contractor perform such revised or added work as "Extra Work", when such extra work is considered by the County to be appurtenant to the satisfactory completion of the project. "Extra Work" is defined as added work of a different character or function and for which no basis for payment is prescribed; or that work which is indeterminate at the time of advertising and is specifically designated as extra work. The signing of the contract by the Contractor will be deemed to be an agreement on his part to perform extra work, as and when ordered by the County. If required extra work results in delay to the work, the Contractor will be given an appropriate extension of time.

The General Manager – Chief Engineer shall have the authority to approve changes or additions in the work in accordance with Public Contract Code 20142 without Board of Supervisors approval.

2.7.2. Procedure for Extra Work

Extra work may not be done by the Contractor without prior request and proper written approval by the County. Upon decision of the County to have extra work performed, the County will so inform the Contractor, acquainting it with the details of the new work. The Contractor shall thereupon present in writing a price for said work to the County, whose written approval shall be secured before work is started; except that the County may order the Contractor to proceed with extra work in advance of the submission of such prices provided that preliminary estimates show that the cost will not exceed \$1,000.

Prices for extra work shall be prepared by the Contractor on one or both of the following methods, as requested by the County, and submitted to the County for approval:

For a stated unit price or lump sum amount based upon current prevailing fair prices for materials, labor, plant, overhead and profit.

On a cost plus 15 percent basis (force account by the Contractor). The cost of all work done by the Contractor on a cost plus 15 percent basis will be computed in the manner described in Section 7, and the compensation thus provided shall be full payment to the Contractor related to the extra work.

Upon receipt of the Contractor's price, the County will make an analysis thereof and in its discretion adopt one of the following procedures:

Accept the Contractor's price for lump sum or unit price amount in the original or amended form and direct it to proceed with the work; or direct it to perform the work on a cost plus 15 percent basis.

Have the work performed by County's forces or by separate contract.

Direct the Contractor to proceed with the work and accept payment therefore in the amount as adjudicated later in a court of law.

The price agreed to by the Contractor for the extra work shall be full compensation to the Contractor for all labor, materials, equipment or other costs related to the extra work.

2.8. PAYMENT FOR EXTRA WORK

At the end of each month the Contractor shall make and deliver to the County a statement of the cost of the extra work completed during the current month, itemized and in a form satisfactory to the County. Payment for extra work shall be added to the monthly partial payment made in accordance with Section 7.5 of the General Provisions.

2.9. RIGHTS OF WAY

The County shall provide the rights of way as specifically described in the Contract Documents upon which the work under this contract is to be done, except that the Contractor shall provide land required for the erection of temporary construction facilities and storage of his material, together with right of access to same.

2.10. CLEANING UP

The Contractor shall, as directed by the County, remove from the County's right of way and from all public and private property, at its own expense, all temporary structures, rubbish and waste materials resulting from its operations.

SECTION 3 - CONTROL OF THE WORK

3.1. AUTHORITY OF THE COUNTY

The County shall have general supervision of the contract under authority of the Board of Supervisors. The County has the authority to stop the work whenever such stoppage may be necessary to ensure the proper execution of the contract. The County shall decide all questions which may arise as to the quality or acceptability of materials furnished, work performed, and rate or progress of the work; all questions which may arise as to the interpretation of the plans and specifications; all questions as to the acceptable fulfillment of the contract on the part of the Contractor; and all questions as to compensation. The County's determination and decision thereon shall be final and conclusive.

3.2. DETAIL DRAWINGS

The approved plans shall be supplemented by such working drawings as are necessary to control the work adequately. All authorized alterations affecting the requirement and information given on the approved plans shall be in writing. No changes shall be made to any plan or drawing after the same has been approved by the County, except by its written direction.

Approval by the County of the Contractor's working drawings (or other documents) does not relieve the Contractor of responsibility for accuracy of dimensions, details or other requirements of the Contract Documents. It is mutually agreed that the Contractor shall be responsible for agreement and conformity of his working drawings with the approved plans and specifications. Full compensation for furnishing all working drawings shall be considered as included in the prices paid for the various contract items of work, and no additional allowance will be made therefore.

3.3. CONFORMITY WITH PLANS AND ALL ALLOWABLE DEVIATIONS

Except as otherwise specifically stated in the Contract Documents, finished surfaces in all cases shall conform exactly to the elevations, lines, grades, cross-sections, and dimensions shown or described in the Contract Documents. Any deviations must be authorized in advance in writing by the County.

3.4. INTERPRETATION OF PLANS AND SPECIFICATIONS

Should it appear that the work to be done is not sufficiently detailed or explained in the Contract Documents, the Contractor must bring this to the County's attention in writing prior to submittal of the Contractor's Proposal.

In the event of any discrepancy between any drawings and the figures written thereon, the figures shall be taken as correct. The Contractor will not be allowed to take advantage of errors and omissions in the drawings and specifications. When errors or omissions are found, they shall immediately be brought to the attention of the other party in writing.

3.5. SUPERINTENDENCE

The Contractor shall keep on his work, continually during its progress, a competent Superintendent responsible for the construction of the work, as well as any necessary assistants. All such persons shall be acceptable to the County continuously throughout the duration of the project. The

Superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor.

3.6. LINES AND GRADES

The Contractor shall provide opportunities and facilities for setting points and making measurements as requested by the County or otherwise as reasonably required. The Contractor shall not proceed until it has made timely demand upon the County for, and has received from the County, such lines and grades as may be necessary as the work progresses. The work shall be done in strict conformity with such lines and grades.

The Contractor shall carefully preserve benchmarks, reference points and stakes, and in case of willful or careless destruction, the Contractor shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their loss or disturbance.

3.7. INSPECTION OF WORK

The County and its representatives shall at all times have access to the work and shall be furnished with every reasonable opportunity for ascertaining that the materials and workmanship are in accordance with the requirements of the Contract Documents. All work done and all materials furnished shall be subject to the County's inspection and approval.

The inspection of the work by any County representatives shall not relieve the Contractor of any of its obligations to fulfill the requirements of the Contract Documents. Defective work or unsuitable materials may be rejected, notwithstanding that such work or materials may have been previously overlooked by County representatives, accepted, or estimated for payment.

3.8. REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

All work which has been rejected shall be remedied or removed and replaced by the Contractor in an acceptable manner; and no compensation will be allowed for such removal or replacement. Any work done beyond the lines and grades as described by the Contract Documents, or any extra work done without proper written authority, will be considered as unauthorized and will not be paid for. Work so done may be ordered removed at the Contractor's expense. Upon failure on the part of the Contractor to comply, the County shall have authority to cause defective or unauthorized work to be remedied, or removed and replaced, and to deduct the costs for this work from any monies due or to become due the Contractor.

3.9. EQUIPMENT AND PLANT

Equipment not suitable to produce the quality of work required will not be permitted to operate on the project. Plants shall be designed and constructed in accordance with general practice for such equipment and shall be of sufficient material to carry the work to completion within the time limit. The Contractor shall provide adequate and suitable equipment and plant to meet these requirements and, when ordered by the County, shall immediately remove unsuitable equipment from the work and discontinue the operation of unsatisfactory plants. No worn or obsolete equipment shall be used, and in no case shall the maker's rating of the capacity for any equipment be exceeded. All vehicles used to haul materials over existing highways shall be equipped with pneumatic tires.

3.10. FINAL INSPECTION

The County will not make the final inspection until all the work provided for and contemplated by the contract has been fully completed and the final clean up has been performed.

SECTION 4 - CONTROL OF MATERIAL

4.1. COUNTY FURNISHED MATERIALS

The Contractor shall furnish all materials required to complete the work, except those specified in the Contract Documents to be furnished by the County. Any materials furnished by the County will be delivered to the Contractor at the points specified in the Contract Documents. The Contractor will be held responsible for all materials so delivered to him, and deductions will be made from any monies due Contractor to make good any shortages and deficiencies, from any cause whatsoever, which may occur after such delivery, or for any demurrage charges due to delinquency in unloading.

4.2. SOURCE OF SUPPLY AND QUALITY OF MATERIALS

At the option of the County the source of supply of any materials shall be approved by the County before the delivery is started. Only materials conforming to the exact requirements of the Contract Documents and approved by the County shall be used in the work. All materials proposed for use may be inspected or tested by the County at any time during their preparation and use. If it is found that sources of supply which have been approved do not furnish a uniform product, or if the product from any source proves unacceptable at any time, the Contractor shall furnish approved material from other approved sources. No material which, after approval, subsequently becomes unfit for use shall be used in the work.

Wherever the name, or brand, or manufacturer of an item is specified, it is used as a measure of quality and utility or a standard. Except in those instances where the product is designated to match others presently in use, or as otherwise stated in the Contract Documents, specifications calling for a designated material, product, thing or service by specific brand or trade name shall be deemed to be followed by the words "or equal" so that the Contractor may propose in the Contractor's bid any equal material, product, thing or service. If the Contractor desires to use any other brand or manufacturer of equal quality or utility to that specified, he shall list definite particulars of that which it considers equivalent to the specified item in its bid. The County will then determine whether or not the proposed name brand or article is equal in quality and utility to that specified, and the County's determination in that regard shall be final and binding upon the Contractor.

4.3. SAMPLES AND TESTS

All tests of materials furnished by the Contractor shall be made by the County in accordance with commonly recognized standards of national organizations for this type of landfill project, and such special methods and tests as are in use at the County's approved laboratory or otherwise determined by the County to be needed. The County shall determine what testing is needed.

Field tests of materials will be made by the County or its representative when deemed necessary as determined by the County; and these tests shall be made in accordance with standard practices of the County or as otherwise needed.

The Contractor shall furnish samples of all materials as requested by the County without charge. No material shall be used until it has been approved by the County. Samples will be secured and tested whenever necessary as determined by the County to determine the quality of the material.

Promptly after the approval of the contract, the Contractor shall notify the County of the proposed sources of supply of all materials to be furnished by it, using a form which will be supplied by the County upon request.

Whenever reference is made to standard tests or requirements of the County, the American Society for Testing Materials, the American Railway Engineering Association or the American Association of State Highway Officials, the reference shall be construed to mean the standards that are in effect at the date the Agreement is signed with subsequent amendments, changes, or additions as thereafter adopted and published by the organization referred to.

None of the provisions stated in this section shall relieve the Contractor of its obligations as stated elsewhere in the Contract Documents.

4.4. DIGGING TRENCHES OR OTHER EXCAVATIONS

Any Work that involves digging trenches or other excavations extending deeper than four feet below the surface, then the following terms shall apply:

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

- 4.4.1.1 Material that the contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
- 4.4.1.2 Subsurface or latent physical conditions at the site differing from those indicated by information about the site made available to bidders prior to the deadline for submitting bids.
- 4.4.1.3 Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

4.4.2 The County shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the work shall issue a change order under the procedures described in the Contract.

4.4.3 In the event that a dispute arises between the County and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the contractor's cost of, or time required for, performance of any part of the work, the contractor shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all work to be performed under the contract. The contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

4.4.4 Contractor shall submit to County, 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. Prior to any excavation is commenced, County shall accept said plan. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer.

- 4.4.5 Nothing in this section shall be deemed to allow the use of a shoring, sloping, or protective system less effective than that required by the Construction Safety Orders.
- 4.4.6 Nothing in this section shall be construed to impose tort liability on the awarding body or any of its employees.

4.5. STORAGE OF MATERIALS

Materials shall be so stored as to ensure the preservation of their quality and fitness for the work. When considered necessary by the County, they shall be placed on wooden platforms or other hard, clean surfaces and not on the ground. They shall be placed under cover when so directed by the County. Stored materials shall be so located as to facilitate prompt inspection.

4.6. DEFECTIVE MATERIALS

All materials not conforming to the exact requirements of the Contract Documents shall be considered as defective; and all such materials, whether in place or not, shall be rejected and shall be removed immediately from the site of the work. No rejected materials, the defects of which have been subsequently corrected, shall be used until approval in writing has been given by the County. Upon failure on the part of the Contractor to comply forthwith with any order of the County made under the provisions of this article, the County shall have authority to remove and replace defective material and to deduct the cost of removal and replacement from any monies due or to become due the Contractor.

4.7. ASSIGNMENT OF CLAIMS

In submitting a bid on this public works project, or any subcontractor agreeing to supply goods, services, or materials, and entering a contract pursuant thereto, the Contractor and/or subcontractors do offer and agree to assign to the County all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from 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 awarding body tenders final payment to the Contractor, without further acknowledgment by the parties.

SECTION 5 - LEGAL RELATIONS AND RESPONSIBILITY

5.1. LAWS TO BE OBSERVED

5.1.1. Compliance with Applicable Law

Reference to and/or incorporation into the Contract Documents of a particular law, statute, ordinance, rule or regulation is not, nor is it intended to be, a definitive statement of the law applicable to the Contract Documents and the accomplishment of the work. Contractor must keep informed as to all such applicable laws - Federal, State, County, Municipal - as they affect the conduct of the work and comply with such law, including, but not limited to, having requisite licenses, obtaining necessary permits, paying necessary fees and taxes, posting notices and installing, operating and maintaining safety precautions and facilities. It is likewise Contractor's responsibility to see to it that its subcontractors also fully comply with such applicable laws. Contractor shall protect and defend County, its officers, agents, employees and contractors against any claim or liability arising from or based upon any alleged violation of such applicable law.

5.1.2. Labor Code

The Contractor shall comply with all applicable requirements of the California Labor Code including but not limited to Labor Code, Chapter 2, Subchapter 1, Article 10, Required Apprentices on Public Works Contracts. Reference is made to Chapter 1, Part 7, Division 2 of the California Labor Code (commencing with Section 1720). By this reference said Chapter 1 is incorporated herein with like effect as if it were here set forth in full. The parties recognize that said Chapter 1 deals with, among other things, discrimination, penalties and forfeitures, their disposition and enforcement, wages, working hours and securing workers' compensation insurance and directly affect the method of prosecution of the work by Contractor and subject it under certain conditions to penalties and forfeitures. Execution of the Agreement by the parties constitutes their agreement to abide by said Chapter 1. Their stipulation as to all matters which they are required to stipulate to by the provisions of said Chapter 1, constitutes Contractor's certification that he is aware of the provisions of said Chapter 1 and will comply with them and further constitutes Contractor's certification as follows: "I am aware of the provisions of Section 3700 of the California 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." Contractor and his subcontractors shall comply with the provisions of the Labor Code regarding apprentices. Contractor shall post at each job site during the course of the work a copy of County's "Determination of Prevailing Wage Rate". Copies of this Determination are available from County and at <http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>.

5.1.3. Equal Employment Opportunity

The Contractor shall comply with all applicable non-discrimination and equal employment laws. The Contractor shall not discriminate in his recruiting, hiring, promotion, demotion or termination practices on the basis of race, religious creed, color, national origin, ancestry, sex, age or physical handicap in the performance of this contract and shall comply with the provisions of the California Fair Employment Practice Act (commencing with

\$1410 of the Labor Code), the Federal Civil Rights Act of 1964 (P.L. 88-352) and all amendments thereto, Executive Order No. 11246 (30 Federal Register 12319), as amended, and all administrative rules and regulations issued pursuant to said Acts and Order. See particularly 41 Code of Federal Regulation (CFR) Chapter 60.

Contractor shall require each of its subcontractors to comply with the preceding paragraph and shall include in each subcontract language similar to the preceding paragraph.

Contractor shall permit access to its records of employment, employment advertisement, application forms and other pertinent data and records (including but not limited to certified payroll information) by County and any state or federal agency having jurisdiction for the purpose of investigation to ascertain compliance with this Section.

County may assign an affirmative action representative to monitor Contractor and his subcontractor(s) conduct required by this section, including the right of entry to the construction site for the purpose of obtaining information from persons performing work on the project providing such inspection does not interfere with the progress of the work.

Elsewhere in the Contract Documents more specific requirements may be contained covering the same subject matter of this Section. If so, such more specific requirements prevail over this section in case of conflict.

Transactions of \$10,000 or under - Contracts and subcontracts not exceeding \$10,000 are exempt from the requirements of this section. No Contractor or subcontractor shall procure supplies and/or services in less than usual quantities to avoid applicability of this section. With respect to contract and subcontracts for indefinite quantities, this section applies unless the amount required in any one year under such contract will reasonably be expected not to exceed \$10,000.

Transactions in Excess of \$10,000, but less than \$50,000 - At County's request, Contractor shall certify that he has in effect an affirmative action plan and agrees to comply with all state and federal laws and regulations regarding Fair Employment Practices. Contractor shall maintain a written copy of his affirmative action plan and furnish County a copy of the Plan upon request. County may require Contractor to complete an Affirmative Action Compliance Report, on a form furnished by County, setting forth definite goals during the term of this contract.

Transactions of \$50,000 or more - If Contractor has 50 or more employees and a contract for \$50,000 or more, he shall develop and submit to County within 30 days after award, a written affirmative action compliance program providing in detail specific steps to guarantee equal employment opportunity. Contractor shall include in his affirmative action program a table of job classifications, which table shall include but need not be limited to job titles, duties and rates of pay.

Contractor shall in each subcontract let to do a portion of the work covered hereunder, where the subcontractor involved has 50 or more employees and the subcontract is for \$50,000 or more, impose in the subcontract the above requirements.

For the purpose of determining the number of employees, the average of the Contractor's or his subcontractor's employees from the 12 month period immediately prior to award, or the total number of employees contractor or its subcontractor will have when performing this contract, whichever is higher, shall be used.

Federally Assisted Construction - If this project is a federally assisted construction project, then the contract provisions contained 41 CFR S60-1.4(b) are incorporated herein and Contractor shall likewise incorporate said provisions in each subcontract entered into by Contractor to perform the work. Federally assisted construction is identified as such in the Notice Inviting Bids.

5.1.4. Registration of Contractors

In order to be considered, a prospective bidder must be licensed in accordance with Division 3, Chapter 9 (commencing with Section 7000) of the Business and Professions Code.

5.1.5. Accident Prevention

Particular attention shall be given to relevant Division of Industrial Safety Construction and Electrical Safety Orders. Said Orders are contained in Title 8 of the California Code of Regulations, Chapter 4, Subchapters 4 and 5. Specific attention shall be taken of the California Occupational Safety and Health Act of 1973 (commencing with Section 6300 of the Labor Code) and the Federal Occupational Safety and Health Act of 1970 (P.L. 91-596) and rules and regulations issued pursuant to said Acts. Specific reference is made to Article 6 of said Construction Safety Orders. Contractor shall submit to County, in advance of excavation a detailed plan showing the design of shoring, bracing, sloping of the sides of trenches, or other provisions to be made for protection of personnel during earthwork operations. In event the Contractor's plan does not conform to the shoring system requirement of Article 6, the contractor's proposed shoring design shall be prepared and signed by a civil or structural engineer registered in the State of California. The Contractor shall also impose these requirements on all subcontractors involved and enforce compliance therewith. The duties here set forth are nondelegable by Contractor.

5.2. CONTRACTOR'S RESPONSIBILITY

Contractor is under the absolute duty in fulfilling his contractual obligations hereunder to proceed, and cause his subcontractors to proceed, in a safe, workmanlike manner, with adequate safeguards for the protection of the public, the workmen and persons from time to time inspecting the work. If at any time Contractor finds any of his subcontractors are allowing work to proceed in an unsafe manner or contrary to the terms of the Contract Documents, Contractor shall immediately cause such action to stop and immediately take all action necessary to protect workmen, inspectors and the general public and cause the work to proceed in a safe manner or in accordance with the terms of the Contract Documents.

5.3. CONTRACTOR'S RESPONSIBILITY FOR WORK

Until the formal final acceptance of the completed work by the County, the Contractor shall have the charge and care of the work and shall bear the risk of injury or damage to any part of the work by the action of the weather or from any other cause, whether or not arising from the execution of

the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work.

5.4. PROPERTY RIGHTS IN MATERIALS

Nothing in the contract shall be construed as vesting in the Contractor any right of property in the materials used after they have been attached or affixed to the work or the soil. All such materials shall become the property of the County upon being so attached or affixed.

5.5. PERMITS AND LICENSES

The Contractor shall procure all permits and licenses (including but not limited to: National Pollution Discharge Elimination System (NPDES) and South Coast Air Quality Management District (AQMD) permit requirements), pay all charges and fees, and give all notices necessary and incident to prosecution of the work.

5.6. ROYALTIES AND PATENTS

The Contractor shall assume all costs arising from the use of patented materials, equipment, devices, or processes used on or incorporated in the work, and agrees to indemnify and save harmless the County and its duly authorized representatives, from all suits at law, or actions of every nature for, or on account of, the use of any patented materials, equipment, devices, or processes.

5.7. SANITARY PROVISIONS

Necessary conveniences, properly secluded from public observation, shall be provided by the Contractor where needed for the use of laborers on the work. Their location, construction and maintenance shall be subject to the approval of the County. The Contractor shall obey and enforce such sanitary regulations as may be prescribed by the State Department of Health or other authorities having jurisdiction.

5.8. PUBLIC SAFETY

The Contractor at its own expense shall furnish, erect, and maintain such fences, barriers, lights, and signs as are necessary to give adequate warning to the public at all times that the work is under construction; and the Contractor shall erect such warning and directional signs and employ such flagmen as are required and shall maintain same throughout the construction period. Full compensation for the work involved in carrying out the precautionary measures above specified shall be considered as included in the prices paid for the various contract items of work and no additional payment will be made therefore.

5.9. USE OF EXPLOSIVES

When the use of explosives is necessary for the prosecution of the work, the Contractor shall use the utmost care not to endanger life or property. All explosives shall be stored in accordance with the provisions of Division II Part I, Chapter 3, of the Health and Safety Code of the State of California and other applicable laws or regulations.

5.10. PROVISIONS FOR EMERGENCIES

Unusual conditions may arise on the work which will require that immediate and unusual provisions be made to protect the public from danger or loss or damage to life or property, and it

is part of the service required of the Contractor to make such provisions and to furnish such protection.

The Contractor shall use such foresight and shall take such steps and precautions as its operations make necessary to protect the public from danger or damage, or loss of life or property.

Whenever work is undertaken pursuant to this Section, Contractor shall promptly file with County a verified report setting forth the nature of the emergency and the action taken by the Contractor by reason of the emergency.

Whenever, in the opinion of the County, an emergency exists against which the Contractor has not taken sufficient precaution for the safety of the public or the protection of utilities or of adjacent structures or property which may be injured or damaged because of the Contractor's work; and, in the opinion of the County, immediate action shall be considered necessary in order to protect public or private, personal or real property interests, or prevent likely loss of human life or damage; then the County may provide suitable protection to said interests by causing such work to be done and material to be furnished as, in the opinion of the County, may seem reasonable and necessary. The cost and expense of all such emergency work shall be borne by the Contractor, and if he shall not pay said cost and expense upon presentation of the bills therefore, duly certified by the County, then said cost and expense will be paid by the County and shall thereafter be deducted from any amounts due or which may become due said Contractor. Failure of the County, however, to take such precautionary measures, shall not relieve the Contractor of its full responsibility for public safety.

5.11. UNFORESEEN DIFFICULTIES

The risk of all loss or damage, except as noted in Section 8.4, arising out of the work, or from any unforeseen obstructions or difficulties which may be encountered during the progress of the work, or from the action of the weather, or from encumbrances in the line of work, shall be the responsibility of the Contractor.

5.12. ACCESS TO THE WORK

Unless provided for in the Special Provisions, access to the work from existing roads shall be provided by the Contractor at its expense and maintained in a manner so as not to create a public nuisance. The County assumes no responsibility for the condition or maintenance of any existing road or structure thereon that may be used by the Contractor for performing the work or for traveling to and from the site of the work. No additional payment will be made to the Contractor for constructing any temporary road used for construction operations or for improving, repairing, or maintaining any existing road or structure thereon that may be used by the Contractor for performance of the work under these specifications. The cost of all work described in this paragraph shall be included in the prices bid in the schedule for other items of construction work.

5.13. GUARANTEE OF WORK

All work shall be guaranteed by Contractor for a period of two (2) years from the recordation of the Notice of Completion against any defects, including but not limited to those resulting from the use of inferior materials, equipment, or workmanship. Upon notice from County, Contractor shall promptly remedy such defects at its expense, including payment to County of its expenses in

connection with such defects; otherwise County shall proceed to remedy such defects and Contractor shall reimburse County for its expenses.

This guarantee is in addition to any specific guarantee(s) provided for elsewhere in the Contract Documents or provided by manufacturers or suppliers.

5.14. SURETY OF GUARANTEE

The performance of guarantee and conditions specified in Section 5.13., shall be secured by a surety bond which shall be delivered by the Contractor to the County prior to the date on which final payment is made to the Contractor. Said bond shall be in an approved form and executed by a surety company or companies satisfactory to the County, in the amount of 10 percent of the final contract price. Said bond shall remain in force for the duration of the guarantee period specified in Section 5.13. Instead of providing such a bond as described above, the Contractor may, at its option, provide for the performance bond furnished under the contract to remain in force for said amount until the expiration of said guarantee period; and the amount of said performance bond may be reduced to 10 percent of the final contract price beginning at the time of recordation of the Notice of Completion.

5.15. DAMAGES BY ACT OF GOD

If the construction of the project herein is damaged, which damage is determined to have been proximately caused by an act of God, in excess of 5% of the contract amount, provided that the work damaged is built in accordance with applicable building standards and the plans and specifications, then the County may, without prejudice to any other right or remedy, terminate the contract.

SECTION 6 - PROSECUTION AND PROGRESS

6.1. PROGRESS OF THE WORK

The Contractor shall begin the work within ten (10) calendar days after the date of receipt by Contractor of notice to proceed from the County and shall diligently and continuously prosecute the same to completion within the time limit provided in the Special Provisions.

6.2. OVERTIME WORK AND WORK AT NIGHT

The Contractor shall conduct the work on a five (5) day, forty (40) hour work week with no work on legal holidays (as further described in the Special Provisions). If the Contractor feels it is necessary to work more than the normal 40 hour work week, he will make a written request for permission from the County, outlining the reasons for such request. The decision of granting permission for overtime work shall be in the sole discretion of the County; and the decision of the County shall be final. If granted, a condition will be imposed requiring the Contractor to pay the County the cost incurred at overtime rates for additional inspection and engineering time required in connection with the overtime work.

When any work is performed at night, only such classes of work shall be done as can be properly inspected. Adequate light must be provided for the safety of the workers and for proper inspection.

6.3. SUBCONTRACTING

Reference is made to the Subletting and Subcontracting Fair Practice Act contained in the California Public Contract Code (commencing with Section 4100). By this reference, said Act is incorporated herein with like effect as if it were here set forth in full and the parties shall abide by its terms and substitution shall be only as allowed by that Act. County reserves the right to approve all subcontractors whether or not they are required to be listed in the Contractor's Proposal.

Contractor shall be responsible for the acts and omissions of its subcontractors and shall make certain that at all times its subcontractors comply with the terms of the Contract Documents and applicable law. Where a portion of the work which has been subcontracted by the Contractor is not being prosecuted in a manner satisfactory to the County, the subcontractor shall be removed immediately on the request of the County and shall not again be employed on the work.

The Contractor shall give its personal attention to the fulfillment of the contract and shall keep the work under its control. The Contractor shall perform with its own organization work of a value amounting to not less than 50 percent of the remainder obtained by subtracting from the total original contract value the sum of any item designated herein or in the Special Provisions as Specialty Items. The furnishing and placing of reinforcing steel, when placing is performed by the supplier, will be considered as a Specialty Item for this purpose; however, he shall be designated in the list of subcontractors. The value of the work subcontracted will be based on the contract item bid price, if any subdivision of a contract unit is subcontracted, the entire unit shall be considered as subcontracted.

6.4. CHARACTER OF WORKMEN

If any subcontractor or person employed by the Contractor shall fail or refuse to carry out the directions of the County or shall appear to the County to be incompetent or to act in a disorderly

or improper manner, he/she shall be discharged immediately upon the request of the County and such person shall not again be employed on this work.

6.5. TEMPORARY SUSPENSION OF THE WORK

The County shall have the authority to suspend the work wholly or in part, for such period as the County may deem necessary, due to unsuitable weather, or to such other conditions as are considered unfavorable for the suitable prosecution of the work, or for such time as the County may deem necessary due to the failure on the part of the Contractor to properly perform the work. The Contractor shall immediately comply with the order of the County to suspend the work wholly or in part. The work shall be resumed when conditions are favorable or methods are corrected, as ordered or approved by the County.

6.6. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

The Contractor shall complete the work called for under the contract in all parts and requirements within the number of working days specified in the Special Provisions. Liquidated damages shall apply as stated in the Special Provisions.

A working day is hereby defined as any day (except Saturdays, Sundays, legal holidays, and days on which the Contractor is specifically required by the Special Provisions to suspend construction operations) on which the Contractor is not prevented by inclement weather or resulting conditions from proceeding with at least 60 percent of the normal labor and equipment force engaged in the controlling operation or operations for at least five hours.

The County will furnish the Contractor a weekly statement showing the number of working days charged to the contract for the preceding week, the number of working days specified for completion of the contract, and the number of working days remaining to complete the contract. The Contractor will be allowed one week in which to file a written protest setting forth in what respects the weekly statement is incorrect, otherwise the statement shall be deemed to have been accepted by the Contractor as correct.

The following holidays will be considered as legal holidays: New Year's Day; Martin Luther King Jr. Birthday, Lincoln's Birthday; Washington's Birthday (observed); Memorial Day; Independence Day; Labor Day; Columbus Day; Veteran's Day; Thanksgiving Day; Christmas; and such other days as are declared County holidays by ordinance passed by the Board of Supervisors. Please refer to specific holiday dates listed in the Special Provisions.

Contractor acknowledges that failure to perform in strict accordance with the Contract Documents and within the time limits specified in the Special Provisions will cause County to suffer special damages in addition to cost of completion of the work in accordance with the provisions of the Contract Documents. Such special damage could include, but is not limited to, lease and rental cost, additional salaries and overhead, interest during construction, attorney expense, additional engineering, inspection expense, cost of maintaining or constructing alternate facilities, and injury to the property of the County or others. Such special damage could also include penalties assessed against the County by other governmental agencies for failure to have the project completed in a timely manner or as required by law. The County may withhold from any money due or that may become due the Contractor under the contract such amount as the County may elect to offset the

damages incurred. Any withholding or failure to withhold shall not in any way limit recovery for damages actually incurred.

It is further agreed that in case the work called for under the contract is not finished and completed in all parts and requirements within the time specified, the County (in its sole discretion) shall have the right to extend the time for completion or not. If the County decides to extend the time limit for the completion of the contract, the County shall further have the right to charge to the Contractor and to deduct from the Contractor's payment all or any part of the actual cost of engineering, inspection, superintendence, and other related expenses caused by the Contractor's failure to complete the project as required. Liquidated damages shall apply as stated in the Special Provisions.

6.7. DELAYS AND EXTENSION OF TIME

If delays are caused by unforeseen causes beyond the control of either the Contractor or the County, such as war, strikes, fire, floods, or other action of the elements that are unreasonable under the circumstances involved and not within the contemplation of the parties, such delays will entitle the Contractor to an equivalent extension of time for the completion of the contract but not damages or additional payments over the contract price. Furthermore, if the Contractor suffers any delay caused by the failure of the County to furnish the necessary right of way or materials agreed to be furnished by it, or by failure to supply necessary plans or instructions concerning the work to be done after written request therefore has been made, the Contractor shall be entitled to an extension of time equivalent to the time lost for any of the above-mentioned reasons herein this Section 6.7 but shall not be entitled to any damages for such delay.

6.8. ASSIGNMENT

The contract may be assigned only upon prior written consent of the County. Such written consent to sublet, assign or otherwise dispose of any portion of the contract, shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the contract.

6.9. TERMINATION OF CONTRACT

If the Contractor fails to begin delivery of material and equipment or to commence work within the time specified herein, or to maintain the rates of delivery of materials, or to execute the work in the proper manner, written notice by the County may be served upon the Contractor demanding compliance with the contract. If the Contractor refuses or neglects to comply with such notice within five (5) working days after receipt of the notice, then the County may take possession of the work, together with all material and equipment thereon, and may complete the work itself in the manner the County determines to be appropriate. The cost of the completion of the work shall be charged against the Contractor and its surety and may be deducted from any money due to the Contractor; and if the sums due under the contract are insufficient, the Contractor and/or its surety shall pay to the County within five (5) working days after the completion of the work all of such cost in excess of the contract price.

SECTION 7 - PAYMENT

7.1. SCOPE OF PAYMENTS

The compensation described in the Agreement shall be complete and full payment to the Contractor for furnishing all materials, labor, tools, equipment and related items necessary to complete the work; and for all obligations imposed upon the Contractor pursuant to the Contract Documents. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective work or material.

7.1.1. Measurement and Computation of Quantities

Unless otherwise stated, all items of the work to be paid for at a contract price per unit of measurement will be measured by the County in accordance with United States Standard Measures. A ton shall mean 2,000 pounds, avoirdupois. Except as otherwise expressly provided in the specifications, the methods of measurement and computation of quantities will be determined by the County.

The weights of metalwork, and other metal parts to be paid for by weight will be determined by the County on the basis of handbook weights, scale weights, or manufacturer's catalog weights, or in the absence of any of the foregoing, on the basis of estimated weights; provided, that weights of nonmetallic coatings will be excluded.

7.1.2. Payment at Contract Prices

The contract price for an item of the work shall include full compensation for all costs of that item, including the costs of any work, materials and equipment incidental to the item but not specifically shown or described in the Contract Documents.

The contract prices shall include full compensation for all costs of any work, materials, and equipment required by the Contract Documents, but not covered by a contract price or otherwise expressly made the subject of direct payment.

7.2. PAYMENT AND COMPENSATION FOR ALTERED QUANTITIES

When alterations in plans or quantities of work are ordered and performed, the Contractor agrees to accept payment in full at the contract unit price for the actual quantities of work done; and no additional payment will be made for anticipated profits.

7.3. FORCE ACCOUNT PAYMENT

When extra work is to be paid for on a force account basis, compensation will be determined as follows:

7.3.1. Work Performed by Contractor

The Contractor will be paid for labor, materials, and equipment rental as hereinafter provided, except where agreement has been reached to pay in accordance with Section 7.3.2. Only materials incorporated in the work will be paid for.

To the total computed as provided in Section 7.3.1.1, 7.3.1.2 and 7.3.1.3 will be added the following percentages:

Labor -- 24 percent
Materials -- 15 percent
Equipment Rental -- 15 percent

It is understood labor, materials, and equipment may be furnished by the Contractor or by the subcontractor or by others on behalf of the Contractor.

When extra work paid for on a force account basis is performed by forces other than the Contractor's organization, the Contractor shall reach agreement with such other forces as to the distribution of the payment made by the County for such work and no additional payment therefore will be made by the County.

7.3.1.1. Labor

The Contractor will be paid the cost of labor for the workmen (including foremen when authorized by the County), used in the actual and direct performance of the work. The cost of labor, whether the employer is the Contractor, subcontractor, or other forces, will be the sum of the following:

7.3.1.1.1. Actual Wages

The actual wages paid shall include any employer payments to or on behalf of the workmen for health and welfare, pension, vacation, and similar purposes.

7.3.1.1.2. Labor Surcharge

To the actual wages as defined in Section 7.3.1.1.1., will be added a labor surcharge set forth in the Special Provisions, which labor surcharge shall constitute full compensation for all payments imposed by State and Federal laws and for all other payments made to, or on behalf of, the workmen, other than actual wages as defined in Section 7.3.1.1.1 and subsistence and travel allowance as specified in Section 7.3.1.1.3.

7.3.1.1.3. Subsistence and Travel Allowance

Subsistence and travel allowance paid to such workmen as required by collective bargaining agreements.

7.3.1.2. Materials

The cost of materials incorporated in the work will be the cost to the purchaser, whether Contractor, subcontractor or other forces, from the supplier thereof, except as the following are applicable:

- (a) If a cash or trade discount by the actual supplier is offered or available to the purchaser, it shall be credited to the County notwithstanding the fact that such discount may not have been taken.

- (b) If the materials are procured by the purchaser by any method which is not a direct purchase from and a direct billing by the actual supplier to such purchaser, the cost of such materials shall be deemed to be the price paid to the actual supplier as determined by the County. No markup except for actual costs incurred in the handling of such materials will be permitted.
- (c) If the materials are obtained from a supply or source owned wholly or in part by the purchaser, payment therefore will not exceed the price paid by the purchaser for similar materials furnished from said source on contract items or on the current wholesale price for such materials delivered to the job site whichever price is lower.
- (d) If the cost of such materials is, in the opinion of the County, excessive, then the cost of such materials shall be deemed to be the lowest current wholesale price at which such materials are available in the quantities concerned delivered to the job site, less any discounts as provided in Section 7.3.1.2(a).
- (e) If the Contractor does not furnish satisfactory evidence of the cost of such materials from the actual supplier thereof, the cost shall then be determined in accordance with Section 7.3.1.2(d).

The County reserves the right to furnish such materials as it deems advisable, and the Contractor shall have no claims for costs and profit on such materials.

7.3.1.3. Equipment Rental

The Contractor will be paid for the use of equipment at the rental rates listed for such equipment in the Special Provisions regardless of ownership and any rental or other agreement, if such may exist, for the use of such equipment entered into by the Contractor. If it is deemed necessary by the County to use equipment not listed in the Special Provisions, a suitable rental rate for such equipment will be established by the County. The Contractor may furnish any cost data which might assist the County in the establishment of such rental rate.

The rental rates paid as above provided shall include the cost of fuel, oil, lubrication, supplies, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.

Operators of rented equipment will be paid for as provided under Section 7.3.1.1

All equipment shall, in the opinion of the County, be in good working condition and suitable for the purpose for which the equipment is to be used.

Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

Individual pieces of equipment or tools having a replacement value of \$25.00 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefore.

Rental time will not be allowed while equipment is inoperative due to breakdowns.

In computing the rental time of equipment, less than 30 minutes shall be considered ½ hour.

7.3.1.3.1. Equipment on the Work

The rental time to be paid for equipment on the work shall be the time the equipment is in operation on the extra work being performed, and in addition, shall include the time required to move the equipment to location of the extra work and return it to the original location or to another location requiring no more time than that required to return it to its original location, except that moving time will not be paid for if the equipment is used at the site of the extra work on other than such extra work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made if the equipment is used at the site of the extra work on other than such extra work.

7.3.1.3.2. Equipment not on the Work

For the use of equipment moved in on the work and used exclusively for extra work paid for on a force account basis, the Contractor will be paid the rental rates listed in the Special Provisions or as agreed to as provided in Section 7.3.1.3 and for the cost of transporting the equipment to the location of the work and its return to its original locations, all in accordance with the following provisions:

- (i) The original location of the equipment to be hauled to the location of the work shall be agreed to by the County in advance.
- (ii) The County will pay the costs of loading and unloading such equipment.
- (iii) The cost of transporting equipment on low bed trailers shall not exceed the hourly rates charged by established haulers.
- (iv) The cost of transporting equipment shall not exceed the applicable minimum established rates of the Public Utilities Commission.
- (v) The rental period shall begin at the time the equipment is unloaded at the site of the extra work, shall include each day that the equipment is at the site of the extra work, excluding Saturdays, Sundays, and legal holidays unless the extra work is performed on such days, and shall terminate at the end of the day on which the County directs the Contractor to discontinue the use of such equipment. The rental time to be paid per day will be in accordance with the following:

Hours In	Hours to be Paid
0	4
0.5	4.25
1	4.5
1.5	4.75
2	5
2.5	5.25
3	5.5
3.5	5.75
4	6
4.5	6.25
5	6.5
5.5	6.75
6	7
6.5	7.25
7	7.75
8	8
Over 8	Hours in operation

When hourly rates are listed, less than 30 minutes of operation shall be considered to be ½ hour of operation.

When daily rates are listed, payment for ½ day will be made if the equipment is not used. If the equipment is used, payment will be made for one day.

The minimum rental time to be paid for the entire rental period on an hourly basis shall not be less than 8 hours or if on a daily basis shall not be less than one day.

- (i) Should the Contractor desire the return of the equipment to a location other than its original location, the County will pay the cost of transportation in accordance with the above provisions, provided such payment shall not exceed the cost of moving the equipment to the work.
- (ii) Payment for transporting, loading and unloading equipment, as above provided, will not be made if the equipment is used on the work in any other way than upon extra work paid for on a force account basis.

7.3.2. Work Performed by Special Forces or Other Special Services

When the County and the Contractor, by advance agreement, determine that a special service or an item of extra work cannot be performed by the forces of the Contractor or those of any of his subcontractors, such service or extra work item may be performed by a specialist. Invoices for such service or item of extra work on the basis of the current market price thereof may be accepted without complete itemization of labor, material, and equipment rental costs when it is impracticable and not in accordance with the established practice of the special service industry to provide such complete itemization. In those

instances wherein a Contractor is required to perform extra work necessitating a fabrication or machining process in a fabrication or machine shop facility away from the job site, the charges for that portion of the extra work performed in such facility may, by agreement, be accepted as a specialist billing.

To the specialist invoice price, less a credit to the County for any cash or trade discount offered or available, whether or not such discount may have been taken, will be added 15 percent in lieu of the percentages provided in Section 7.3.1.

7.3.3. Records

The Contractor shall maintain his records in such manner as to provide a clear distinction between the direct costs of extra work paid for on a force account basis and the costs of other operations.

The Contractor shall furnish the County (on a form provided by the County) report sheets in duplicate of each day's extra work paid for on a force account basis no later than the working day following the performance of said work. The daily report sheets shall itemize the materials used, and shall cover the direct costs of labor and the charges for equipment rental, whether furnished by the Contractor, subcontractor, or other forces, except for charges described in Section 7.3.2. The daily report sheets shall provide names or identifications and classifications of workmen, the hourly rate of pay and hours worked, and also the size, type and identification number of equipment, and hours operated.

Materials 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 said vendor's invoices not be submitted within 15 days after acceptance of the work, the County reserves the right to establish the cost of such materials at the lowest current wholesale prices at which said materials are available in the quantities concerned delivered to the location or the work, less any discounts provided in Section 7.3.1.2 (a).

Daily report sheets shall be signed by the Contractor or its authorized agent.

The County will compare its records with the daily report sheets furnished by the Contractor, make any necessary adjustments, and compile the costs of work paid for on a force account basis on daily extra work report forms furnished by the County. When these daily extra work reports are agreed upon and signed by both parties, they shall become the basis of payment for the work performed, but shall not preclude subsequent adjustment based on a later audit.

The Contractor's cost records pertaining to work paid for on a force account basis shall be open to inspection or audit by representatives of the County, during the life of the contract and for a period of not less than 18 months after the date of acceptance thereof, and the Contractor shall retain such records for that period. Where payment for materials or labor is based on the cost thereof to forces other than the Contractor, the Contractor expressly guarantees that the cost records of such other forces shall be open to inspection and audit by representatives of the County on the same terms and conditions as the cost records of

the Contractor. If an audit is to be commenced more than 60 days after the acceptance date of the contract, the Contractor will be given a reasonable notice of the time when such audit is to begin.

7.3.4. Payment

Payment as provided above in Sections 7.3.1 and 7.3.2 shall constitute full compensation to the Contractor for performance of work paid for on a force account basis and no additional compensation will be allowed therefore.

7.4. ACCEPTANCE

The work shall be inspected for final acceptance by the County promptly upon receipt of notice in writing from the Contractor that the completed work is ready for such inspection.

7.5. PARTIAL PAYMENTS

On or about the last day of each month, the County shall make an estimate in writing of the total amount of work done by the Contractor to the time of such estimate and the value thereof. The County shall retain 5 percent (5%) of such estimated value of the work or partial payment for the fulfillment of the contract by the Contractor.

After deducting all previous payments and all sums to be kept or retained under the provisions of the contract or applicable law, the County shall make monthly progress payments to the Contractor. No such estimate or payment shall be required to be made when, in the judgment of the County, the work is not proceeding properly. No payment shall be required to be made by the County unless and until all required submittals have been delivered to the County, including but not limited to the following: certified payroll information (at a frequency specified in the Special Provisions, if project is a prevailing wage contract), construction schedule updates as listed in Section 2.2, and National Pollution Discharge and Elimination System permit requirements and frequencies as stated in Special Provisions.

In accordance with Public Contract Code Section 22300 and other applicable law, the Contractor may substitute securities for any monies withheld to ensure performance under the contract. Such substitution shall be made only upon a separate agreement between the County Board of Supervisors and the Contractor which contains terms and conditions in compliance with all laws applicable to monies withheld under the contract.

7.6. DELAYED PAYMENTS

All the monies due the Contractor under the contract will be paid by the Treasurer of the County of Riverside, prepared and approved as required by law; and it is understood that any delay in the preparation, approval and payment of these demands will not constitute a breach of the County's obligations.

7.7. FINAL PAYMENT

The County, after completion of the work, and submittal of any final documents or reports required by the Special Provisions, shall make a final estimate in writing to the County Board of Supervisors of the amount of work done and the value of such work; and pursuant to order of the Board of Supervisors the County shall pay the sum found to be due after deducting therefrom all previous payments and all amounts to be kept and retained under the provisions of the contract or applicable

law. All prior partial estimates and payments shall be subject to correction in the final estimate and payment. The withheld retention funds shall not be due and payable to the Contractor until the expiration of thirty-five (35) days after the date of approval by the Board of Supervisors and recordation of the notice of completion.

The Contractor agrees that no certificate given or payments made under the contract except the final payment and approval by the Board of Supervisors shall be conclusive evidence of the performance of the contract. No payment shall be construed to be an acceptance of any defective work or improper materials.

The Contractor agrees that payment of the final amount due under the contract will be withheld until the guarantee of work as required in Section 5.13 herein is accepted by the County in approved form.

The Contractor's agreement to the final payment shall release the County, including its officers, employees, agents and contractors, from any and all claims from the Contractor for further or additional compensation related to the work.

7.8. CLAIMS RESOLUTION – CLAIMS UP TO \$375,000

In accordance with Public Contract Code Section 20104 - 20104.8 and other applicable law, public works claims of \$375,000 or less which arise between the Contractor and the County shall be resolved following the statutory procedure.

7.8.1. Submission of Claims

All claims shall be submitted in writing and accompanied by substantiating documentation. Claims must be filed before processing of the final payment unless other notice requirements are provided in the contract. "Claim" means a separate demand by the claimant for (1) a time extension, (2) payment of money or damages arising from work done by or on behalf of the claimant and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled, or (3) an amount the payment of which is disputed by the County.

7.8.1.1. Claims under \$50,000.00

The County shall respond in writing to the claim within 45 days of receipt of the claim, or, the County may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the County may have against the claimant. If additional information is needed thereafter, it shall be requested and provided upon mutual agreement of the County and the claimant. The County's written response shall be submitted 15 days after receiving the additional documentation, or within the same period of time taken by the claimant to produce the additional information, whichever is greater.

7.8.1.2. Claims over \$50,000.00 but less than or equal to \$375,000.00

The County shall respond in writing within 60 days of receipt, or, may request in writing within 30 days of receipt of the claim, any additional documents supporting the claim or relating to defenses or claims the County may have against the claimant. If

additional information is needed thereafter, it shall be requested and provided pursuant to mutual agreement between the County and the claimant. The County's response shall be submitted within 30 days after receipt of the further documents, or within the same period of time taken by the claimant to produce the additional information or documents, whichever is greater.

7.8.2. Meet and Confer

If the claimant disputes the County's response, or if the County fails to respond within the statutory time period, the claimant may so notify the County within 15 days of the receipt of the County's response or within fifteen (15) days of the County's failure to respond within the time prescribed, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon such demand, the County shall schedule a meet and confer conference within 30 days for settlement of the dispute.

7.8.3. Filing of Claims

If following the meet and confer conference, the claim or any portion thereof remains in dispute, the claimant may file a claim pursuant to Government Code 900 et seq. and Government Code 910 et seq. For purposes of those provisions, the time within which a claim must be filed shall be tolled from the time the claimant submits the written claim until the time the claim is denied as a result of the meet and confer process, including any time utilized for the meet and confer conference.

7.8.4. Mediation and Judicial Arbitration

If a civil action is filed to resolve any claim, the provisions of Public Contract Code 20104.4 shall be followed providing for nonbinding mediation and judicial arbitration.

7.8.5. Location for Filing of Claims, Jurisdiction

Any legal action related to the performance of the work or the terms of the Contract Documents shall be filed only in the Superior Court of the State of California located in Riverside, California.

7.9. CLAIMS RESOLUTION – ALL CLAIMS (PUBLIC CONTRACT CODE SECTION 9204)

This section is intended to help resolve disputes between the parties related to this project. Such disputes shall be brought to the attention of the County at the earliest possible time, so that such disputes may be promptly resolved, if possible, or other appropriate action or investigation may be promptly undertaken. Claims must be filed on or before the date of final payment as required in Public Contract Code Section 20104.2. Public works claims which arise between the Contractor and the County shall be resolved using the following procedure:

7.9.1. Claim

A "claim" means a separate demand by the Contractor sent by registered mail or certified mail return receipt requested for one or more of the following: (a) a time extension including, without limitation, for relief from damages or penalties for delay assessed by the County; (b) payment by the County of money or damages arising from work done by or on behalf of the Contractor and payment for which is not otherwise expressly provided or to which the Contractor is not otherwise entitled; (c) payment of an amount that is

disputed by the County. The Contractor shall furnish reasonable documentation to support the claim.

7.9.2. Form and Contents of Claim(s)

The Contractor shall furnish reasonable documentation to support the Claim, which shall be sent by registered mail or certified mail with return receipt requested to the Department at the address provided herein this Section 7.10. The Contractor's written Claim must include, but not limited to, the following:

- 1) A statement to identify that it is a Claim under this Section 7.10, on a company letterhead, and a request for a decision on the Claim;
- 2) A detailed description or narrative of pertinent events, act, error, omission, unforeseen condition, event or other circumstance giving rise to the Claim;
- 3) Citation to contract provisions;
- 4) Theory of entitlement that provides a detailed justification for any remedy or relief sought by the Claim. This includes, but not limited to: a detailed cost breakdown, invoices, material tickets, staff logged time, summary of quantities, other cost records and total cost calculations;
- 5) Complete pricing of all cost impacts;
- 6) A time impact analysis of all time delays that shows actual time impact on the critical path; and
- 7) Documentation, Department letters, notifications, related drawings and photos supporting items (1) through (6).

The Claim must be verified under penalty of perjury by Contractor's project superintendent as to the Claim's accuracy, and shall be priced like a Change Order, and must be updated at regular intervals as to cost and entitlement if a continuing Claim. Routine contract materials, for example, correspondence, RFI, Change Order requests, or payment requests shall not constitute a Claim. Contractor shall bear all costs incurred in the preparation and submission of a Claim.

Claims and support documentation related must be sent to:

Hans W. Kernkamp, General Manager – Chief Engineer
14310 Frederick St., Moreno Valley, CA 92553

7.9.3. Claims Procedure

- 1) Upon receipt of a Claim and the supporting documentation, the Department shall conduct a reasonable review of the Claim and within forty-five (45) days, or an extended period as may be set by mutual agreement of the Department and Contractor, provide the Contractor with a written statement identifying what portion of the Claim is still disputed and what portion is undisputed.

- 2) Notwithstanding the time period set forth in C. 1) above, if the Department needs approval from the Board of Supervisors to provide the Contractor with a written statement identifying the disputed portion and the undisputed portion of the Claim, and the Board of Supervisors does not meet within the forty-five (45) days or within the mutually agreed to extension of time following receipt of the Claim, the Department shall have up to three (3) days following the next duly publicly noticed meeting of the Board of Supervisors after the forty-five (45) day period, or extension, expires to provide Contractor a written statement identifying the disputed portion and the undisputed portion of the Claim.
- 3) Any payment due on the undisputed portion of the Claim under this section shall be processed and made within sixty (60) days after the Department issues its written statement. Amounts not paid in a timely manner as required by this Section 7.10 shall bear interest at 7 percent per annum. If the Department fails to issue a written statement, the Claim shall be deemed rejected in its entirety. Failure by the Department to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A Claim that is denied by reason of the Department's failure to have responded to the Claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the Claim or the responsibility or qualifications of the Contractor.
- 4) If the Contractor disputes the Department's written response, or if the Department fails to respond within the time prescribed, the Contractor may demand in writing, sent by registered mail or certified mail return receipt requested, an informal meet and confer conference for settlement of the portion of the Claim in dispute. Upon receipt of the demand, the Department shall schedule a meet and confer conference within thirty (30) days.
- 5) Within ten (10) business days following the conclusion of the meet and confer conference, if the Claim or any portion thereof remains in dispute, the Department shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion shall be processed and made within sixty (60) days after the Department issues its written statement. Any disputed portion of the Claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the Department and Contractor sharing the associated costs equally. The Department and Contractor shall mutually agree to a mediator within ten (10) business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

- 6) For purposes of this section, mediation includes any nonbinding process, including but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute with resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section. Unless otherwise agreed to by the Department and the Contractor in writing, the mediation conducted pursuant to this Section 7.10 shall excuse any further obligation under Section 20104.4 of the Public Contract Code to mediate after litigation has been commenced.
- 7) If mediation is unsuccessful to resolve all issues, the parts of the Claim remaining in dispute shall be subject to applicable procedures outside of this section and the requirements of Public Contract Code § 9204. The Claim resolution procedures in this Section do not preclude the Department from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this Article does not resolve the parties' dispute.
- 8) Following the procedures set forth in this Section 7.10, including the mediation, if the Claim or any portion of it remains in dispute, the Contractor may file a Claim as provided in Chapter 1 (commencing with § 900) and Chapter 2 (commencing with § 910) of Part 3 of Division 3.6 of Title 1 of the Government Code.
- 9) If the Government Code claim is denied, Contractor may file an action in court. If a civil action is filed to resolve any claim, such action shall be subject to the provisions of Public Contract Code Sections 9204 or 20104.4 and shall be followed, providing for non-binding mediation and judicial arbitration. This Section applies only to claims subject to Public Contract Code Sections 9204 or 20104. If a claim is not subject to Public Contract Code Sections 9204 or 20104, the Contractor's right to file a civil action shall be as otherwise provided by law.

7.9.4. Subcontractor Claim(s)

If a subcontractor or a lower tier subcontractor has a Claim, the Contractor may present to the Department a Claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a Claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the Claim be presented to the Department shall furnish reasonable documentation as set forth in Section 7.10 to support the Claim. Within forty-five (45) days of receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the Claim to the Department, and if the Contractor did not present the Claim, provide the subcontractor with a statement of the reasons for not having done so

7.9.5. Venue

Any legal action related to the performance of the work or the terms of the Contract Documents shall be filed only in the Superior Court of the State of California located in Riverside, California.

7.9.6. Consistency with Public Contract Code Sections 9204 and 20104

If any Claim(s) arising under this Contract is subject to the provisions of Public Contract Code Sections 9204 or 20104 et seq. (Div. 2, Part 3, Chapter 1, Article 1.5), and if provisions of those statutory sections require a procedure or procedural element different from that established in this Contract, then the provisions of those statutory sections shall apply in place of the conflicting procedure or procedural element established herein.

SECTION 8 - GENERAL

8.1. COOPERATION BETWEEN CONTRACTORS

The Contractor shall fully cooperate and coordinate its work with all utility and public agency representatives engaged in construction, relocation, altering or otherwise rearranging any facilities interfering with the progress of the work, and with any other contractors working at or near the project site. Full compensation for any delay or inconvenience to the Contractor's operation due to such operations shall be considered included in the prices for the other items of work and no additional allowance will be made therefore.

8.2. HOLD HARMLESS / INDEMNIFICATION

CONTRACTOR shall indemnify and hold harmless the County of Riverside, its Agencies, Districts, Special Districts and Departments, their respective directors, officers, Board of Supervisors, elected and appointed officials, employees, agents and representatives from any liability claim, action, or damages whatsoever, based or asserted upon any services of CONTRACTOR, its officers, employees, subcontractors, agents or representatives arising out of or in any way relating to this Agreement, including but not limited to property damage, bodily injury, or death or any other element of any kind or nature whatsoever arising from the performance of CONTRACTOR, its officers, agents, employees, subcontractors, agents or representatives relating to this Agreement. CONTRACTOR shall defend, at its sole expense and pay all costs and fees including, but not limited to attorney fees cost of investigation, defense and settlements or awards, the County of Riverside, its Agencies, Districts, Special Districts and Departments, their respective directors, officers, Board of Supervisors, elected and appointed officials, employees, agents and representatives in any claim or action to which this indemnification and hold harmless obligation applies.

With respect to any action or claim subject to indemnification herein by CONTRACTOR, CONTRACTOR shall, at their sole cost, have the right to use counsel of their own choice and shall have the right to adjust, settle, or compromise any such action or claim without the prior consent of COUNTY; provided, however, that any such adjustment, settlement or compromise in no manner whatsoever limits or circumscribes CONTRACTOR'S indemnification to COUNTY as set forth herein.

CONTRACTOR'S obligation hereunder shall be satisfied when CONTRACTOR has provided to COUNTY the appropriate form of dismissal relieving COUNTY from any liability for the action or claim involved.

The specified insurance limits required in this Agreement shall in no way limit or circumscribe CONTRACTOR'S obligations to indemnify and hold harmless the COUNTY herein from third party claims.

In the event there is conflict between this clause and California Civil Code Section 2782, this clause shall be interpreted to comply with Civil Code 2782. Such interpretation shall not relieve the CONTRACTOR from indemnifying the COUNTY to the fullest extent allowed by law.

8.3. INSURANCE

Without limiting or diminishing the CONTRACTOR'S obligation to indemnify or hold the COUNTY harmless, CONTRACTOR shall procure and maintain or cause to be maintained, at its sole cost and expense, the following insurance coverage's during the term of this Agreement.

8.3.1. Workers' Compensation:

If the CONTRACTOR has employees as defined by the State of California, the CONTRACTOR shall maintain statutory Workers' Compensation Insurance (Coverage A) as prescribed by the laws of the State of California. Policy shall include Employers' Liability (Coverage B) including Occupational Disease with limits not less than \$1,000,000 per person per accident. The policy shall be endorsed to waive subrogation in favor of The County of Riverside.

8.3.2. Commercial General Liability:

Commercial General Liability insurance coverage, including but not limited to, premises liability, contractual liability, products and completed operations liability, personal and advertising injury, cross liability coverage, covering claims which may arise from or out of CONTRACTOR'S performance of its obligations hereunder. Policy shall name the County of Riverside, its Agencies, Districts, Special Districts, and Departments, their respective directors, officers, Board of Supervisors, employees, elected or appointed officials, agents or representatives as Additional Insureds. Policy's limit of liability shall not be less than \$1,000,000 per occurrence combined single limit and \$2,000,000 annual aggregate. If such insurance contains a general aggregate limit, it shall apply separately to this agreement or be no less than two (2) times the occurrence limit.

8.3.3. Vehicle Liability:

If CONTRACTOR'S vehicles or mobile equipment are used in the performance of the obligations under this Agreement, then CONTRACTOR shall maintain liability insurance for all owned, non-owned or hired vehicles so used in an amount not less than \$1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this agreement or be no less than two (2) times the occurrence limit. Policy shall name the County of Riverside, its Agencies, Districts, Special Districts, and Departments, their respective directors, officers, Board of Supervisors, employees, elected or appointed officials, agents or representatives as Additional Insureds.

8.3.4. Environmental Impairment Insurance:

Contractor shall maintain Environmental Impairment Insurance providing coverage for the Contractor's performance of work included within this Agreement, with a limit of liability of not less than \$1,000,000 per occurrence and \$1,000,000 annual aggregate.

8.3.5. General Insurance Provisions - All lines:

Any insurance carrier providing insurance coverage hereunder shall be admitted to the State of California and have an A M BEST rating of not less than A: VIII (A:8) unless such requirements are waived, in writing, by the County Risk Manager. If the County's Risk Manager waives a requirement for a particular insurer such waiver is only valid for that specific insurer and only for one policy term.

The CONTRACTOR'S insurance carrier(s) must declare its insurance deductibles or self-insured retentions. If such deductibles or self-insured retentions exceed \$500,000 per occurrence such deductibles and/or retentions shall have the prior written consent of the County Risk Manager before the commencement of operations under this Agreement. Upon notification of deductibles or self-insured retention's unacceptable to the COUNTY, and at the election of the County's Risk Manager, CONTRACTOR'S carriers shall either; 1) reduce or eliminate such deductibles or self-insured retention's as respects this Agreement with the COUNTY, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses.

CONTRACTOR shall cause CONTRACTOR'S insurance carrier(s) to furnish the County of Riverside with either 1) a properly executed original Certificate(s) of Insurance and certified original copies of Endorsements effecting coverage as required herein, and 2) if requested to do so orally or in writing by the County Risk Manager, provide original Certified copies of policies including all Endorsements and all attachments thereto, showing such insurance is in full force and effect. Further, said Certificate(s) and policies of insurance shall contain the covenant of the insurance carrier(s) that thirty (30) days written notice shall be given to the County of Riverside prior to any material modification, cancellation, expiration or reduction in coverage of such insurance. In the event of a material modification, cancellation, expiration, or reduction in coverage, this Agreement shall terminate forthwith, unless the County of Riverside receives, prior to such effective date, another properly executed original Certificate of Insurance and original copies of endorsements or certified original policies, including all endorsements and attachments thereto evidencing coverage's set forth herein and the insurance required herein is in full force and effect. ***CONTRACTOR shall not commence operations until the COUNTY has been furnished original Certificate (s) of Insurance and certified original copies of endorsements and if requested, certified original policies of insurance including all endorsements and any and all other attachments as required in this Section. An individual authorized by the insurance carrier to do so on its behalf shall sign the original endorsements for each policy and the Certificate of Insurance.***

It is understood and agreed to by the parties hereto and the insurance company(s), that the Certificate(s) of Insurance and policies shall so covenant and shall be construed as primary insurance, and the COUNTY'S insurance and/or deductibles and/or self-insured retention's or self-insured programs shall not be construed as contributory.

The COUNTY'S Reserved Rights--Insurance. If, during the term of this Agreement or any extension thereof, there is a material change in the scope of services; or, there is a material change in the equipment to be used in the performance of the scope of work which will add to additional exposures (such as the use of aircraft, watercraft, cranes, etc.); or, the term of this Agreement including any extensions thereof exceeds five (5) years the COUNTY reserves the right to adjust the types of insurance required under this Agreement and the monetary limits of liability for the insurance coverage's currently required herein, if, in the County Risk Manager's reasonable judgment, the amount or type of insurance carried by the CONTRACTOR has become inadequate.

CONTRACTOR shall pass down the insurance obligations contained herein to all tiers of subcontractors working under this Agreement.

The insurance requirements contained in this Agreement may be met with a program(s) of self-insurance acceptable to the COUNTY.

CONTRACTOR agrees to notify COUNTY of any claim by a third party or any incident or event that may give rise to a claim arising from the performance of this Agreement.

8.4. PUBLIC UTILITIES

The locations of all pipelines, power lines, communication lines and other utility components known to County to exist within the limits of the work, are indicated on the drawings and may be the subject of a specific section in the Special Provisions. Size, location and characteristics of such utilities are based upon information made available to County, generally from the owner of the utility in question. The exactness of such information is not guaranteed but may be assumed to have been accomplished with reasonable accuracy.

In addition to the drawings and any such provision regarding utilities, Contractor is under a duty to take into account the location of service laterals or other appurtenances which can be inferred from the presence of facilities such as buildings, meter, junction boxes or similar items in or about the limits of the work.

Unless otherwise directed by the Contract Documents, all existing utilities, whether shown or described or not, shall be left in place and Contractor must conduct its operations so that such utilities are protected from damage at all times during the course of the work; and the work must be accomplished so as to give such utilities proper protection and support upon completion of the work by Contractor.

If during the course of the work, Contractor discovers underground utility components not indicated in the drawings or elsewhere in the Contract Documents, Contractor must immediately notify, in writing, the County and the utility company (public or private) involved, stating with exactness the condition found.

If Contractor encounters a utility not shown or described in the Contract Documents, Contractor shall cease all work which would disturb such utility and its support until given specific instructions as to how to proceed regarding such utility by County.

All work needed to protect existing utilities shown or described in the Contract Documents, or which can be reasonably inferred from the presence of other visible facilities, is to be done at Contractor's expense.

Contractor's cost of locating and repairing damage not due to the failure of Contractor to exercise reasonable care, and removing or relocating utility components and facilities not indicated in the drawings or elsewhere in the Contract Documents, and for equipment on the project necessarily idled during such work shall be paid Contractor as Extra Work.

County may direct the Contractor to do such repair or relocation work as required. When such repair or relocation work is not elsewhere provided for in these Contract Documents, or reasonably inferred therefrom, Contractor shall be compensated for such work as Extra Work.

8.5. PROTECTION OF EXISTING STREET FACILITIES

The Contractor shall be responsible for the protection of existing signs, fences, concrete curbs, gutters and other facilities or structures. The Contractor shall be responsible to repair or replace any such items which are damaged.

Excavation within the street right of way shall be conducted in a manner to cause the least interruption to traffic. Where traffic must cross open trenches, the Contractor shall provide suitable bridges at street intersections and driveways. Hydrants under pressure, valve pipe covers, valve boxes, curb stop boxes, fire or police call boxes, or other utility controls shall be left unobstructed and accessible during construction.

8.6. DIVERSION AND CONTROL OF WATER

Unless otherwise provided in the Agreement, no separate or additional payment will be made for diversion or control of surface or groundwater. All costs incidental to maintaining dry working areas shall be the responsibility of the Contractor and shall be included in the unit prices paid for other items of work.

8.7. DUST ABATEMENT

During the performance of all work, the Contractor shall take the necessary precautions to avoid any loss or damage resulting from its operations that raise or produce dust. The Contractor will be required to have a positive and continuous method of dust control which is satisfactory to the County. The methods to be used for controlling dust in the construction area and along haul roads shall be approved by the County prior to starting any of the work. All costs incidental to dust control shall be included in the unit prices paid for other items of work.

8.8. PROJECT SIGNS

The Contractor shall erect a maximum of two project signs at the locations designated by the County. The signs will be furnished by the County. The signs shall be erected as soon as possible and within 15 days after date of Notice to Proceed. The signs are 4 feet by 8 feet in size, with two 4" x 4" x 12' posts. The sign posts shall be set 5.0 feet in good solid ground and the backfill carefully tamped into place.

8.9. EXAMINATION OF PLANS, SPECIFICATIONS, CONTRACT, AND SITE OF WORK

The Contractor shall examine fully and carefully the site(s) of the work, the plans, the specifications, and any other Contract Documents prior to submitting its bid. The submission of a bid shall be conclusive evidence that the Contractor has investigated the site(s) and is satisfied as to the conditions and requirements of the work to be performed.

Where the County has made investigations of subsurface conditions in areas where work is to be performed, or in other areas, such investigations are made only for the purpose of study and design. Where such investigations have been made, bidders may, upon request, inspect the records of the County as to such investigations. The records of such investigations are not a part of the contract

and are solely for the convenience of the bidders. It is expressly understood and agreed that the County assumes no responsibility whatsoever in respect to the sufficiency or accuracy of the investigations thus made, the records thereof; or of the interpretations set forth therein or made by the County in its use thereof and there is no warranty or guarantee, either express or implied, that the conditions indicated by such investigations or records thereof are representative of those existing throughout such areas, or any part thereof, or that unlooked-for developments may not occur, or that materials other than, or in proportions different from those indicated, may not be encountered. No information derived from inspection of such records will in any way relieve the Contractor from its obligations under the Contract Documents.

SECTION 9 - WATERING

9.1. DESCRIPTION

This work shall include providing a water supply for all water required for the work. The application of the water shall be subject to the approval of the County at all times and shall be applied in the necessary amounts and at the necessary locations subject to the approval of the County.

At least one mobile unit of at least 1,000-gallon capacity for applying water shall be available on the project at all times.

Water for compacting embankment material and for dust control shall be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses with nozzles that will ensure a uniform application of water.

SECTION 10 - PUBLIC CONVENIENCE, TRAFFIC CONTROL AND DETOURS

10.1. GENERAL

The Contractor shall so conduct its operations as to offer the least possible obstruction and inconvenience to the public and it shall have under construction no greater length or amount of work than it can prosecute properly with due regard to the rights of the public.

Unless otherwise provided in the Special Provisions, all public traffic shall be permitted to pass through or near the work with as little inconvenience and delay as possible.

Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately at the Contractor's expense.

Construction operations shall be conducted in such a manner as to cause as little inconvenience and annoyance as possible to abutting and nearby property owners.

Convenient access to driveways, houses and buildings along or near the work shall be maintained and temporary approaches to crossings or intersecting highways shall be provided and kept in good condition.

10.2. SIGNS

It shall be the responsibility of the Contractor to provide and maintain all traffic control, lights, barricades and signs, both on and off the site of work, subject to approval of the County; and all such devices shall be of a type approved by the County.

If, in any case, the County finds it necessary to replace, add to or erect said barricades, signs, or lights when the Contractor fails to do so, the Contractor shall be billed for all costs thereof.

10.3. MATERIALS STORAGE

Storing or stockpiling of excavated material, imported backfill material or construction materials on any street or highway will not be permitted except as approved in advance in writing by the County.

(This page left intentionally blank.)



**TECHNICAL PROVISIONS
FOR THE
C2P5 AND C3P2 LINER EXPANSION
PROJECT
AT THE
BADLANDS SANITARY LANDFILL**

AUGUST 2020

(This page left intentionally blank)

TABLE OF CONTENTS

1. GENERAL	
1.1 INTRODUCTION.....	
1.2 DEFINITION OF TERMS.....	
1.3 GENERAL SCOPE OF WORK.....	
1.4 REFERENCED SPECIFICATIONS AND DOCUMENTS.....	
1.5 QUALITY ASSURANCE AND QUALITY CONTROL PLAN.....	
1.6 PRECEDENCE OF CONTRACT DOCUMENTS.....	
1.7 NOTICE TO PROCEED.....	
1.7.1 Construction Schedule.....	
1.7.2 Public/Site Safety Plan.....	
1.7.3 Pre-Construction Meeting.....	
1.8 TIME OF COMPLETION AND LIQUIDATED DAMAGES.....	
1.9 SUSPENSION AND RESUMPTION OF OPERATIONS.....	
1.10 CONTRACTOR'S AND GEOSYNTHETIC MANUFACTURER'S QUALIFICATIONS.....	
1.11 CONTRACTOR'S RESPONSIBILITIES.....	
1.12 PERMITS.....	
1.12.1 Notification to SCAQMD Under Rule 403, Fugitive Dust Control.....	
1.12.2 SCAQMD Title V Permit, Refuse Excavation.....	
1.12.3 Compliance with CARB Off Road Diesel Vehicle Regulations.....	
1.12.4 State Water Quality Control Board's National Pollution Discharge and Elimination System (NPDES) Permit.....	
1.13 ENVIRONMENTAL REQUIREMENTS.....	
1.13.1 General.....	
1.13.2 Environmentally Restricted Areas.....	
1.14 DIVERSION AND CONTROL OF WATER.....	
1.15 DETAIL DRAWINGS AND SUBMITTALS.....	
1.16 SURVEY CONTROL OF WORK.....	
1.17 TESTS AND INSPECTIONS.....	
1.17.1 General.....	
1.17.2 Earthwork Testing.....	
1.17.3 Geosynthetic Testing.....	
1.17.4 Pre-Approved Materials.....	
1.18 AS-BUILT PROJECT DRAWINGS.....	
1.19 PROTECTION OF EXISTING UTILITIES.....	
1.20 PROTECTION OF ADJACENT LANDFILL OPERATIONS.....	
1.21 STORAGE OF MATERIALS.....	
1.22 EQUIPMENT STAGING AREA.....	
1.23 EQUIPMENT RENTAL.....	
1.24 LABOR SURCHARGE.....	
1.25 UNITS OF MEASUREMENT.....	
1.26 MEASUREMENT AND PAYMENT.....	
2. CONSTRUCTION SCHEDULE SUBMITTALS	
2.1 GENERAL.....	
2.1.1 Definitions.....	
2.1.2 General Requirements.....	
2.1.3 CPM Schedule Requirements.....	
2.1.4 Schedule Submittal Requirements.....	
2.2 EXECUTION.....	
2.3 MEASUREMENT AND PAYMENT.....	
3. PREPARE AND IMPLEMENT NPDES SWPPP	

3.4	MEASUREMENT AND PAYMENT	
4.	MOBILIZATION AND DEMOBILIZATION	
4.1	GENERAL	
4.2	MATERIALS	
4.3	EXECUTION	
4.4	MEASUREMENT AND PAYMENT	
5.	DEVELOP WATER	
5.1	GENERAL	
5.2	MATERIALS	
5.3	EXECUTION	
5.4	MEASUREMENT AND PAYMENT	
6.	DEMOLITION	
6.1	GENERAL	
6.2	MATERIALS	
6.3	EXECUTION	
6.4	MEASUREMENT AND PAYMENT	
7.	EARTHWORK	
7.1	GENERAL	
7.1.1	Section Includes	
7.1.2	Technical Provisions Quality Assurance/Quality Control	
7.2	MATERIALS	
7.2.1	General	
7.3	EXECUTION	
7.3.1	General Subgrade Preparation	
7.3.2	Excavation	
7.3.3	Over-excavation	
7.3.4	Engineered Fill	
7.3.5	Interim Cover and Refuse Removal & Disposal	
7.4	MEASUREMENT AND PAYMENT	
8.	FINISHED SUBGRADE SURFACE PREPARATION FOR GEOSYNTHETICS	
8.1	GENERAL	
8.1.1	Section Includes	
8.1.2	References	
8.1.3	QA/QC	
8.2	MATERIALS	
8.3	EXECUTION	
8.4	MEASUREMENT AND PAYMENT	
9.	ANCHOR TRENCH CONSTRUCTION	
9.1	GENERAL	
9.1.1	Section Includes	
9.2	MATERIALS	
9.3	EXECUTION	
9.3.1	Excavation	
9.3.2	Anchor Trench Requirements	
9.3.3	Securing of FML, GCL and Geotextile	
9.3.4	PCS Placement and Compaction	

10.1.1	Section Includes
10.1.2	References
10.1.3	Submittals
10.1.4	QA/QC
10.1.5	Safety.....
10.1.6	Product Labeling
10.1.7	Packaging
10.1.8	Shipping, Handling, Delivery and Storage
10.2	MATERIALS.....
10.3	EXECUTION.....
10.3.1	Inspection.....
10.3.2	Installation.....
10.3.3	Field Quality Control.....
10.4	MEASUREMENT AND PAYMENT
11.	FLEXIBLE MEMBRANE LINER (FML)
11.1	GENERAL
11.1.1	Section Includes
11.1.2	References.....
11.1.3	Submittals
11.1.4	QA/QC
11.1.5	Safety.....
11.1.6	Delivery, Storage and Handling
11.2	MATERIALS.....
11.3	EXECUTION.....
11.3.1	Inspection.....
11.3.2	Installation.....
11.3.3	Field Quality Control.....
11.4	MEASUREMENT AND PAYMENT
12.	GEOTEXTILES.....
12.1	GENERAL
12.1.1	Section Includes
12.1.2	References.....
12.1.3	Submittals
12.1.4	QA/QC
12.1.5	Safety.....
12.1.6	Delivery, Storage and Handling
12.2	MATERIALS.....
12.3	EXECUTION.....
12.3.1	Inspection.....
12.3.2	Installation.....
12.3.3	Field Quality Control.....
12.4	MEASUREMENT AND PAYMENT
13.	PROTECTIVE COVER SOIL (PCS) LAYER CONSTRUCTION.....
13.1	GENERAL
13.1.1	Section Includes
13.2	MATERIALS.....
13.3	EXECUTION.....
13.4	MEASUREMENT AND PAYMENT
14.	TEMPORARY PROTECTIVE MEMBRANE.....

14.2	SAFETY
14.3	DELIVERY, STORAGE, AND HANDLING
14.4	MATERIALS.....
14.5	INSTALLATION
14.6	MEASUREMENT AND PAYMENT
15.	AGGREGATE BASE
15.1	GENERAL
15.2	SUBMITTALS.....
15.3	MATERIALS.....
15.4	EXECUTION.....
15.5	MEASUREMENT AND PAYMENT
16.	SILT FENCE.....
16.1	GENERAL
16.2	SUBMITTALS.....
16.3	MATERIALS.....
16.4	EXECUTION.....
16.5	MEASUREMENT AND PAYMENT
17.	8" HDPE CLEANOUT PIPE.....
17.1	GENERAL
17.2	SUBMITTALS.....
17.3	MATERIALS.....
17.4	EXECUTION.....
17.4.1	Storage and Handling.....
17.4.2	Installation.....
17.4.3	Inspection and Testing.....
17.5	MEASUREMENT AND PAYMENT
18.	DAILY COVER HAUL.....
18.1	GENERAL
18.2	MATERIALS.....
18.3	EXECUTION.....
18.3.1	EXCAVATION
18.4	MEASUREMENT AND PAYMENT
19.	AUTHORIZED TIME & MATERIALS WORK
19.1	GENERAL

1. GENERAL

1.1 Introduction

These Technical Provisions are for the construction of a geosynthetic liner system at the Badlands Landfill in Riverside County, California. This project is designated as "the Canyon 2 Phase 5 (C2P5) and Canyon 3 Phase 2 (C3P2) Liner Expansion Project" (Project) at the Badlands Landfill. The work to be done under this contract shall consist of furnishing equipment, superintendence, labor, skills, materials, and all other items necessary for earthwork, the construction and installation of a geosynthetic liner system, access roads and environmental control systems. The work to be performed and furnished shall conform to the Contract Documents.

The specified lining for the Project area shall consist of side-slope geosynthetics liner. Finished sideslope preparation will be required to prepare the designated project area to receive the components of the geosynthetics liner system. The major features of the work to be performed shall include but are not limited to: prepare and implement a project specific National Pollution Discharge Elimination System (NPDES) Storm Water Pollution Prevention Plan (SWPPP), demolition, earthwork (excavation and placement of engineered fill), geosynthetic liner installation, refuse excavation and disposal, temporary protective membrane installation, screening and placement of PCS material, construction of crushed miscellaneous base access roads and surface drainage system(s) improvements.

The Contractor shall be aware that the Badlands Landfill is an active landfill site. The Contractor's work relating to the project shall not impede or interrupt daily landfill operations. Full cooperation of the Contractor and its forces is required to assure safe working conditions. Therefore, it is necessary to emphasize the County will have full authority to remove any of the Contractor's employees or subcontractors who do not immediately abide by landfill site rules or directions from the County.

1.2 Definition of Terms

Acceptable Entry Conditions

The conditions that must exist in a confined space to allow entry and to ensure employees involved with a confined space entry can safely enter into and work within the space.

Bentonite

This term is defined as high-swelling clay material. More specifically, Sodium Bentonite.

Confined Space

Is large enough and so configured that a worker can bodily enter and perform assigned work, has limited or restricted means for entry or exit (for example: tanks, vessels, silos, storage bins, vaults, and pits are spaces that may have limited means of entry or exit), is

not designed for continuous occupancy by an employee, and any excavation or trench greater than five (5) feet in depth is by definition a confined space.

Construction Engineer

The Construction Engineer is the individual assigned by the County Project Manager to be on the site to manage and oversee the administration of the construction project. The Construction Engineer, an authorized employee of the County, is the on-site representative reporting to the Project Manager during the construction phase of the project. The Construction Engineer is assisted by the QA/QC Consultant to direct and monitor the project. All coordination, reporting, and issues related to non-compliance will be directed to the Project Manager through the Construction Engineer. In addition, the Construction Engineer will participate with the Project Manager and QA/QC Manager in all decisions related to design and QA/QC issues which arise during the course of construction.

Contractor's Surveyor

The Contractor's Surveyor is responsible to perform horizontal and vertical control of the actual construction, based on benchmarks established by County's Surveyor.

County's Surveyor

Surveyor representing the County shall establish reference benchmarks for construction. County's Surveyor shall also perform surveys to check line, grade, and calculate volumes, as necessary.

Cubic Yard

Unless otherwise specified in these specifications, where the term cubic yard appears it shall mean bank (bulk) volume in the case of excavation; and compacted volume yielding the specified relative compaction, moisture content, and hydraulic conductivity, if required, in the case of engineered fill.

Flexible Membrane Lining (FML)

An essentially impermeable synthetic material used as an integral part of a lining system. It is sometimes referred to as a geomembrane sheet or panel.

General Contractor

The General Contractor is the firm responsible for all construction aspects of the project. The General Contractor may use subcontractors for specialized portions of the project, such as grading and earthworks, electrical, mechanical, and other parts of the project.

Geosynthetics

Geosynthetics is a generic classification given to synthetic (man-made plastic and/or liner) materials that are used for geotechnical engineering applications. Materials included are: drainage mats, flexible membrane linings (FML), geotextiles, geonets, geogrids, geocomposites, geosynthetic clay liners (GCL) and geocells. For this project, geosynthetics refers to FML, GCL, and geotextile.

Geosynthetic Clay Liner (GCL)

GCL is a factory-manufactured hydraulic barrier consisting of granular sodium bentonite clay, sandwiched between, supported and encapsulated by two geotextiles, held together by needlepunching.

Geosynthetic Quality Assurance Laboratory

The firm responsible for conducting tests such as conformance testing and testing of field seams for peel and shear on geosynthetic samples taken from the site. The laboratory shall be independent of the Owner, Manufacturer, Lining Contractor, and any party involved with the manufacture and/or installation of any of the geosynthetics.

Geotextile

Geotextile is a permeable synthetic textile used as a filter or cushion layer against soil, rock, sand, gravel or any other similar materials, and forming an integral part of the lining system.

Hazardous Atmosphere

An atmosphere that may expose employees to the risk of death, incapacitation, impairment or ability to self-rescue (that is, escape unaided from a permit space), injury or acute illness from one or more of the following causes: flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL), airborne combustible dust at a concentration that meets or exceeds its LFL (This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet); Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent; Atmospheric concentration of any substance for which a dose or a Permissible Exposure Limit or a Threshold Limit Value is published and which could result in employee exposure in excess of the dose or Permissible Exposure Limit or Threshold Limit Value. Any other atmospheric conditions that is immediately dangerous to life or health.

HDPE

HDPE is the high-density polyethylene material used in the manufacturing of piping and flexible membrane liners.

Immediately Dangerous to Life or Health (IDLH)

Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.

Leachate

This term is defined as liquid that has come in contact with or percolated through waste materials.

Leachate Collection and Removal System (LCRS)

LCRS is a system that collects and removes leachate. It also controls leachate head within the liner system during landfill operation.

Manufacturer

A manufacturer is the firm or firms responsible for the production of geosynthetics or the maker, fabricator, or producer of a product and/or material.

Minimum Average Roll Value (MARV)

The MARV is a minimum value that exceeds design requirements (i.e. all geosynthetic rolls delivered to the project will meet or exceed the specification values). ASTM D4759 is used to determine conformance to a specification with the MARV.

Moisture Content

This term is defined as the percentage of water contained in a soil, clay or bentonite mixture in relation to its dry weight, using ASTM D2216 or ASTM D4643.

Needlepunching

A GCL manufacturing process whereby boards of barbed needles incorporate the staple fibers from a nonwoven geotextile, through a sodium bentonite clay layer, into the matrix of a second geotextile layer.

Optimum Moisture Content (OMC)

This term is defined as the moisture content that corresponds to the maximum dry density, as determined by the specified laboratory Moisture Density Relationship Test, ASTM D1557.

Overlap

Where two adjacent geosynthetic panels contact, this term is defined as the shortest distance measured from the overlying edge of one panel to the underlying edge of the other.

Oxygen Deficient Atmosphere

An atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen Enriched Atmosphere

An atmosphere containing more than 23.5 percent oxygen by volume.

Permit-required Confined Space (Permit Space)

A confined space that has one or more of the following characteristics: Contains or has a potential to contain a hazardous atmosphere; Contains a material that has the potential for engulfing an entrant; Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or Contains any other recognized serious safety or health hazard.

Project Manager

The Project Manager is the designated representative of the County responsible for the project.

Protective Cover Soil (PCS) Layer

This term is defined as a soil layer that overlies the drainage layer or geotextile and comes into direct contact with placed waste. This term is also referred to as the Operation Layer. On side slopes, this layer also serves as a Leachate Collection and Removal System (LCRS) layer. Term "combined Ops/LCRS layer is sometimes used.

Quality Assurance/Quality Control (QA/QC) Consultant

The QA/QC Consultant is the consultant contracted by the County responsible for the implementation of the construction QA/QC Plan. It may also mean a Senior QC Monitor temporarily designated by the QA/QC Consultant to act on its behalf at the site during operations. The QA/QC Consultant shall be responsible for review of all manufacturer/subcontractor certifications and documentation and for review of observation, sampling, and testing activities for construction.

Quality Assurance (QA) Monitors

The QA Monitors are the individuals working under the direction of the QA/QC Consultant. Such personnel include Field Engineers, Field Geologists, and Technicians.

Regulatory Agency Project Coordinators

The Regulatory Agency Project Coordinators are the representatives of the California Regional Water Quality Control Board (CRWQCB), the Department of Resources Recycling and Recovery (CalRecycle), the Local Solid Waste Management Enforcement Agency (LEA), and the South Coast Air Quality Management District (SCAQMD) that have jurisdiction over the project.

Relative Compaction

This term is defined as the ratio of field-compacted dry density to the maximum dry density as determined by the Moisture Density Relationship Test, ASTM D1557.

Sieve Sizes

These are defined as U.S. Standard sieve sizes.

Slope

Slope is described in terms of horizontal distance to vertical distance (H:V) where V is generally fixed as unity. It is also expressed as a percent (%) equal to the vertical distance divided by the horizontal distance, and multiplied by 100.

Sodium Bentonite

The high swelling clay component of GCLs consisting primarily of the mineral Montmorillonite.

Subgrade

This term refers to native, engineered fill, or constructed stable base material, on which all construction elements of this project shall be placed.

Temporary Protective Membrane

A relatively thin polyethylene sheet installed as a protective layer over side-slope liner to protect against UV degradation.

Thermal Fusing

A needlepunching enhancement process utilizing heat to bond the needlepunched fibers and more permanently lock them into the second geotextile to increase the internal shear strength characteristics.

1.3 General Scope of Work

The major features of work to be performed by the contractor under this contract include furnishing all labor, materials, vehicles, tools, equipment, power, and incidentals necessary for the construction of Badlands Landfill Project. The items of work to be performed shall conform to all of the Contract Documents, including but not limited to the General Provisions, Project Drawings, QA/QC Plan, Referenced Specifications and Documents, and these Technical Provisions.

The major features of the work to be performed shall include, but are not limited to:

- A. Provide Project Survey
- B. Demolition of existing drainage structures and other miscellaneous items as shown on the Project Drawings
- C. Erosion control and storm water protection (NPDES permit requirements) within Project Areas
- D. Construction of surface drainage control systems as shown on the Project Drawings
- E. Earthwork - excavation, over-excavation, and placement of engineered fill as shown on the Project Drawings
- F. Refuse excavation and disposal as shown on the Project Drawings and as directed by the County
- G. Preparing finished surface of liner subgrade to receive geosynthetics
- H. Installation of geosynthetic clay liner (GCL)
- I. Installation of high density polyethylene (HDPE) liner
- J. Installation of geotextile fabric
- K. Screening and placement of PCS layer
- L. Construction of access roads
- M. Installation of temporary protective membrane on side-slope liner

1.4 Referenced Specifications and Documents

The following specifications and documents shall apply as specifically referenced in the Contract Documents:

Standard Specifications

The term Standard Specifications is a direct reference to the publication entitled "Standard Specifications for Public Works Construction" (2018 edition, and all subsequent amendments, supplements, and additions) written and promulgated by the Joint Cooperative Committee of the Southern California Chapter American Public Works Association and Southern California Departments Associated General Contractors of California. This publication is also known as the "Greenbook."

State Standard Specifications

The "State Standard Specifications" are the Standard Specifications of the State of California, Department of Transportation, dated 2018.

ASTM Specifications

The latest revised specifications or tentative specifications of the American Society for Testing and Materials.

Standard Drawings

Unless otherwise noted on the Project Drawings, the Standard Drawings shall be those of the Riverside County Flood Control and Water Conservation District, the Riverside County Transportation Department and Standard Plans of the State Department of Transportation (Caltrans).

Plans or Project Drawings

The Plans or Drawings are the Contract Project Drawings specifically prepared for this project.

1.5 Quality Assurance and Quality Control Plan

The QA/QC Plan for Project at the Badlands Landfill is included in these Contract Documents as Appendix A. Payment for complying with all requirements of the QA/QC Plan shall be considered as included in the various items of work, and no additional compensation shall be allowed.

1.6 Precedence of Contract Documents

In case of conflict between the Contract Documents, the following order of governing documents shall be followed (with the first listed document controlling):

- A. Permits from other agencies as may be required by law
- B. Quality Control/Quality Assurance Plan (QA/QC Plan)
- C. Technical Provisions
- D. Project Drawings
- E. General Provisions
- F. Standard Drawings
- G. Standard Specifications referenced within the Contract Documents
- H. State Standard Specifications referenced within the Contract Documents

1.7 Notice to Proceed

Within ten (10) business days of the award of contract by the Riverside County Board of Supervisors, or sooner, the Contractor shall submit all of the following items:

- A. Performance Bond and Payment Bond (Instructions to Bidders)
- B. Required Certificates of Insurance (General Provisions Section 8.3)
- C. Construction Schedule (Technical Provisions Section 1.7.1 and Section 2)
- D. Contractor Project Specific Public/Site Safety Plan (Technical Provisions Section 1.7.2.)
- E. Project Specific SWPPP (Technical Provisions Section 3)

The County will not issue the Notice to Proceed before the Contractor submits the performance bond, payment bond, certificates of insurance, construction schedule, public/site safety plan, and project specific SWPPP supplement, and attends the mandatory pre-construction meeting.

After receipt of the construction schedule, public/site safety plan, and project specific SWPPP supplement, the County will review them and provide appropriate comments. The Contractor will be required to address all comments from the County and resubmit within five (5) business days.

1.7.1 Construction Schedule

The Contractor shall submit construction schedules to the County in accordance with Section 2 of these Technical Provisions and Section 6-1 of the Standard Specifications. Before commencement of construction, the Contractor shall also provide a map showing the proposed phasing of construction activities. This map shall delineate the timing and phasing to be utilized in develop water, earthwork, finished subgrade surface preparation for geosynthetics, anchor trench construction, geosynthetic clay liner, flexible membrane liner, geotextile, protective cover soil layer construction, temporary protective membrane, and all other miscellaneous items as required by the work.

The Contractor shall be responsible for all impacts due to its failure to submit acceptable updates in a timely manner, including but not limited to withholding progress payments until updated construction schedules are submitted in accordance with Section 2 of the Technical Provisions.

The County's acceptance of a construction schedule from the Contractor does not in any way limit the Contractor's obligation to complete the work in accordance with all the requirements of the Contract Documents.

At the completion of the work, the Contractor shall submit a final as-built schedule showing the complete actual construction history as a condition of formal final acceptance of the work by the County.

1.7.2 Public/Site Safety Plan

The Contractor shall submit a Public/Site Safety Plan to the County, which shall be subject to County review and comment. This Public/Site Safety Plan shall address the County landfill property areas including Liner Construction Area, Canyon 6 Stockpile, the Western Stockpile Top Deck, the access road to the Offsite Water Source, and corresponding access routes between these locations. Review of the Public/Site Safety Plan does not in any way release the Contractor of liability in the event of an accident or injury, nor does it place any liability on the County or any County employee. The Public/Site Safety Plan must, at a minimum, meet all the requirements of Federal and State regulations regarding all construction activities. The Contractor shall be solely responsible for adherence to the Public/Site Safety Plan at all times.

It is the responsibility of the Contractor to confirm compliance with all relevant health and safety regulations. The Contractor shall take proper safety and health precautions to protect the workers, the public and County employees. Contractors shall comply with Provisions of Occupational Safety and Health Administration Regulations for Construction, CFR, 1926/1910 and CFR 1910.120, the California Department of Industrial Relations, Division of Industrial Safety (Safety Orders), with the additional Safety Provisions in the Contractor's Public/Site Safety Plan, and all other applicable Federal, State, County and local laws, ordinances, codes, the requirements set forth herein, and any regulations that may be specified in other parts of this Contract. If any of these requirements are in conflict, the more stringent requirement shall apply. The 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 shall be responsible for providing all items necessary for health and safety, including dust control, personal protective equipment, decontamination equipment if required, and collection and disposal of rinse waters, in accordance with applicable Federal and State regulations. The County shall reserve the right to direct removal of any of the Contractor's employees or subcontractors who are not adhering to or meeting the requirements of the law, the Public/Site Safety Plan, or applicable regulations.

The Public/Site Safety Plan shall include procedures that address traffic control for approaching, crossing, or traveling along public access roads between the Offsite Water Source, Liner Project Area, Canyon 6 Stockpile and the Western Stockpile according to the State Department of Transportation (Caltrans) Manual on Uniform Traffic Control Devices (MUTCD) 2014 Edition as amended by the MUTCD supplement which prescribes uniform standards and specifications for all official traffic control devices in California. The MUTCD can be viewed in the State Department of Transportation (Caltrans) website at <http://www.dot.ca.gov/trafficops/camutcd/camutcd2014rev3.html>. During the period of construction, landfill operations may be conducted along the top deck and southern portion of the landfill as shown on the General Site Map, Sheet 3, of the Project Drawings. The Public/Site Safety Plan shall include procedures for addressing traffic control along travel routes adjacent to landfill operations areas. The Public/Site Safety Plan will state that all expansion construction traffic shall not exceed 15 miles per hour when traveling on landfill site access roads used by the public.

The Public/Site Safety Plan shall also address procedure and protocol for clean-up in the event of a spill as defined in Section 1.13 of these Technical Provisions, and human protection from exposure to uncovered refuse as defined in Section 7.3.5 of these Technical Provisions.

Where necessary, trenches, pits, and other excavations shall be properly sloped, sheathed and braced to furnish safe and acceptable working conditions. Any damage that occurs from earth pressures, slides, cave-ins, or other causes due to failure to provide proper sloping, sheathing or bracing, or through other negligence or fault of the Contractor, shall be repaired at the Contractor's sole expense. The manner of bracing for excavations shall be as set forth in the rules, orders, and regulations of the Division of Industrial Safety of the State of California or OSHA; whichever is more restrictive. Reference is made to Section 5.1.5. "Accident Prevention" of the General Provisions, in which the Contractor is required to submit to the County a detailed plan showing the design of shoring, bracing, sloping of the sides of trenches, or other provisions to be made for the protection of personnel during earthwork operations in advance of any such operation.

Approved personal fall arrest, personal fall restraint or positioning systems shall be worn by those employees whose work exposes them to falling in excess of 7 1/2 feet from the perimeter of a structure, unprotected sides and edges, leading edges, through shaft ways and openings, sloped roof surfaces steeper than 7:12 (horizontal: vertical), or other sloped surfaces steeper than 40 degrees. Particular attention shall be given to relevant Division of Industrial Safety of the State of California. Said Orders are contained in Title 8 of the California Code of Regulations, Chapter 4, and Subchapter 4. Specific reference is made to Article 24 of said Construction Safety Orders.

The Public/Site Safety Plan shall also address procedure and protocol for employee heat illness protection. When the temperature exceeds 80 degrees Fahrenheit in the heat index chart, at minimum, the Public/Site Safety Plan shall guarantee the employee with the following: access to fresh, cool drinking water throughout the day; access to shade for 5 minutes at a time to rest and cool down; training on how to work safely in the heat, including how to call for emergency services if someone is overcome by heat. Particular attention shall be given to relevant Division of Industrial Safety of the State of California. Said Orders are contained in Title 8 of the California Code of Regulations, Chapter 4, Subchapter 7, and Group 2. Specific reference is made to Article 10 of said Construction Safety Orders, Section 3395 Heat Illness Prevention.

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, may contain hydrogen sulfide, toxic or hazardous material, is combustible, and may contain no oxygen. Landfill gas can also migrate through several thousand feet of soil adjacent to landfills. The Contractor is, therefore, advised of the need for precautions against fire, explosion and asphyxiation when working in or near excavations on the project site.

The Contractor shall hold mandatory weekly safety meetings on the site. The Contractor shall notify the County of the time and place of all meetings and allow the County to participate. Meetings shall reiterate all safety measures to be taken, discuss any violations committed, and preventive measures to avoid subsequent violations. The Contractor shall provide the County with a copy of the minutes and attendance of the safety meetings.

1.7.3 Pre-Construction Meeting

Within ten (10) business days of the award of contract by the Riverside County Board of Supervisors, the County will hold a mandatory pre-construction meeting to be attended by the Riverside County Department of Waste Resources, the Contractor's superintendent, the Contractor's surveyors, major subcontractors, regulatory agency representatives, QA/QC Consultant, and other individuals involved in the execution of the work.

During the Pre-Construction Meeting, the Contractor shall be issued up to four (4) complete copies of the Contract Documents (which includes four full-sized sets of Project Drawings and four half-sized sets of Project Drawings). Digital information of the Project Drawings will be made available upon written request from the Contractor. The cost of any additional copies requested shall be deducted from payment to the Contractor.

1.8 Time of Completion and Liquidated Damages

The Contractor shall diligently and continuously prosecute the entire project to final completion before the expiration of **110 *WORKING DAYS*** from the date of the Contractor's receipt of the Notice to Proceed. The working day shall be as set forth in Section 6.6 of the General Provisions. The length of each working day shall be from 7:00 AM to 4:00 PM, including one hour for lunch break, unless otherwise approved in writing by the County.

The following days have been designated by the County as holidays in 2020/2021:

January 1	New Year's Day
Third Monday in January	Martin Luther King, Jr.
February 12	Lincoln's Birthday
Third Monday in February	Washington's Birthday
Last Monday in May	Memorial Day
July 4	Independence Day
First Monday in September	Labor Day
Second Monday in October	Columbus Day
November 11	Veteran's Day
Fourth Thursday in November	Thanksgiving Day
Fourth Friday in November	day after Thanksgiving
December 25	Christmas Day

For a holiday that falls on a Saturday, both the Saturday and the preceding Friday shall be considered legal holidays. For a holiday that falls on a Sunday, both the Sunday and following Monday shall be considered legal holidays.

The Contractor shall not be permitted to work on days designated by the County as holidays unless the Contractor submits a written request to work and the request is approved in writing by the County. All Contractor requests to work on designated holidays shall be submitted at least seven (7) calendar days prior to the requested date(s).

In case all the work called for and all the conditions and requirements of the project are not completed within the number of working days specified above, liquidated damages of Five Thousand Dollars (\$5000) for each additional working day required to properly complete the project in excess of the allowed number of working days shall be paid by the Contractor to the County.

1.9 Suspension and Resumption of Operations

The Contractor shall suspend construction operations when, in the County's opinion, the conditions for such operations are unsatisfactory due to rain, wind or any other condition the County deems unsatisfactory. The Contractor shall not be compensated monetarily for any delays caused by the suspension of operations. Working days shall be charged as appropriate, as stated in Section 6.6 of the General Provisions and Section 1.8 of these Technical Provisions.

Whenever operations have been suspended, the effect of rain, wind or other adverse conditions shall be assessed by the County before approval to resume construction is given. Equipment will not be allowed to travel over any portion of the work surface until the construction area has dried sufficiently to prevent excessive rutting and to allow the equipment to be operated safely and satisfactorily. If rutting occurs, the Contractor shall re-grade, scarify, and re-compact the materials to whatever depth is required to repair the damage in accordance with the appropriate specifications described herein at the Contractor's expense.

1.10 Contractor's and Geosynthetic Manufacturer's Qualifications

The Contractor and/or its geosynthetics lining subcontractor shall have successfully installed at liquid/solid waste containment facilities a minimum of two (2) million square feet of GCL materials, and a minimum of four (4) million square feet each of HDPE lining materials and geotextile material. These materials are further specified in the Technical Provisions.

The Manufacturer(s) of each type of geosynthetic specified in these Technical Provisions shall have successfully manufactured ten (10) million square feet each of GCL material, HDPE lining material and geotextile material of which at least eight (8) million square feet of each type shall have been successfully installed in liquid/solid waste containment facilities. With the submittal of the Bid Proposal, the Contractor shall submit for acceptance by the County documented evidence of satisfaction of all of the

aforementioned qualifications. The evidence must address manufacturing capabilities and the name and experience of the project superintendent and senior installation personnel that will be responsible for the installation of each type of geosynthetic. As part of this submittal, a project reference list shall be provided indicating, as a minimum, the name, address and phone number of the owner and the owner's representative, the location of the project, the amount of material installed and completion date.

The Contractor shall have, or be able to obtain, all the personnel, equipment, and materials necessary to perform the work specified in the scope of work, and be able to keep the needed equipment at the job site for the duration of the work. The bidder may meet these requirements by using subcontractors, or forming a partnership, joint venture, or other legal arrangement. If the qualifications are met by the formation of a partnership, joint venture or other legal arrangement; then each separate legal entity shall be required to sign the contract and accept joint and several liabilities. The Contractor, or the Contractor's personnel shall hold appropriate certificates, licenses, and permits necessary to perform the work described in the scope of work, including excavation of and moving solid waste between points within the landfill property.

The Contractor shall present all licenses held, the certificate numbers, and in whose name the license is issued in his bid response. The Contractor shall demonstrate prior experience in performing and completing earthwork construction projects in his bid response. Prior work performed by the Contractor shall include mass excavation and placement of fill. In the Contractor Proposal, the Contractor shall present specific projects, dates, locations, clients, project costs, a project summary description, and the Contractor's role in each project. The Contractor shall present a reference list of clients that includes a contact person and phone number. The Contractor shall also possess a Class A Contractor's License.

1.11 Contractor's Responsibilities

The Contractor shall identify to the County, in writing, the name of the representative who shall have complete authority to act for this project. The Contractor shall also furnish to the County a telephone number where the Contractor or his representative may be contacted 24 hours a day. The Contractor shall examine the Contract Documents, and shall be aware of conditions at the site that may affect execution of the work. These conditions include, but are not limited to, the following:

1. Applicable health and safety regulations
2. Transportation and access conditions
3. Availability of utilities
4. Surface and subsurface conditions
5. Location, availability, and condition of construction materials
6. Climate
7. On-site soil characteristics of soil to be used in construction, including but not limited to size and type variation, location of excavation and stockpile areas, etc.

8. General construction conditions at the site

The Contractor should note that a number of soil borings have been drilled to various depths in or near the construction area. Soil reports and test results are available for review at the Riverside County Department of Waste Resources office. Review of these documents does not relieve the Contractor of the responsibility of evaluating their accuracy and pertinence.

The Contractor shall assume full responsibility for any theft or vandalism occurring to the Contractor's equipment, tools, materials, supplies, and construction (prior to final acceptance of the entire project by the County), and shall take appropriate measures necessary to eliminate their occurrences.

The Contractor is responsible for setting line and grade for the excavation work and any other related construction activities. The Contractor's excavation work shall commence from the top ridge and then downward along the side slopes. An electronic copy of the grading plan is available to the Contractor upon request in Microstation format.

Until County final acceptance of the entire project, the Contractor shall retain full responsibility for the work.

1.12 Permits

The Contractor shall obtain and/or comply with all required permits and licenses related to the work, pay all charges and fees, and give a copy of all required documents to the County prior to commencement of work. Required permits include but are not limited to:

1.12.1 Notification to SCAQMD Under Rule 403, Fugitive Dust Control

The Contractor is responsible for implementing the necessary mitigation measures to ensure compliance with regulatory thresholds relating to air quality including but not limited to SCAQMD Rule 403 Fugitive Dust Control Requirements (Appendix C). The County shall have the authority to immediately suspend all construction operations if, in the County's opinion, the Contractor fails to adequately provide for dust control.

The Contractor shall file Form 403-N with the SCAQMD for the construction operation under this contract. The Contractor shall provide a copy of the filed Form 403-N for the project to the County prior to commencement of project construction.

In compliance with the requirement of Section (e)1(E) of Rule 403, as amended on June 3, 2005, the Contractor shall identify a SCAQMD-certified dust control supervisor on the project site, or available on-site within 30 minutes, during project work hours. Payment for complying with this section shall be considered as included in the various items of the work, and no additional compensation shall be allowed.

1.12.2 SCAQMD Title V Permit, Refuse Excavation

The Contractor is responsible for compliance with the Title V permit for Refuse Excavation issued by the South Coast Air Quality Management District (SCAQMD) and any other applicable regulations included in Appendix D.

The County has obtained a Title V permit revision to include refuse excavation at Badlands Landfill in accordance with SCAQMD Rule 1150. The Contractor shall comply with all requirements of the SCAQMD permit conditions (i.e., daily cover, transportation, dust suppression, etc.) at any time refuse is encountered. The Contractor shall address this work in the Site Safety Plan submittal Section 1.7.2 . The County will provide the required personnel to monitor the activities in accordance with the SCAQMD Title V permit.

1.12.3 Compliance with CARB Off Road Diesel Vehicle Regulations

Landfill operations at Department sites, including Badlands Landfill, are subject to the requirements of the California Code of Regulations (CCR), Title 13, Section 2449, which are enforced by the California Air Resources Board (CaARB). The objective of this regulation is to reduce emissions of diesel particulate matter (PM), oxides of nitrogen (NOx) and other criteria pollutants from in-use diesel-fueled vehicles. Therefore, to ensure compliance with the cited regulations, Contractor must provide proof of compliance with the "CaARB In-Use Off-Road Diesel Vehicle Regulations" currently in effect to include the following:

- Proof of reporting their fleet into CaARB's Diesel Off-road On-line Reporting System (DOORS)
- Proof of compliance with CaARB performance requirements specific to fleet size (Fleet Compliance Snapshot)
- Written Idling Policy
- Requirement for ARB Equipment Identification Number (EIN) labeling on all vehicles

Payment for complying with this section shall be considered as included in the various items of the work, and no additional compensation shall be allowed.

1.12.4 State Water Quality Control Board's National Pollution Discharge and Elimination System (NPDES) Permit

The State Water Quality Control Board NPDES Construction General Permit requires the development and implementation of a SWPPP. The Badlands Sanitary Landfill is covered under the State General Industrial Storm Water Permit and has already filed a Notice of Intent (NOI) with the State, so the Contractor will not be required to file an NOI and submit their Construction SWPPP with the State. However, after notification of award and prior to start of any work, the Contractor shall prepare and submit to the County, a project-specific Storm Water Pollution Prevention Plan (SWPPP) outlining procedures to reduce pollutants (directly or indirectly related to the Contractor's activities) in storm water runoff as detailed in Section 3 of these Technical Provisions.

1.13 Environmental Requirements

1.13.1 General

The Contractor and its sub-contractors shall at all times keep the site neat, tidy, and free of waste materials or rubbish resulting from work. Toxic materials, including oil, fuel oil, gasoline, coolant, fluid filters, and other contaminants, shall be transported off site and disposed of at an approved facility. The Contractor shall adhere to the Riverside County Hazardous Materials Business Emergency Plan (BEP) for Badlands Sanitary Landfill. Containers temporarily holding these toxic materials shall be covered, properly labeled and have no leaks, and shall be removed from the site as quickly as is reasonably possible. Upon award of Contract, the Department shall provide Contractor with a digital copy of the BEP for Badlands Sanitary Landfill and up to four (4) hard copies upon request.

Any accidental spills or spills that are produced during routine equipment maintenance shall be cleaned up by removing all the contaminants and the contaminated soil, disposing of it at an approved facility, and replacing the removed contaminated soil volume with clean soil material. If an event of a spill occurs, the Contractor and/or its sub-contractors shall follow the procedures outlined in the Site Safety Plan.

The Contractor shall comply with and supplement, if necessary, the Riverside County Hazardous Materials Business Emergency Plan for Badlands Sanitary Landfill. Contractor may also have to submit a Hazardous Material Business Emergency Plan (HMBEP); it shall be through the California Environmental Reporting System (CERS). The CERS online system can be viewed at the following link: <https://cers.calepa.ca.gov/>. Once the Contractor has submitted their HMBEP online, they shall provide a copy to the County as part of the Public/Site Safety Plan. Along with a copy of their CERS submittal, the Contractor shall submit a separate Hazardous Materials Business Emergency Plan to address Contractor activities if work/use includes storage, or potential storage of hazardous materials exceeding the following quantities: 55 gallons of liquids, 500 pounds of solids, or 200 cubic feet of compressed gases. In addition, the Contractor shall comply with the Riverside County Spill Prevention, Control, and Countermeasure (SPCC) Plan for the Badlands Sanitary Landfill, including but not limited to the submittal of a Business Emergency Plan and performance of required inspections, if the Contractor's work requires the onsite storage of petroleum products (as defined in the SPCC Plan) or if the Contractor stores petroleum waste products onsite. Upon award of Contract, the Department shall provide Contractor with a digital copy of the SPCC Plan for the Badlands Sanitary Landfill and up to four (4) hard copies upon request.

1.13.2 Environmentally Restricted Areas

Certain portions of the Badlands Landfill site have environmental restrictions. The Contractor's work must remain within the disturbance limits, referred to as "Disturbance Limits" in the Project Drawings.

1.14 Diversion and Control of Water

It is anticipated that water, such as rainfall or surface runoff, will be encountered within Project Limits during the period of construction under this contract. The Contractor, by submitting a bid, will be held to have investigated the risks arising from such waters and to have made the bid in accordance with such conditions. The Contractor shall be responsible for all costs associated with or resulting from any water at or coming into Project Limits. An approximated peak rate of 124.4 cfs is estimated to flow into the Southwest Sedimentation Basin, 20.1 cfs is estimated to flow into the Western Stockpile Sedimentation Basin, and 25 cfs is estimated to flow in the Canyon 6 Sedimentation Basin during a 100 year/24 hour rain event. The current drainage plan at the Badlands Landfill, which includes the Project Limits, is shown in the Site's Industrial SWPPP.

The Contractor shall at all times protect the work from damage by such waters and shall take all due measures to prevent delays in progress of the work caused by such waters. In order to accomplish this, the Contractor shall exercise every reasonable precaution to protect channels, storm drains, and bodies of water from pollution through the use of water pollution control measures consisting of construction of facilities which may be required to provide retention, control, and abatement of water pollution. The Contractor shall construct, and maintain all temporary diversion and protective works to divert runoff around the work areas and material storage areas, and to protect persons and property downstream of the work. The County may require the Contractor to implement additional protection measures. Excavation and stockpile areas shall be graded and properly maintained to provide adequate drainage at all times. The Contractor shall provide berms or other measures as necessary and/or required to prevent run-off from flowing onto completed areas and to avert erosion. The Contractor shall also conduct and schedule all operations so as to minimize or avoid muddying and silting of said channels, drains, and water bodies.

Upon completion of each workday, the Contractor shall take all necessary preventive measures to avoid or minimize damage resulting in erosion or impounding caused by storm water runoff. Erosion control measures shall consist of constructing sandbag berms, desilting basins, drains, and other such facilities required to provide prevention, control, and abatement of water pollution.

All nuisance water shall be disposed of at the Contractor's sole expense in a manner that will not damage public or private property, create a nuisance or health menace and complies with all applicable regulations. The Contractor shall furnish, install, and operate pumps, hoses, pipes or other equipment of a sufficient capacity to keep all construction excavations free from water until the excavation is backfilled. Water, if odorless and uncontaminated, may be discharged in a manner accepted by the County. When required by the County, the Contractor shall implement MP-52 as a means of desilting the water before discharging it as described in the California Stormwater Quality Association (CASQA) BMP handbook.

Special measures will be required to protect the GCL placed or stored on site. Prior to delivery, the Contractor shall present to the County and QA/QC Consultant its method of protecting these materials. Refer to Section 10.1.8 of these Technical Provisions for the proper procedures for handling and storage of GCL. Work shall be suspended, as stated in Section 1.9, "Suspension and Resumption of Operations", of these Technical Provisions, when the site is wet, muddy, or in any other condition that interferes with proper operation and construction procedures.

After notification of award and prior to start of any work, the Contractor shall prepare and submit to the County project-specific Storm Water Pollution Prevention Plan (SWPPP) outlining procedures to reduce pollutants (directly or indirectly related to the Contractor's activities) in storm water runoff as detailed in Section 3 of these Technical Provisions. The Contractor shall fulfill the provisions for construction monitoring requirements.

1.15 Detail Drawings and Submittals

Unless specified otherwise in these Technical Provisions, four (4) copies of all shop drawings and submittals of documentation and samples of materials shall be submitted by the Contractor to the County for review and acceptance, at least two (2) weeks prior to fabrication or installation of any work pertaining to them. However, additional time (beyond two weeks) may be required due to a large number of submittals at one time period in order to give the County and QA/QC Consultant adequate time to review, test, and accept the materials.

The review and acceptance of shop drawings, samples, submittals, specifications and descriptive literature submitted by the Contractor will be only for general conformance with design concept, and shall not be construed as:

- a. Permitting any deviation from the contract requirements
- b. Relieving the Contractor of the responsibility for any error in detail dimensions or otherwise that may exist in such submittals
- c. Constituting a blanket acceptance of dimensions, quantities or details of the material or equipment shown
- d. Accepting deviations from additional details or instructions previously furnished by the County.

Such check or review shall not relieve the Contractor of the full responsibility of meeting all of the requirements of the Contract Documents.

1.16 Survey Control of Work

County surveyors have established external primary survey control points on firm ground outside the limits of the work to be used throughout the construction period for the Contractor's work. In addition, the County surveyors will make verification surveys as various stages of the work are completed and survey for preparation of pay quantities. The Contractor's surveyors are responsible for ensuring that all construction conforms to

the requirements of the Contract Documents, and for surveying for as-built Project Drawings as required in Section 1.18 of the Technical Provisions.

The Contractor shall provide County representatives with access to the completed portions of the work before they are covered by subsequent construction to allow County representatives to verify that all construction conforms to the requirements of the Contract Documents. The Contractor shall therefore provide notice to the County **at least two (2) working days** prior to the time the respective areas will be ready for verification surveys, and **at least one (1) working day** for the survey work or any other inspection to be completed.

Major construction items requiring verification include but are not limited to:

- A. Surfaces within limits of over-excavation areas before removal and prior to engineered fill placement
- B. Project Subgrade
- C. Location and extent of geosynthetics
- D. Limits of PCS layers
- E. Drainage structures
- F. Access roads
- G. Other miscellaneous surveys as deemed necessary by the County.

1.17 Tests and Inspections

1.17.1 General

The Contractor shall comply with requests by the County or QA/QC Consultant to alter the work sequence or uncover materials to facilitate testing, inspection, or observation, or for the collection of samples or data. The Contractor shall provide the County and QA/QC Consultant with safe and suitable access to the work area for testing, inspection, or observation. **The Contractor is required to submit all materials at least two (2) weeks before they are scheduled to be integrated into the project**, in order to give the County and QA/QC Consultant adequate time to review, test, and accept the materials.

It is understood that observation and testing of a material at the time of its incorporation into the work shall in no way be considered as a guarantee of continued acceptance of material presumed to be similar to that upon which observations and tests have been made, and that observation and testing performed by the County and QA/QC Consultant shall not relieve the Contractor or its suppliers of the responsibility for quality control or to fully comply with the requirements of the Contract Documents.

1.17.2 Earthwork Testing

Earthwork testing shall be performed by the QA/QC Consultant in accordance with the QA/QC Plan. If testing indicates that any area of a completed layer does not meet the specifications, the Contractor shall perform corrective action; followed by retesting of the

same area by the QA/QC Consultant in accordance with the QA/QC Plan. The Contractor shall remove, re-work, and bring into compliance any area that the County or QA/QC Consultant consider to be unsatisfactory. The area shall be restored to the complete satisfaction of the County and QA/QC Consultant. The Contractor shall be solely responsible for any and all costs and delays associated with and resulting from any required re-working of a soil layer due to non-compliance. Payment for complying with this section shall be considered as included in the various items of work, and no additional compensation shall be allowed.

1.17.3 Geosynthetic Testing

Geosynthetic testing shall be performed by an independent testing laboratory in accordance with the QA/QC Plan. However, the Contractor shall be responsible for performing field testing on the geosynthetics under the observation of the QA/QC Consultant. The Contractor's finished product shall meet or exceed all the required parameters and specifications listed in the Contract Documents. Payment for complying with this section shall be considered as included in the various items of work, and no additional compensation shall be allowed.

1.17.4 Pre-Approved Materials

Materials to be used in the work shall be subject to observation and testing by the County and the QA/QC Consultant, or by an agency or laboratory accepted by the County. The Contractor shall furnish, without charge, any samples that may be requested or required for testing. The Contractor shall submit all materials two (2) weeks before they are scheduled to be integrated into the project, in order to give the County and QA/QC Consultant adequate time to review, test, and accept the materials.

Manufacturers' warranties, guarantees, instruction sheets, and parts lists that are furnished with materials used in construction shall be delivered to the County before the respective items are incorporated into the work. Payment for complying with this section shall be considered as included in the various items of work, and no additional compensation shall be allowed.

1.18 As-Built Project Drawings

The Contractor shall maintain a set of full-sized Project Drawings, including all addenda, change orders, and pertinent data related to the project, in the field office. The Contractor shall mark all changes and revisions made to the Project Drawings during construction by utilizing the records prepared by the Contractor's surveyors and onsite supervisory personnel as construction proceeds. Contractor shall correct the Project Drawings daily and review them with the County at weekly meetings or as requested by the County. Upon completion of the work, the Contractor shall deliver to the County the information contained in this progress set of Project Drawings as a condition of final acceptance of the work by the County.

Payment for complying with this section shall be considered as included in the various items of work, and no additional compensation shall be allowed.

1.19 Protection of Existing Utilities

A number of buried and surface utilities and structures shown on the Project Drawings exist at the landfill. These may include but are not limited to: water lines, ground water monitoring wells, landfill gas probes, landfill gas wells (vertical and lateral), landfill gas system header line, power lines and poles, survey monuments, drainage culverts, above-ground drainage facilities, and office buildings.

The Contractor is hereby notified of the possible existence of underground utilities not indicated in the Contract Documents and to the possibility that underground and above-ground utilities may be at a location different from that which is indicated in the Contract Documents. The Contractor shall be responsible for verifying underground utilities' locations including contact of Underground Service Alert (USA) at 1-800-422-4133, 48 hours prior to beginning work.

Contractor shall be responsible for protection of identified utilities (as shown on the Project Drawings or as identified through utility search) and shall take all necessary precautions by constructing barriers, bridges, and crossings for construction equipment and vehicles to prevent damage to the utilities or as required by the County. Any damage or loss to identified underground utilities as well as above-ground utilities caused by the Contractor's operations shall be promptly repaired at the Contractor's expense and to the satisfaction of the County.

1.20 Protection of Adjacent Landfill Operations

The Badlands Landfill site is an active facility; thus, all construction work relating to this project shall not impede or interrupt daily landfill business and operations. The Contractor shall provide a temporary fence (or other structure acceptable to the County) as necessary along the project limits or as otherwise directed by the County, to prevent debris, rocks and equipment from interfering with the access roads and landfill operations adjacent to the Contractor's work. In addition, the Contractor must obtain in advance the County's written acceptance for the locations and construction of temporary haul roads. Throughout the duration of construction, the Contractor shall provide adequate area for County personnel to remove material from the Canyon 6 Stockpile for daily cover and must maintain means of access to Engineering and Operations Office. The Contractor shall also inform the County, on a daily basis, which haul routes will be utilized adjacent to landfill operations, so that accidents may be avoided.

Payment for complying with this section shall be considered as included in the various items of work, and no additional compensation shall be allowed.

1.21 Storage of Materials

An area for the storage of the Contractor's materials is delineated on the Project

Drawings. All imported materials shall be stored in the designated area, unless the Contractor obtains the County's written acceptance for an additional area. All imported materials to be used in construction shall be unloaded, stored, and handled in accordance with manufacturer and supplier recommendations, to prevent damage to the material. When delivery of a material occurs, the Contractor shall promptly observe shipments to assure that the material complies with requirements, that quantities are correct, and that the material is undamaged. The Contractor shall take full responsibility for any delay caused by a supplier or manufacturer. The storage area shall be accessible to the County and QA/QC Consultant, so that they may observe, verify, and document the presence and condition of materials being stored.

The Contractor shall protect materials from sun, rain, mud, soil, and debris, and as stated in the QA/QC Plan. Care shall be taken to protect manufactured materials against damage from misuse, mishandling, or accident. The Contractor shall store materials and maintain construction operations within limits indicated by applicable laws, ordinances, and permits, and as outlined by the County. Care shall be exercised to avoid blocking roads, interfering with County operations, or presenting a hazard to County personnel and equipment, or to the public.

Special measures will be required to protect the GCL placed or stored on site. Prior to delivery, the Contractor shall present to the County and QA/QC Consultant its method of protecting these materials. Refer to Section 10.1.8 of these Technical Provisions for the proper procedures for handling and storage of GCL.

1.22 Equipment Staging Area

An area for the storage of the Contractor's equipment is delineated on the Project Drawings located in the Western Stockpile. The storage area shall be accessible to the County and QA/QC Consultant so that they may verify the presence and condition of equipment being stored. The stored equipment shall be placed in accordance with the Project Drawings or as directed by the County. The Contractor shall confine equipment and maintain construction operations within limits indicated by applicable laws, ordinances, and permits, and as outlined by the County. The Contractor shall make certain that the storage of equipment in any area does not interfere with or otherwise disrupt County operations at the site. Care shall be exercised to avoid blocking roads, interfering with County operations, or presenting a hazard to County personnel and equipment, or to the public.

The maximum allowable time that a piece of equipment shall remain on site, in a condition that makes it incapable of performing its designed function, shall be four (4) working days. Any equipment needing further maintenance shall be moved off site for repairs, at the full expense of the Contractor. Equipment no longer needed for the job shall also be removed within four (4) working days of its last use.

Payment for complying with this section shall be considered as included in the various items of work, and no additional compensation shall be allowed.

1.23 Equipment Rental

Attention is directed to Section 7.3.1.3. of the General Provisions. The equipment rental rates to be applied shall be the rates that are in effect at the time of the award of the Contract, as published by the California Department of Transportation. A copy of said equipment rental rates is on file at the County office.

1.24 Labor Surcharge

Attention is directed to Section 7.3.1.1.2. of the General Provisions. The labor surcharge percentage to be applied to the regular hourly wages paid as defined in Section 7.3.1.1. of the General Provisions shall be thirteen percent (13%). The labor surcharge percentage to be applied to the overtime hourly wages paid as defined in Section 7.3.1.1. of the General Provisions shall be twelve percent (12%).

1.25 Units of Measurement

In lieu of Part 1, Section 9-1.4, "Units of Measurement", in the Standard Specifications, measurements shall be in accordance with U.S. Standard Measures. A pound is an avoirdupois. A ton is 2,000 pounds avoirdupois. The unit of liquid measure is the U.S. Gallon.

1.26 Measurement and Payment

There shall be no additional payment to the Contractor for complying with all requirements and work listed in this section. Compensation for these requirements and work shall be considered as included in the various other contract bid items of work.

END OF SECTION 1

2. CONSTRUCTION SCHEDULE SUBMITTALS

2.1 GENERAL

2.1.1 Definitions

Activity – A discrete, identifiable task or event that takes time, uses resources, can be measured, has a definable start and stop date, furthers progress of the project work, and can be used to plan, schedule, and monitor a project.

Activity, Controlling – The first or currently performed activity on the critical path. Also referred to as the controlling operation.

Activity, Critical – Any activity on the critical path.

Activity, Milestone – A type of activity that is typically used to represent the beginning or end of the project or its interim stages. It has no duration.

Activity ID – A unique alphanumeric identification code assigned to an activity.

Bar Chart – A graphic representation of a Critical Path Method (CPM) schedule with relationships. A timescale appears along the horizontal axis.

Calendar Day – A day on the calendar beginning and ending at midnight.

Completion Duration, Contract – The original duration specified in the Contract for completing the project or the duration resulting from changing the original completion duration through authorized time extensions. The Contract may also specify completion duration for interim milestones, phases, or other portions of the project.

Completion Duration, Scheduled – The completion duration of the project that is projected or forecasted by the schedule.

Contract Working Day – As defined in General Provisions Section 6.6.

Critical Path (Longest Path) – The sequence of activities which establishes the scheduled completion duration.

Data Date – The date from which a project schedule is calculated.

Duration, Original – The estimated time expressed in Contract Working Days Section 1.8 of the Technical Provisions needed to perform an activity.

Duration, Remaining – The estimated time, expressed in Contract Working Days needed to complete an activity.

Float, Total – The difference in Contract Working Days between the earliest dates an activity can be performed and the dates by which it must be performed to avoid delaying the scheduled project completion duration.

Holidays – As specified in Technical Provisions Section 1.8.

Narrative Report – A document submitted with each schedule, schedule update, or revised schedule that discusses topics related to project progress and scheduling.

Open End – An activity that has either no predecessor or no successor, or activities whose only predecessor relationship is a finish-to-finish relationship or whose only successor relationship is a start-to-start relationship.

PERT Diagram – A graphic representation of a Critical Path Method (CPM) which shows activity information in box format and relationship information between activities.

Predecessor – An activity that logically occurs before another activity.

Relationship – The interdependence among activities. Relationships are expressed by defining an activity's predecessors and successors. The relationships in a project schedule are sometimes referred to as the logic of the schedule.

Schedule – A plan that indicates the time and sequencing of activities necessary to complete a project.

Schedule, Baseline – The accepted schedule showing the Contractor's original plan to complete the project. (Sometimes known as the as-planned schedule.)

Schedule Update, Bi-Weekly – A schedule produced by incorporating the project's progress (sometimes known as as-built information or data) over a two-week calendar period into the most recent accepted schedule. The update will reflect a new data date, work performed up to but not including the new data date, and the plan for completing the project.

Schedule, Revised – A schedule prepared and submitted by the Contractor at the request of the County or offered by the Contractor that includes a significant modification to the schedule logic or durations; usually for the purposes of recovering delay or depicting a significant change in the Contractor's plan.

Schedule, Final – The last schedule update containing actual start and finish dates for every activity. The Contractor must certify the accuracy of this final schedule.

Successor – An activity that logically follows another activity.

Time-Scaled Network Diagram – A graphic representation of a CPM schedule comprised of a bar chart that also shows the relationships among activities. The relationships are shown by arrows, with the arrow connecting each activity to its successor activities.

2.1.2 General Requirements

The Contractor shall plan and schedule the project and report progress to the County by submitting a Baseline Schedule, bi-weekly schedule updates, revised schedules, and a Final As-Built Schedule as required by Technical Provisions Section 1.7.

County acceptance of any schedule, whether baseline, update, revised, or final as-built does not modify the contract or constitute endorsement or validation by the County of the Contractor's logic, activity durations, or assumptions in creating the schedule. If errors are discovered by the Contractor or the County after the schedule has been accepted, the Contractor shall correct the error(s) in the next schedule submittal. The County's acceptance of a construction schedule from the Contractor does not in any way limit the Contractor's obligation to complete the work in accordance with all requirements of the Contract Documents.

2.1.3 CPM Schedule Requirements

The Contractor shall develop the aforementioned schedules using MS Project 2013 or earlier version. Contractor shall calculate the schedule using the Retained Logic scheduling option unless accepted in writing by the County to use the Progress Override scheduling option.

The Contractor shall ensure the schedule identifies and includes the following:

- a. Work to be performed by the Contractor, subcontractors, and suppliers.
- b. Work to be performed by the County, other contractors, and third parties such as QA/QC Consultant, other government agencies and authorities, or other entities required for completion of the project.
- c. The project start date, scheduled completion date, and other milestones.
- d. Required submittal development, delivery, review, and acceptance activities.
- e. Fabrication, delivery, installation, and testing activities for materials, plants, and equipment.
- f. Sampling and testing periods.
- g. Settlement periods.
- h. Cure periods.
- i. Utility notification and relocation.
- j. Installation or erection and removal of temporary systems or structures such as temporary electrical systems or shoring.
- k. Punch list completion and final clean-up.
- l. Required inspections and materials testing.
- m. The use of constraints is limited to those required by the Contract Documents.

- n. The use of negative lags, lags in excess of ten (10) Contract Working Days, lags with finish-to-start relationships (with exception of Bi-Weekly Schedule Update tasks), or start-to-finish relationships shall not be used unless accepted in writing by the County.
- o. Contractor shall not use open-end activities. Only the first activity will have no predecessor and only the last activity no successor.
- p. Each activity shall have the following: a unique numeric Activity ID; a unique descriptive name using such attributes as work type and location to distinguish activities; a duration stated in workdays of no more than 30 contract work days unless a longer duration is accepted in writing by the County; and coding for responsibility, phasing and area.

2.1.4 Schedule Submittal Requirements

The Contractor shall provide the following items with each schedule submittal:

- a. An electronic file of the schedule on a compact disc (CD) or as an attachment through an email to manuelruiz@rivco.org.
- b. A time-scaled network diagram plotted in color on 11x17 paper with each sheet including a title, match data for diagram correlation if there is more than one page, a page number and a key. The diagram shall include columns that show the Data Date, the Activity ID and Description, Early and Late Dates, Total Float, lags and constraints. The Bi-Weekly, Revised and Final schedules shall also include Target Dates set to the original Early Dates on the Baseline Schedule, as well as Actual Dates and Percent Complete.
- c. A PERT diagram plotted in color on 11x17 paper with each sheet of the plot including a title, match data for diagram correlation if there is more than one page, a page number and a key. The diagram shall include relationship types, lags, constraints, as well as information required in the time-scaled network diagram.

The Contractor shall include a narrative report with each schedule submittal. For the narrative report submitted with the Baseline Schedule, the Contractor will address the circumstances of the first working day of the contract, including the workdays per week, holidays observed, number of hours per workday shift, and how the schedule accommodates adverse weather days for each activity. For narrative reports submitted with schedule updates or revisions, the Contractor will address the time period from the data date of the previous schedule through the data date of the submitted schedule update that the report accompanies. Discussion of delays or issues in the narrative report does not constitute notice and does not replace the need for the Contractor to provide notice as required by the Contract Documents. Contractor shall include in each narrative report the following checked documents and information in the sequence indicated:

	Contractor to Include in the Submittal:	Baseline CPM Schedule	Bi-Weekly Update/Schedule Revision
1	A transmittal letter	X	X
2	A description of work performed since the last report		X
3	A description of unusual labor, shift, equipment, or material conditions or restrictions encountered or anticipated	X	X
4	A description of the current critical path	X	X
5	A description of changes in the critical path and scheduled completion date (for the project or its milestones) from the last report		X

6	A description of problems encountered or anticipated	X	X
7	<i>A description of current and anticipated delays including:</i>		
	identification of the delayed activity, by Activity ID and Description	X	X
	type of delay	X	X
	cause of the delay	X	X
	effect of the delay on other activities, milestones, and completion dates	X	X
	a statement of actions in response to the delay	X	X

8	<i>A statement that identifies and explains proposed changes incorporated in the schedule including, but not limited to:</i>		
	added activities		X
	deleted activities		X
	changed activity descriptions		X
	changed relationships		X
	changes in the original durations of activities that have yet to start		X
	increases in the remaining duration of unfinished, previously started activities		X
9	<i>The status of pending items including but not limited to:</i>		
	permits	X	X
	change orders		X

	time adjustments		X
	non-compliance notices		X
10	A statement of reasons for a scheduled completion date before or after the contract completion date for the project	X	X

2.2 EXECUTION

- a. **Baseline Schedule** – Within ten (10) business days of the award of contract or sooner, the Contractor shall submit the Baseline Schedule in accordance with Technical Provisions Section 1.7. The County will respond by accepting the Baseline Schedule, rejecting the schedule and identifying the reason(s) for rejection, or by asking for more information. The Contractor shall address the reasons for rejection or provide the information requested and resubmit the revised Baseline Schedule no more than five (5) calendar days after the County’s response. The County may withhold progress payments until the Contractor submits and the County accepts the Baseline Schedule.
- b. **Bi-Weekly Schedule Updates** – Within ten (10) business days after the issuance of the Notice to Proceed, the Contractor shall prepare and submit bi-weekly schedule updates (every two weeks) to the County that depict the project status as of the end of each two-week period in accordance with the requirements of Technical Provisions Sections 2.1.3. and 2.1.4. The County may withhold progress payments of all bid items until the County accepts the Contractor submitted schedule updates.
- c. **Revised Schedule** – The County has the right to request submittal of a revised construction schedule by the Contractor. Circumstances leading to such a request include but are not limited to: (1) a projected delay to scheduled interim or project completion dates, and (2) a significant difference between the actual sequence or duration of work and that depicted in the schedule as determined by the County. The Contractor shall prepare and submit the revised schedule no more than five (5) calendar days after the County’s request in accordance with the requirements of Technical Provisions Sections 2.1.3. and 2.1.4. Within five (5) calendar days of receipt, the County will respond by accepting the revised schedule, rejecting the schedule and identifying reasons for rejection, or by requesting more information.

The Contractor shall address the reasons for rejection or submit the information requested no more than five (5) calendar days after the County's request. The County may withhold progress payments until the Contractor submits and the County accepts the revised schedule.

- d. **Final As-Built Schedule** – Within fourteen (14) calendar days of the issuance of Notice of Completion, Contractor shall submit a Final As-Built Schedule that includes the actual start and finish dates for each activity. The Contractor shall include with the submittal a certificate signed by the Contractor stating: *“To the best of my knowledge, the enclosed final schedule reflects the actual start and finish dates of the activities contained herein.”*

2.3 MEASUREMENT AND PAYMENT

- a. The following schedule will be used to determine measurement of Construction Schedule Submittals work and disbursement of the bid price for all Construction Schedule Submittals:

Percent of Contract Work Completed (\$ Expended/\$ Total Bid Price)	Percent of Construction Schedule Submittals Considered to be Complete
County Acceptance of Baseline Schedule	25%
Completion of 33% of Contract Working Days	25%
Completion of 67% of Contract Working Days	25%
County Acceptance of Final As-Built Schedule	25%

- b. **Payment** of Construction Schedule Submittals shall be based upon the lump sum as stated in **Bid Item No. 1** – *“Construction Schedule”*. Payments shall constitute full compensation for submitting Construction Schedules including but not limited to: furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in developing, preparing, submitting Payment of Construction Schedule Submittals work, revising, and obtaining acceptance of the Construction Schedules as specified in the referenced Standard Specifications and these detailed Technical Provisions, and as directed by the County. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 2

3. PREPARE AND IMPLEMENT NPDES SWPPP

3.1 GENERAL

This section covers the preparation and implementation of the Storm Water Pollution Prevention Plan (SWPPP) by the Contractor. The Badlands Sanitary Landfill is covered under the State General Industrial Storm Water Permit and has already filed a Notice of Intent (NOI) with the State, so the Contractor will not be required to file an NOI and submit their Construction SWPPP with the State. However, the Contractor shall prepare and submit to the County, a project-specific SWPPP as required by the National Pollution Discharge Elimination Systems (NPDES) General Permit for construction activities at the Badlands Sanitary landfill site as well as the Offsite Water Source. The SWPPP shall, to the extent feasible, implement and maintain all of the following minimum BMPs to reduce or prevent pollutants in stormwater discharging from project areas of construction:

- A. Good Housekeeping
- B. Preventative Maintenance
- C. Spill and Leak Prevention and Response
- D. Material Handling and Waste Management
- E. Erosion and Sediment Controls
- F. Employee Training Program
- G. Quality Assurance and Record Keeping

The SWPPP shall also identify additional site-specific Best Management Practices (BMPs) planned for use on the project at each site where work occurs, and stipulate schedules for ongoing monitoring and maintenance of those BMPs.

After notification of award and prior to the start of any work, the Contractor shall prepare and submit a satisfactory Schedule of Values for all Storm Water Pollution Prevention work. The Schedule of Values will establish unit prices for individual items of work and will form the basis for payment of contract work and will be used to establish payment for any extra work. An acceptable form for the Schedule of Values, representing the minimum level of detail required to quantify the scope of work is included in the Measurement and Payment of this section.

The County requires the development and implementation of a SWPPP. All persons responsible for implementing requirements of the State Construction General Permit shall be appropriately trained in accordance with Section VII of the General Permit. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. The SWPPP shall contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list Best Management Practices (BMPs) the Contractor will use to protect storm water runoff and the placement of those BMPs. Additionally, the

SWPPP must contain a visual monitoring program and a chemical monitoring program for “non-visual” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on Clean Water Act section 303(d) list. The SWPPP must include BMPs that address source control,

It is anticipated that water, such as rainfall or surface runoff, will be encountered within the landfill property as well as the Offsite Water Source during the period of construction under this Contract. The project limits for the geosynthetics liner installation portion of this project fall within the existing drainage course of Canyon 2 that receives rainfall and surface runoff from approximately 27 acres of Canyons 1, 2, and 3. The project limits for the Western Stockpile fill area receives rainfall and surface runoff from approximately 7 acres of surrounding hillside. The project limits for the Canyon 6 Stockpile area receives rainfall and surface runoff from approximately 8 acres of the surround area which includes Canyon 2. The Contractor, by submitting a bid, will be held to have investigated the risks arising from such waters and to have made the bid in accordance with such conditions. The Contractor must not alter or stop any current drainage pathways throughout the landfill property. The Contractor shall be responsible for all costs associated with or resulting from any water at or coming into the Project Limits.

The Contractor shall at all times protect the work from damage by such waters and shall take all due measures to prevent delays in progress of the work caused by such waters. In order to accomplish this, the Contractor shall exercise every reasonable precaution to protect the Project Limits from pollution through the use of water pollution control measures consisting of construction of facilities that may be required to provide retention, control, and abatement of water pollution. The Contractor shall also conduct and schedule all operations so as to minimize or avoid muddying areas in and around the project limits. Contractor shall specifically address planned measures to mitigate the aforementioned throughout the course of construction within the Project Limits.

All nuisance water shall be disposed of at the Contractor’s sole expense in a manner that will not create a nuisance or health menace and complies with all applicable regulations. The Contractor shall furnish, install, and operate pumps, hoses, pipes or other equipment of a sufficient capacity to keep all construction excavations free from water until the excavation is backfilled. Water, if odorless and uncontaminated, may be discharged in a manner accepted by the County. When required by the County, the Contractor shall implement MP-52 as a means of desilting the water before discharging it as described in the CASQA BMP handbook.

3.2 MATERIALS

The work covered by this section shall consist of furnishing all necessary labor, materials, equipment, tools and supervision for the construction of all work necessary to implement BMPs as required by the General Construction Permit as described in the CASQA BMP Fact Sheet Handbook.

3.3 EXECUTION

The County complies with the State NPDES through regular inspections and monitoring and implementation of best management practices for each site. The County site-specific SWPPP for the Badlands Landfill is available for reference at the Landfill and can be provided digitally upon award of the Contract. After notification of award and prior to start of any work, the Contractor shall prepare and submit to the County a project-specific Storm Water Pollution Prevention Plan (SWPPP) that addresses construction activities for the project and outlines procedures to reduce pollutants (directly or indirectly related to the Contractor's activities) in storm water runoff.

At a minimum, the Contractor will be required to provide street sweeping on paved portions of any haul routes as often as reasonably required by the County. For all street sweeping, vacuuming, and the stabilized construction access, Contractor shall reference the guidelines described in the CASQA Stormwater BMP handbook.

3.4 MEASUREMENT AND PAYMENT

- a. The following schedule will be used to determine measurement of Prepare and Implement NPDES SWPPP work and disbursement of the bid price to Prepare and Implement NPDES SWPPP:

Percent of Contract Work Completed (\$ Expended/\$ Total Bid Price)	Percent of Prepare and Implement Stormwater Pollution Prevention Plans Considered to be Complete
0%-30%	30%
31%-50%	50%
51%-75%	75%
More Than 75%	100%

- b. Payment to Prepare and Implement NPDES SWPPP work shall be based upon the lump sum as stated in **Bid Item No. 2** – “Prepare and Implement NPDES SWPPP”. Payments shall constitute full compensation for preparing and implementing the SWPPP including but not limited to: furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in developing, preparing, obtaining acceptance of, revising, amending and implementing the SWPPP as specified in the Standard Specifications and these detailed Technical Provisions, and as directed by the County. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the

actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 3

4. MOBILIZATION AND DEMOBILIZATION

4.1 GENERAL

This contract item shall consist of expenditures for all preparatory work and operations, including but not limited to: bond and insurance costs; those costs necessary for the movement of personnel, equipment, supplies, construction of a haul route and incidentals to the project site; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site as well as the related demobilization costs at the completion of the project. Demobilization shall include but not be limited to cleaning installations and the removal of temporary structures as required by the County. Throughout all phases of construction, including suspension of work and until final acceptance of the project, the Contractor shall keep the work areas clean and free of refuse generated as a result of the Contractor's operations. Any such refuse shall be disposed of in the designated disposal area or as directed by the County.

4.2 MATERIALS

- a. The Contractor shall provide a field office for QA/QC Consultant and Contractor use and the additional necessities required to maintain this field office in accordance with the requirements of Part 1, Section 8 of the Standard Specifications and the requirements of the Contract Documents. The temporary field office shall be Class A excluding integrated sanitary facilities. The office shall have a minimum floor space of 175 square feet, at least one door, and window area not less than 22 square feet. All doors and windows shall be provided with screens. The field office shall have one separate room for each entity with acceptable means for locking. The following items, at a minimum, shall be furnished by the Contractor for the field office:
 - i. Furniture, which shall be equitably split for use between Contractor and QA/QC Consultant, shall be provided as follows: two plan tables not less than 30 inches by 72 inches and two drafting stools; four standard 5-foot double pedestal desks with drawers suitable for holding files and four swivel chairs; six straight chairs; two lockable legal-sized 4-drawer metal file cabinets; one plan rack; and three wastebaskets.
 - ii. Electric power shall be provided to include a minimum of six (6) duplex convenience outlets. The field offices shall be illuminated at all tables and desks. An outdoor lighting fixture with 300W bulb shall be installed to effectively light the area around each field office facility.
 - iii. Heating and air conditioning of sufficient capacity, including the power supply, shall be provided to adequately control the temperature at all times.
 - iv. The Contractor shall provide cooled drinking water within the field office.

- v. The Contractor shall provide three non-coin-operated/unrestricted telephones and telephone lines. The telephone installation shall include sufficient extension cords to serve all plan tables and desks for each of the two rooms.
 - vi. The Contractor shall maintain the capability to digitally transfer files to the County during business hours, either via internet line or mobile hot spot.
 - vii. The Contractor shall also provide and maintain one new facsimile (fax) document transfer machine, connected to a different line than the telephone. An additional jack shall be provided on the facsimile machine line suitable for the use of a computer with modem capabilities.
 - viii. The Contractor shall provide and maintain one new plain paper photocopy machine with document feed capability in good working order. The copy machine and facsimile machine need not be separate entities.
 - ix. The Contractor shall also provide at least three (3) portable toilets on the project site as follows: at least one (1) portable toilet adjacent to the construction trailer, and at least two (2) portable toilets adjacent to the Project Area. All sanitary facilities shall include twice-per-week servicing.
 - x. The Contractor shall provide fire extinguishers and first-aid kits inside the field office to provide adequate protection to all personnel anticipated to be onsite. A Type A fire extinguisher shall also be maintained in the construction area at all times.
 - xi. The Contractor shall supply all necessary office supplies for operation of the copy and facsimile machines, and shall supply all necessary sanitary supplies for the toilet facilities throughout the duration of the project.
 - xii. All of the aforementioned materials shall be made available for use by employees associated with the construction project, including (but not limited to) the County, the QA/QC Consultant, regulatory agency staff, and any other agencies involved with the construction project.
 - xiii. All materials furnished for the execution of the work and purchases made by the County shall remain the property of the County. Any existing structures or installations shall be left in a condition that is at least equivalent to the condition prior to construction. The final condition of the construction site shall be subject to acceptance by the County.
- b. Contractor shall construct access roads as needed to haul material throughout the Project Limits. Access roads shall be constructed using source material from the Canyon 6 Stockpile. The suitability of the Canyon 6 Stockpile earthen material shall be subject to the acceptance of the County and approval of the QA/QC Consultant.

4.3 EXECUTION

- a. Upon receipt of the Notice to Proceed, the Contractor shall furnish, mobilize, and install such temporary works, materials, equipment, supplies, personnel, and field offices as necessary for the successful completion of the work. The Contractor shall also operate and maintain temporary works, equipment, and field offices throughout the duration of construction. All temporary works, such as sanitation facilities, shall fully comply with applicable rules and regulations of governing authorities. The temporary field office shall be subdivided into three offices, shall be provided by the Contractor in accordance with Part 1, Section 8 of the Standard Specifications and the requirements herein. The field office shall be placed at the designated location shown on the Project Drawings or as otherwise accepted by the County, and shall be fully operational within five (5) working days after the Contractor commences construction activities. All windows shall be barred on the construction trailer to prevent unauthorized entry through the windows. Tie-downs shall be supplied so as to prevent the displacement of the trailer during high winds. The trailer, along with its contents shall be removed at the conclusion of the work, or at any time during construction as directed by the County. The trailer and its contents (excluding materials furnished for the execution of the work and purchases made by the County) shall remain the property of the Contractor. All costs of the field office, including but not limited to utilities, shall be borne by the Contractor.
- b. The Contractor shall remove and properly dispose of all refuse from the construction site. The County shall have the right to determine what refuse is, and to determine the manner and placement of on-site disposal. Any hydrocarbon-impacted soils found at the site as a result of the construction operation, such as equipment maintenance, shall be removed and properly disposed of at the Contractor's expense.
- c. The Contractor shall obtain all necessary permits and permission to utilize public roads for mobilization, demobilization, and access to the site. Access to the site is available through existing public roads during the hours stated in Section 1.8 of these Technical Provisions.
- d. The Contractor shall construct access roads as needed to haul material throughout the Project Limits. During the period of construction, landfill operations may be conducted along the top deck and the southern portion of the landfill. Contractor shall use the northern haul route as shown on the General Site Map to access Canyon 6 stockpile. The Haul Route shown on the General Site Map is approximate and can be adjusted by the Contractor to achieve a more efficient haul route. Constructed access roads, if accepted by the County, may become a landfill access road and will not require demobilization by the Contractor.

4.4 MEASUREMENT AND PAYMENT

- a. The following schedule will be used to determine **measurement** of mobilization and demobilization and disbursement of the bid price for mobilization and demobilization:

Percent of Contract Work Completed (\$ Expended/\$ Total Bid Price)	Percent of Mobilization and Demobilization Considered to be Complete
More Than 5%	40%
26%-50%	60%
51%-75%	80%
More Than 75%	90%
Upon County's acceptance of work including complete demobilization	100%

- b. **Payment** of mobilization and demobilization shall be based upon the lump sum as stated in **Bid Item No. 3** – *“Mobilization and Demobilization”*. Payments shall constitute full compensation for all labor, material, equipment, and all other items necessary and incidental to completion of this item of work. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 4

5. DEVELOP WATER

5.1 GENERAL

The work covered by this section shall consist of furnishing all materials, equipment, labor and supervision to collect, load, transport, and apply water from an offsite water source as necessary for compaction of materials, testing, dust control, and other project construction use. The work shall include installing and maintaining a water meter and water tower (or water J-stand) at the offsite source, installing and maintaining a stabilized construction entrance/exit at the offsite source, documenting and reporting the amount of water used, performing street cleaning along the designed water haul route, and maintaining the offsite source property according to the Contract Documents.

5.2 MATERIALS

The closest water hydrant to the Badlands Landfill available for use on this project is located on Highland Boulevard, approximately 500 feet northwest of the intersection with Ironwood Avenue, which is approximately 1.6 miles from the landfill site entrance. The hydrant on Theodore Street between State Highway 60 and Ironwood Avenue is utilized by the Department for daily operations and will not be available for Contractor use, while the hydrant at the corner of Ironwood Avenue and Theodore Street is deemed unsafe for water truck use due to heavy volumes of daily landfill traffic at this intersection.

5.3 EXECUTION

- a. Contractor shall attach and maintain a water meter at the connection to the water source so that the water meter registers only quantities used for this project. Contractor shall provide certification that the water meter has been properly calibrated prior to installation.
- b. Contractor shall install and maintain a water tower or water J-stand in accordance with all applicable permits to facilitate loading water trucks.
- c. Contractor shall document and report meter readings of water usage on a weekly basis to the County. The Contractor shall also document the number of water truck loads used each working day, and shall report the daily load count to the County at the end of each working day.
- d. Contractor shall install and maintain a Stabilized Construction Entrance/Exit per CASQA BMP Fact Sheet Treatment Control-1 (TC-1) at the offsite water source. This will include, but may not be limited to, the installation and maintenance of crushed aggregate rock and rumble racks. The Contractor shall modify the Stabilized Construction Entrance/Exit (TC-1) at the direction of the County, and shall add additional aggregate rock when directed by the County.

- e. Contractor shall utilize the designated access routes within the landfill site for all Contractor equipment traveling between the Project Limits and the site entrance.
- f. Contractor shall implement necessary traffic control devices and/or personnel to ensure daily landfill traffic does not access the Project Work Areas in accordance with the Site Safety Plan Technical Provisions Section 1.7.2. Contractor shall be responsible for ensuring this gate is locked during non-working hours.
- g. Contractor shall control the generation of dust related to the Contractor's work and use of the water source to the satisfaction of the County, including, without limitation, all work areas, the offsite water source, and associated access routes.
- h. Contractor shall perform street sweeping utilizing a broom-type street sweeper along paved portions of the designed offsite water haul route on a weekly basis or as required by the County. Performance and effectiveness of the street sweeper(s) shall be to the satisfaction of the County and in accordance with Technical Provisions Section 3.3.
- i. Contractor shall immediately remove any build-up of mud, dirt or debris along the aforementioned access routes to the satisfaction of the County. Contractor shall utilize broom-type street sweepers and/or laborers for this work.
- j. Contractor shall conduct all activities at the offsite water source only during designated contract working hours.
- k. Once the project has been substantially completed, Contractor shall remove corrugated steel panels and re-grade the portion of offsite water source site utilized by the Contractor during the construction project to its original condition and as directed by the County.

5.4 MEASUREMENT AND PAYMENT

- a. **Payment** for complying with this section shall be at the lump sum bid price as stated in **Bid Item No. 4** – "*Develop Water*" and shall be prorated in each progress payment in accordance with the following schedule:

Percentage of Contract Work Completed (\$ expended/\$ total bid price)	Percent of Develop Water Considered to be Complete
More than 25%	40%
More than 50%	60%
≥ 75%	80%
Upon demobilization of all Contractor equipment and appurtenances at the source	100%

- b. **Payment** of the lump sum contract price for as stated in **Bid Item No. 4** - “*Develop Water*” shall constitute full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in Develop Water and shall include all costs associated with the develop water operations, compliance with all applicable SCAQMD regulations, the Site Safety Plan, hauling, offsite grading, and on-site or off-site disposal/recycling. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 5

6. DEMOLITION

6.1 GENERAL

The work covered by this section shall include salvage, remove, relocate, recycle, and stockpile material encountered during construction as described in the Contract Documents. The work in this section shall include furnishing all labor, supervision, tools, equipment, and materials necessary to complete and insure that all demolition activities conform to the requirements of the Contract Documents.

6.2 MATERIALS

- a. In-place materials/structures requiring demolition activity by the Contractor include Soil Cement located in the areas shown on the Project Drawings, including: the Northern Haul Road. This total in-place quantity is approximately 32,511 square feet for a total weight of approximately 830 tons.
- b. Demolition material quantities are approximate. Contractor is responsible for calculating all material quantities for bidding purposes.

6.3 EXECUTION

The Contractor shall remove, salvage, haul and stockpile Soil Cement to an area adjacent to the Active Pad, as directed by the County. Soil Cement Road shall not be demolished until excavation to Bench 5 anchor trench commences.

6.4 MEASUREMENT AND PAYMENT

- a. **Payment** for complying with this section shall be at the lump sum bid price as stated in **Bid Item No. 5 – “Demolition”**.
- b. **Payment** of the lump sum contract price for salvage, remove, haul, and stockpile material from existing structures shall constitute full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in salvage, remove, recycle, and stockpile material from existing structures and shall include all costs associated with the demolition operations, compliance with all applicable SCAQMD regulations and the Site Safety Plan. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 6

7. EARTHWORK

7.1 GENERAL

7.1.1 Section Includes

The work in this section shall include furnishing all labor, supervision, tools, equipment, and materials necessary to: achieve design grades and elevations, establish subgrade for the northern benches, northern sideslopes and access roads within the Project Limits. This work shall include, but is not limited to: clearing, grubbing, excavation, over-excavation; refuse excavation, refuse disposal, interim cover over refuse; and placement and compaction of engineered fill within Project Limits as shown on the Project Drawings and as required by the Contract Documents.

7.1.2 Technical Provisions Quality Assurance/Quality Control

All work shall be performed in accordance with the QA/QC Plan, under the ongoing observation of the County and QA/QC Consultant. The QA/QC Consultant shall verify that the engineered fill has been moisture conditioned and compacted adequately in accordance with the QA/QC Plan. The verification will be conducted by field-testing as well as visual observation of the operation. Contractor shall ensure that the moisture content and density requirements for all earthwork are achieved.

The Contractor shall supply labor and equipment for preparing test areas as requested by the QA/QC Consultant. When material has not been properly placed, moisture-conditioned, or compacted, as determined by observation or verification testing, such material shall be removed or reworked as necessary at the sole expense of the Contractor to obtain the required relative compaction and moisture content. When sand cone density tests, field permeability tests, or any other field tests are performed, no equipment shall be operated within the immediate vicinity of the test area or as requested by the QA/QC Consultant. This requirement is essential since the vibration produced by the construction equipment will adversely impact the testing results.

7.2 MATERIALS

7.2.1 General

The suitability of all earthen and manufactured materials shall be subject to the acceptance of the County and approval of the QA/QC Consultant. Fill materials shall not contain brush, roots, sod, or other deleterious or unsuitable materials. In zoned fills, particle size below the top two (2) feet of engineered fill shall not exceed six (6) inches within the Project Grading Limits. Organic material and earthen material particles greater than the specified size shall be deposited in a separate stockpile, as directed by the County and QA/QC Consultant. Particles greater than the specified size shall be

deposited in the Canyon 6 Stockpile, used for daily cover or as otherwise directed by the County. Organic material shall be deposited at the landfill working face as directed by the County. The landfill working face is located within the current edge of fill limits as shown in the project drawings. Where the engineered fill or native cut forms the subgrade for the liner, the subgrade shall be prepared in accordance with the requirements of Section 8.3 of these Technical Provisions.

7.3 EXECUTION

7.3.1 General Subgrade Preparation

All work areas within the Project Limits shown on the Project Drawings shall be evaluated and accepted by the County and QA/QC Consultant to verify satisfactory completion of clear and grub work (including removal of Demolition Section 6 items as shown on the Project Drawings), penetration of the excavation into firm natural soils, and removal of all unsuitable materials. All unsuitable material found at the subgrade design elevations shall be excavated as over-excavation material by the Contractor (under the direction of the QA/QC Consultant) and the area shall be backfilled to design elevations and grades with engineered fill in accordance with the requirements of Section 7.3.3 of these Specifications.

Unless otherwise noted or required, areas where engineered fill is to be placed, or in other areas where unsuitable materials have been removed and where the surface is judged to be loose or otherwise unsuitable, the subgrade shall be prepared as follows:

- a. The upper six (6) inches of in-situ material shall be ripped, moisture-conditioned, and re-compacted to a minimum of 90 percent relative compaction, at a moisture content range between optimum moisture content (OMC) and 2% above OMC in accordance with ASTM D1557 or as determined by the County and QA/QC Consultant.
- b. The compacted surface shall be scarified to provide a good bond between the foundation material and the subsequent fill material, as appropriate.
- c. Areas of hard or dense, natural soil identified by the County and QA/QC Consultant shall be left undisturbed.

7.3.2 Excavation

- a. This work may include ripping, breaking, and dozing of materials using standard earthmoving equipment up to and including CAT D-9 with single ripper type equipment. Based on a previous subsurface soil investigation, the material within limits of excavation has been determined to be rippable. In the event non-rippable material is encountered, the Contractor shall immediately notify the County and the QA/QC Consultant. Prior to the removal of non-rippable material, Contractor, County, and the QA/QC Consultant shall mutually decide upon the most acceptable method of removal for this material. If mutually decided, this work shall be

considered as extra work and therefore will be paid for in accordance with Section 2.7 of the General Provisions entitled "Extra Work". This item shall also include keeping excavation areas neat and orderly, and completing the excavation to the satisfaction of the County and QA/QC Consultant. Liner construction operations in a given area shall not commence until the subgrade surface preparation has been completed by the Contractor, and has been accepted by the County and QA/QC Consultant.

- b. Areas of excavation shall be graded to drain at all times, and necessary precautions shall be taken to control dust and erosion. The Contractor's access roads shall be maintained as necessary for Contractor, County, and QA/QC personnel, including landfill operation access. Unless specifically required by the Contract Documents, excavations shall not be carried below the design lines and grades shown on the plans or as otherwise recommended by the QA/QC Consultant and accepted by the County in writing. Unauthorized over-excavation shall be immediately corrected by backfilling to grade with engineered fill in accordance with Section 7.3.4 of the Technical Provisions at the Contractor's sole expense.
- c. Excavated material from within the Project Limits shall be used by the Contractor as a source of material for executing the following work items and miscellaneous tasks: engineered fill in the Project Grading Limits, screening operation to produce protective cover soil material, supplying interim cover material for disposal of excavated refuse, supplying daily cover material for landfill operations, and any other miscellaneous tasks required by the Contract Documents or as directed by the County. Contractor shall utilize and exhaust excavated material from the Northern slopes of the proposed lined area prior to utilizing the Canyon 6 borrow area for source material for engineered fill. Excavation grading in the Canyon 6 stockpile shall follow the Canyon 6 Stockpile grading plan included in the Project Drawings. Unauthorized over-excavation in Canyon 6 shall be immediately corrected by backfilling to grade with engineered fill in accordance with Section 7.3.4 of the Technical Provisions at the Contractor's sole expense.
- d. Unsuitable excavated material, as identified by the QA/QC Consultant, shall be placed in the designated Canyon 6 Stockpile Area or an area designated by the County as uncontrolled fill, and shall not be used as engineered fill. Excavation of unsuitable material shall include clearing and grubbing in accordance with Section 300-1.1 of the Standard Specifications.
- e. Surface drainage shall be maintained at all times in the Project Limits and these completed areas shall be graded as shown on the Project Drawings and as directed by the County. Final sloped surfaces within these Project Limits shall be finished by track walking and left in a uniformly graded condition. Surfaces of flat areas shall be finish-graded with a motor grader or approved equal. The Contractor shall construct drainage and erosion control facilities in accordance with the Project Drawings within the completed portions of the Project Limits and as required by the Contract Documents, or as directed by the County. All material required for the surface drainage and erosion control facilities shall be supplied and installed by the Contractor.

- f. The Contractor shall not be compensated for any unauthorized earthwork activities which deviate from what is required by the Contract Documents. The Contractor shall remove or correct any unauthorized road alterations at the Contractors expense.
- g. Side slopes to be lined shall be cut to an inclination not steeper than 1.5:1 (H:V) unless otherwise shown on the Project Drawings. The Contractor shall observe temporary and permanent excavations on a regular basis for signs of instability. Should signs of instability be noted, the Contractor shall notify the County and the QA/QC Consultant immediately, and shall undertake remedial measures as soon as practicable, subject to the direction and acceptance of the County and the QA/QC Consultant. It shall be the Contractor's responsibility to remove all loose materials from the excavated slopes, and to maintain the slopes in a safe and stable condition at all times during the progress of the work and during any temporary closure of the work. Permanent cut slopes shall be left in a clean, safe, and stable condition upon completion of the work.
- h. Where necessary, trenches, pits, and other excavations shall be properly sheathed and braced to furnish safe and acceptable working conditions. Any damage occurring from excessive earth pressures, slides, cave-ins, or other causes due to failure to provide proper sheathing or bracing, or through other negligence or fault of the Contractor, shall be repaired by the Contractor at its sole expense. The manner of bracing for excavations shall be as set forth in the rules, orders, and regulations of the Division of Industrial Safety of the State of California or OSHA California Code of Regulations Subchapter 4, Article 6, Section 1540 "Excavations"; whichever is more restrictive.

7.3.3 Over-excavation

- a. Areas identified by the QA/QC Consultant during construction to require over-excavation shall be excavated to limits as determined by the County and/or the QA/QC Consultant. Material removed during over excavation may be used as engineered fill at the discretion of the County and QA/QC consultant when the material meets the requirements for engineered fill. Material that does not confirm to requirements for engineered fill shall be hauled to the Canyon 6 Stockpile or an area designated by the County as uncontrolled fill.
- b. After excavation, the area shall be backfilled and compacted in accordance with Section 7.3.4 "Engineered Fill" to subgrade elevations in accordance with the Project Drawings. The excavation of these materials shall not, in quantity, include the material excavated for the convenience of the Contractor's operations. Prior to placing engineered fill material, the Contractor shall clear all stabilization, buttress, and key-way fill areas within the limits of over-excavation of loose slough materials. Prior to the placement of any engineered fill, the QA/QC Consultant must approve any areas cleared of loose slough material.

7.3.4 Engineered Fill

- a. Under the direction of the QA/QC Consultant, only suitable material encountered within the excavation areas shall be utilized in the engineered fill areas, and all unsuitable material shall be removed and hauled to the Canyon 6 Stockpile area designated on the Project Drawings, or as otherwise directed by the County.
- b. The Contractor shall restrict earthwork movement and haul routes to the areas within the Project Limits as shown on the Project Drawings. Any earthwork operations requiring activity outside of the Project Limits shall require a written request and written acceptance to and from the County.
- c. Compacted engineered fill is required within the Project Limits, as shown on the Project Drawings or as directed by the County or QA/QC Consultant, on-site soil shall be placed and compacted in layers as specified herein. The Contractor shall spread soil evenly by mechanical equipment over the prepared subgrade. The Contractor shall place engineered fill material in thickness of loose lifts no greater than eight inches (8") and compacted lifts no greater than six inches (6"). Each lift shall be spread evenly and compacted to obtain a near uniform condition in each layer. In areas of lift thickness greater than specified herein, the Contractor, prior to construction of additional lifts, must complete re-grading and compacting of the surface to the maximum specified lift thickness. The top of each previously compacted layer shall be scarified so that there is no lamination between layers.
- d. Engineered fill material shall be compacted to a minimum of 90% relative compaction per the Project Drawings, based on the laboratory maximum dry density, determined by ASTM D1557. Engineered fill over cut slopes, or scarified natural steep slopes shall be properly keyed into undisturbed bedrock or firm material in accordance with the Contract Documents and as accepted by the County and QA/QC Consultant.
- e. All general on-site soil material used for engineered fill shall have a moisture content between 2% below OMC and 2% above OMC in accordance with ASTM D1557 or as determined by the QA/QC Consultant. Additional water may need to be added at any time during construction. The moisture content of the engineered fill materials prior to and during compaction shall be uniform throughout each layer of the material.
- f. When the moisture content of the fill material is below optimum, water shall be added until the moisture content is within the limits required to assure an adequate bonding and compaction of all fill material. When the moisture content of the fill material is above the specified limits, the fill material shall be aerated by plowing, disking, blading, or other satisfactory methods until the moisture content is acceptable. All plowing, tamping, blending, disking, or air drying of material is considered incidental to the work and no additional compensation will be allowed. Wetting of materials by rain or artificial means to acceptable moisture content will require mixing or air drying to return this material to the required moisture content. Complying with this

requirement is considered incidental to the work and no additional compensation will be allowed.

- g. Surfaces of all slopes outside the geosynthetic liner limits shall be finished by track walking with Dozer-type equipment or approved equal by the County Representative in the field and left in a uniformly graded condition. Surfaces of flat areas shall be finish graded with a motor grader or approved equal.
- h. Surfaces of all slopes within the geosynthetic liner limits shall be prepared in accordance with the requirements of Section 8 of these Technical Provisions.

7.3.5 Interim Cover and Refuse Removal & Disposal

- a. The Contractor shall remove interim cover soil, refuse, or soil co-mingled with refuse from within the Project Limits shown on the Project Drawings and as required to join to existing liner, south of the Grading Limits. Interim cover soil may be suitable for source material for engineered fill in accordance with Section 7.3.4 of these Technical Provisions and should be tested prior to removal. Only the removal and disposal of refuse or soil co-mingled with refuse will be paid in accordance with Section 7.4f of these Technical Provisions.
- b. Refuse or soil co-mingled with refuse may be encountered within the Project Limits inside the landfill footprint; however, it is possible that refuse may be encountered in any excavation area within the Project Limits shown on the Project Drawings.
- c. Contractor shall haul contaminated material and excavated refuse to the landfill working face for disposal by landfill operations staff. Recognizing the primary importance of public and landfill worker safety in and adjacent to this area, Contractor shall coordinate proposed haul routes, timing, duration, and other related factors with the County prior to each planned haul sequence to the landfill working face. Prior to the end of each working day, Contractor shall cover refuse encountered during excavation in place with one-foot (1') of clean earthen daily cover material as directed by the County.
- d. In the event the County or Contractor suspects any excavation material from the landfill is hazardous (as defined by CalRecycle or the Local Enforcement Agency), the Contractor shall stockpile the suspect material in a location separate from the rest of the excavated material. The Contractor shall immediately notify the County if excavation material is suspected to be hazardous. The County will make the appropriate analyses to determine if the suspected hazardous material is hazardous by CalRecycle or LEA definition. The Contractor shall dispose of determined hazardous material in the hazardous waste disposal site designated by the County. The Contractor shall be compensated for disposal of such hazardous waste. This work shall be considered as extra work and therefore; will be paid for in accordance with Section 2.7 of the General Provisions entitled "Extra Work". (Any hazardous material generated by the Contractor, including but not limited to spills or leaks during routine equipment maintenance or any spills caused by any of the Contractor's

subcontractors or suppliers, shall be properly disposed of at the Contractor's expense as stated in the Contract Documents.)

- e. The County has obtained a South Coast Air Quality Management District (SCAQMD) Title V Permit revision in accordance to Rule 1150 for refuse excavation. The Contractor must place refuse within the limits of the landfill footprint as shown on the Project Drawings; and the Contractor shall also comply with all requirements of the SCAQMD permit conditions (i.e., daily cover, transportation, dust suppression, etc.) at any time refuse is encountered. The refuse excavation requirements associated with the Badlands Title V Permit are included in Appendix D. The Contractor shall address this work in the Site Safety Plan submittal Section 1.7.2. The County will provide required personnel to monitor the activities in accordance with the SCAQMD Title V Permit. Contractor shall notify County immediately when refuse is encountered during excavation and shall not proceed until County is ready to monitor refuse excavation.

7.4 MEASUREMENT AND PAYMENT

- a. The last available ground topography for the site was generated from a combination of an aerial flight survey completed in July 2018 and a conventional ground survey method completed in September, 2019. Due to the ongoing landfill operations, this composite ground topography will not reflect the actual field conditions at the time of award of this contract. Because of this, and since the ongoing landfill activities within the project limits will continue up to award of this contract and issuance of the Notice to Proceed, all earthwork quantities in the "Contractor's Proposal" are only estimates which have been primarily determined by using the aforementioned composite ground topography. However, in order to generate an updated ground topography contour map which will be used as the base map (or pre-construction ground) for this project, the County plans to perform an updated ground survey within any disturbed areas immediately before the issuance of the Notice to Proceed and the commencement of this Project. This survey (updated ground survey and the July 2018 aerial flight) will be used to generate an updated ground topography contour map (pre-construction ground contours) that will be used to determine the final pay quantities for all applicable bid items.
- b. Unless otherwise stated, the final measurement of all earthwork quantities for the various layers shall be calculated to the nearest cubic yard or the nearest square foot based only upon comparison of pre-construction and post-construction surfaces of the project work. These surfaces shall be established by a combination of conventional ground surveying done by the County and aerial flight surveys of the project work area. Unless otherwise stated, the surface for any layer which will be covered by subsequent layers shall be established by ground surveying. The surface for any layer which will not be covered shall be established by aerial flight survey. It should be noted that different methods may be used by the County for determining quantities for progress payments. However, the earthwork quantities used for progress payments will be adjusted at the completion of the project based upon the final measurement method stated in this paragraph. The Riverside County Flood Control

and Water Conservation District shall conduct the aerial flight surveys at the County's request immediately following the completion of work. Final volumetric calculation of earthwork quantities for payment purposes shall then be performed by the County based upon the resulting Digital Terrain Models (DTM) using the triangular volume method with a grid interval of one (1) foot by one (1) foot. The DTM from the aerial flight may take longer than 1 month from the completion of the Project to be received. At the confirmation of the Contractor, the quantity may use conventional ground survey method to determine final measurements.

- c. Allowable deviation from design grades shown on the Project Drawings shall be \pm 0.10 feet on all benches and access roads within the project limits; and \pm 0.25 feet for all remaining areas within the project limits. Limits for measurement of the excavations and fills shall be to the lines and grades as shown on the Project Drawings or as directed by the County and QA/QC Consultant.
- d. The **measurement** of the final quantity for *Bid Item No. 6* "Engineered Fill" shall be based on the total quantity of engineered fill placed only within the Grading limits, as shown on the Project Drawings. The total quantity of engineered fill shall include the quantity of engineered fill placed to construct the finished subgrade surface. The total quantity of engineered fill placed to construct the finished subgrade surface shall be determined by comparing the pre-construction ground surface and the finished subgrade surface. The pre-construction ground surface shall be established by a combination of conventional ground survey and aerial flight survey, and the post-construction ground surface for this work shall be established by ground surveying at completion of the finished subgrade surface. **Payment** for the placement of engineered fill shall be made based on the unit price per in-place cubic yard for engineered fill, as stated in the Contractor's Proposal, *Bid Item No. 6* - "Earthwork (Engineered Fill)" and shall constitute full compensation to the Contractor for all work related to the placement of engineered fill within the Grading Limits including but not limited to: clearing, grubbing, excavation of material used for engineered fill and compaction.
- e. The **measurement** of the final quantity for *Bid Item No. 7* "Over-Excavation and Placement of Engineered Fill" shall be based on comparison of the original ground surface (pre-construction ground) and/or County-surveyed excavated subgrade surface and the County-surveyed ultimate over-excavation surface (limited as determined by the County and/or the QA/QC Consultant). The Contractor, therefore, shall notify the County in writing a minimum of two (2) days prior to the placement of engineered fill within the over-excavated areas, and shall allow two (2) working days for the County to complete necessary surveying work. Establishing these surfaces and measuring the final quantity shall be performed by the County pursuant to the aforementioned method of calculation. **Payment** for over-excavation and placement of engineered fill shall be made based on the unit price per in-place cubic yard of the total excavation quantity, as stated in the Contractor's Proposal, *Bid Item No. 7*.

- f. The **measurement** of the final quantity for **Bid Item No. 8** "Refuse Excavation and Disposal" shall be determined in the refuse excavation area by comparing the County-surveyed refuse surface and the County-surveyed refuse excavation surface (limited as determined by the County and/or the QA/QC Consultant) within the approximate limits as shown on the Project Drawings. The Contractor, therefore, shall notify the County in writing a minimum of two (2) days prior to the excavation of the refuse encountered areas, and shall allow two (2) working days for the County to complete necessary survey work. The refuse excavation surface shall also be established by ground surveying after completion of refuse removal, prior to the placement of engineered fill. Establishing these surfaces and measuring the final quantity shall be performed by the County pursuant to the aforementioned method of calculation. **Payment** for refuse excavation and disposal shall be at the contract unit price per cubic yard as stated in **Bid Item No. 8** - "Earthwork (Refuse Excavation & Disposal)" and shall constitute full compensation to the Contractor for all work related to refuse excavation and disposal (within the designated areas) including but not limited to: furnishing all labor, supervision, materials, tools, and equipment; performing pioneering, clearing, grubbing; grading, re-grading, excavating, over-excavating, placing a minimum of one-foot (1') of clean interim cover over the exposed refuse surfaces, shaping, preparing, compacting, hauling, loading, Contractor surveying, compliance with all regulatory permits and conditions (including the Title V permit), construction of temporary haul roads for refuse excavation and disposal in accordance with the Contract Documents.
- g. No additional compensation will be allowed for removal, reprocessing, or re-compaction of material not meeting the requirement of the Contract Documents. No payment shall be made for excavation or fill outside the limits as shown on the Plans.
- j. The Contractor is notified that shrinkage of fill materials is expected and the Contractor's unit price shall take into consideration additional material required (due to shrinkage) to complete Engineered Fill Work in accordance with the Contract Documents.
- k. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 7

8. FINISHED SUBGRADE SURFACE PREPARATION FOR GEOSYNTHETICS

8.1 GENERAL

8.1.1 Section Includes

This section includes the work necessary to finish the surfaces of earth subgrade within the limits to receive geosynthetics on side slopes and benches. All costs associated with finished subgrade surface preparation (FSSP) for geosynthetics placed on the side slopes and benches shall be included in **Bid Item No. 9**.

8.1.2 References

Reference Standards and Specifications: The following standards and specifications, including documents referenced therein, form part of these Technical Provisions and are incorporated herein by reference.

American Society for Testing Materials (ASTM)

D6102 Standard Guide for Installation of Geosynthetic Clay Liners

8.1.3 QA/QC

All work shall be performed in accordance with the QA/QC Plan.

Prior to the start of work, the Contractor shall discuss with the County, at a minimum, the procedures, equipment and techniques to be used to prepare subgrade surfaces. The County shall have the authority to order an immediate stoppage of work because of non-standard preparation procedures, or for any condition which may result in a deficient earth subgrade surface to receive the geosynthetics.

8.2 MATERIALS

Materials shall comply with the applicable requirements of Section 7.2, "Materials" for on-site soils as required.

8.3 EXECUTION

- a. Prior to the start of preparation of the earth subgrade surface to receive the geosynthetics on side slopes and benches, a site inspection shall be conducted by the Contractor, the County and QA/QC Consultant to verify surface conditions required to support the geosynthetics. All areas receiving geosynthetic liner shall be **smooth drum rolled** prior to installation of geosynthetics.

- b. Before final rolling and compaction of the earth subgrade commences, it shall be free from abrupt breaks, sharp objects and other foreign materials that may inhibit proper placement of geosynthetics on the subgrade. For areas not accessible to large compaction equipment, final smoothing of the earth subgrade surface shall be performed by approved mechanical or hand tamping methods, as accepted by the County and QA/QC Consultant.
- c. The surfaces of the completed earth subgrade shall be smooth, uniform and free from sudden changes in grade, surface voids and un-compacted areas. Final finish subgrade surface preparation shall not precede the geosynthetics installation by more than 48 hours, in order to minimize potential damage due to wind, rain and the actions of man and animals. The surface of the earth subgrade shall be prepared to the tolerances and conditions specified in the Contract Documents.
- d. The subgrade surfaces shall have a smooth finished surface and shall be prepared according to ASTM D6102. The surface shall not be pebbly or tracked and rutted by equipment and shall be free from pockets, holes, and discontinuities that in the judgment of the County and QA/QC Consultant could cause bridging and over stressing of the liner. In addition, all rocks or coarse particles projecting by more than 3/8-inch above the finished surface shall be buried or removed.
- e. The finished subgrade surface shall not be wet or in any condition which will impede proper installation of the liner. Under no circumstances shall the geosynthetics be placed over standing or running water on the subgrade. The Contractor shall be responsible for maintaining the integrity of the geosynthetic liner throughout the duration of the project. Vehicles or personnel that may damage the subgrade or cause ruts shall be kept off the subgrade once the surface is constructed to the design elevations.
- f. Contractor shall not proceed with the installation of geosynthetics until an acceptance form for the surface preparation of geosynthetics detailing the approximate area and date has been signed by the Contractor, County and QA/QC Representatives. A subgrade acceptance form shall not be signed until an area of subgrade complies with all the conditions required in Section 8.3 of these Technical Provisions. A signed subgrade acceptance form does not relieve the Contractor from having to meet the requirements listed in Section 8.3 prior to installation of geosynthetics. A copy of a blank acceptance form for the Project has been provided in Appendix A of the QA/QC Plan.

8.4 MEASUREMENT AND PAYMENT

- a. The **measurement** of the final quantity for *Bid Item No. 9 "Finished Subgrade Surface Preparation for Geosynthetics (FSSP)"* shall be based on final square footage of ground surface after it has been prepared and tested to the satisfaction of the County and QA/QC Consultant. The area of the final ground surface shall be determined by the County based on conventional ground surveying method. Quantities shall be calculated based on "true" area and to the nearest square foot.

Limits of surface to be prepared are shown on the Project Drawings. **Payment** for finished subgrade preparation shall be at the contract unit price per square foot as stated in **Bid Item No. 9** and shall constitute full compensation to the Contractor for all work related to Finished Subgrade Surface Preparation on side slopes and bench areas within the geosynthetic liner limits in the project including but not limited to: furnishing all labor, supervision, materials, tools, and equipment necessary to finish the surfaces of earth subgrade to receive geosynthetics in accordance with the Contract Documents. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 8

9. ANCHOR TRENCH CONSTRUCTION

9.1 GENERAL

9.1.1 Section Includes

This work shall include furnishing all labor, supervision, tools, equipment, and materials necessary to complete the work of constructing anchor trenches along benches and slope alignments in accordance with the Contract Documents and Project Drawings. This work includes but is not limited to the excavation of the anchor trenches along the alignments shown on the Project Drawings to the depths and widths indicated in the design details prior to FML, GCL, geotextile and temporary liner (slope protection) deployment; temporarily stockpiling the excavated material; screening material placement on the bench; and placing and compacting the suitable material as specified in Section 9.3.4 "PCS Placement and Compaction". All construction of the anchor trenches shall conform to applicable requirements of the Standard Specifications and to the requirements of the Contract Documents.

9.2 MATERIALS

Material to be placed over the GCL, FML, and/or Geotextiles shall have maximum particle size no greater than one inch (1"). The Contractor shall screen material obtained from the designated soil stockpile areas or directly from the project excavation area to produce the required material. The soil used for the anchor trench shall be free from organic or other unsuitable material. In general, PCS materials shall be prepared and comply with the applicable material requirements of Section 13.2 "Materials" for the PCS layer for the side-slope liner and benches.

9.3 EXECUTION

9.3.1 Excavation

The anchor trench shall be excavated to the line, depth and width shown on the Project Drawings, prior to geosynthetic liner system placement. The anchor trench shall be excavated a maximum of 200 feet ahead of liner placement to eliminate the potential damage (due to rain or wind) of an open trench. The QA/QC Consultant and the County shall verify that the anchor trench has been constructed according to Project Drawings. Temporary diversion of storm water away from the anchor trench shall be provided to protect the open anchor trench from damage.

9.3.2 Anchor Trench Requirements

Slightly rounded corners shall be provided at the hinge of trenches where the FML, GCL and geotextile enter the trench, so as to avoid sharp bends in the FML, GCL and geotextile. This also applies to the 1-foot x 1-foot anchor trench used for the FML, GCL, geotextile and temporary protective membrane along the side-slopes. All sharp or protrusive objects, which could cause damage to the FML, GCL and geotextile, shall be removed from the trench in such a manner as to maintain the integrity of the trench. Areas of the trench, which are damaged by the removal of unacceptable material from the trench, shall be repaired to the satisfaction of the County and QA/QC Consultant. This may require the reconstruction or widening of the trench at the sole discretion of the County. No loose soil shall be allowed to underlie the FML, GCL and geotextile. No water shall be impounded under the material in the trench. Compliance with the requirements of this section is considered to be part of this item of work and no additional compensation shall be allowed for complying with this section.

9.3.3 Securing of FML, GCL and Geotextile

The Contractor shall use sandbags filled with one-inch minus material to secure the ends of the FML, GCL and geotextile panels in the anchor trench while the seaming takes place, prior to placement and compaction of PCS on top of materials on the trenches. The GCL shall be placed into and across the base of the excavated trench, stopping at the back wall of the excavation.

9.3.4 PCS Placement and Compaction

- a. Only screened materials (1" maximum particle size) shall be used as backfill for the anchor trench as required in Section 9.2 of these specifications.
- b. Backfilling of the trench shall be done in such a manner that as the FML, GCL and geotextile are completely seamed and approved by the QA/QC Consultant in a length of the trench, the trench is backfilled and compacted. The progression of anchor trench backfilling shall proceed in such a manner that no more than 100 lineal feet of anchor trench contains FML, GCL and geotextile panels, which have been completely seamed and approved by the QA/QC Consultant but are not backfilled. At the end of each day, all FML, GCL and geotextile panels, which have been seamed and approved by the QA/QC Consultant, shall be backfilled. These final 100 lineal feet of trench backfilled at the end of each day need not be compacted until the following morning, unless work is not scheduled to be performed the following day (i.e. weekend day or holiday). In this instance, all panels of FML, GCL and geotextile in the trench, which have approved seams, shall be backfilled and compacted on the same day.
- c. Backfill material (PCS) shall be material generated during the excavation of the anchor trench or from the Canyon 6 Stockpile borrow area and shall be free from roots, woods, organic matter, refuse or other deleterious matter.
- d. Trench backfill material (PCS) shall be placed in eight-inch (8") thick loose lifts (as approved by the County and QA/QC Consultant) and compacted lifts no greater than

six inches (6"). Each lift shall be spread evenly and compacted to obtain a near uniform condition in each layer by hand operated light compaction equipment such as a vibratory compaction foot or other equipment as approved by the County and QA/QC Consultant. Light rubber-tired or other light compaction equipment may be used to compact the upper portion of the trench without causing damage to the synthetic liner system as approved by the County and QA/QC Consultant

- e. Compaction and required moisture content shall be in accordance with the requirements of Section 7.3.4, "Engineered Fill". A minimum of 90% relative compaction (ASTM D1557) is required. At no time shall construction equipment come into direct contact with the geosynthetic liner system. If damage occurs, it shall be repaired by the Contractor at its expense prior to the completion of backfilling.

9.4 MEASUREMENT AND PAYMENT

- a. Excavation, temporarily stockpiling the excavated material or hauling it to the stockpile area, importing material (if needed) from the select material stockpile, securing the ends of GCL, FML and geotextile panels, and backfilling the anchor trench shall be measured by the County in terms of linear feet along the centerline of the anchor trench.
- b. Payment shall be made, at the unit price per actual lineal feet of completed anchor trench as stated in the Contractor's Proposal, **Bid Item No. 10** – "Excavate and Backfill Anchor Trench (3-foot wide x 2-foot deep)"; and **Bid Item No. 11** – "Excavate and Backfill Anchor Trench (1-foot wide x 1-foot deep)". No additional payment will be allowed for any removal, replacement, re-compaction or any other repairs required to provide an anchor trench in compliance with the Contract Documents. All other work required to construct the anchor trench but not specifically described herein, shall be considered incidental to the work and will not be paid for separately.
- c. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 9

10. COATED GEOSYNTHETIC CLAY LINER (GCL)

10.1 GENERAL

10.1.1 Section Includes

This item of work shall include furnishing all labor, supervision, tools, equipment, and material necessary to complete the work of installing specialty fabric encased Geosynthetic Clay Liner (GCL), also referred to as "Coated GCL". The GCL shall be installed on the side slopes, and benches within the limits shown on the Project Drawings and as directed by the County.

All construction operations relating to the installation of the GCL shall conform to applicable requirements of the Standard Specifications, to the requirements of the Contract Documents and the manufacturer's recommendations. This process shall result in the installation of a continuous GCL that meets or exceeds the specified minimum average roll values (MARV) in Section 10.2 of the Technical Provisions.

10.1.2 References

The following reference standards and specifications, including documents referenced therein, form part of this section:

American Society for Testing and Materials (ASTM):

- | | |
|-------------------------------|--|
| <i>D 4632-08</i> | Standard Test Method for Grab Breaking Load and Elongation of Geotextiles. |
| <i>D4643-08</i> | Standard Test Method for Determination of Water (Moisture) Content of Soil by the Microwave Oven Method. |
| <i>D5084</i> | Standard test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter. |
| <i>D5261-10</i> | Standard Test Method for Measuring Mass per Unit Area of Geotextiles. |
| <i>D5321-08</i> | Standard Test Method for Determining the Coefficient of Soil and Geosynthetics or Geosynthetic and Geosynthetic Friction by the Direct Shear Method. |
| <i>D5887-09</i> | Standard Test Method for Measurement of Index Flux through Saturated Geosynthetic Clay Liners Using Flexible Wall Permeameter. |
| <i>D5888-02 (2006)</i> | Standard Guide for Storage and Handling of GCL. |

- D5889-97 (2008)** Standard Practice for Quality Control of GCL.
- D5890-06** Standard Test Method for Swell Index of Clay Mineral Component of GCL.
- D5891-02 (2009)** Standard Test Method for Fluid Loss of Clay Component of GCL.
- D5993-99 (2009)** Standard Test Method for Measuring Mass per Unit Area of GCL.
- D6102-06** Standard Guide for Installation of Geosynthetic Clay Liner.
- D6243-09** Standard Test Method for Determining the Internal and Interface Shear Resistance for Geosynthetic Clay Liner by the Direct Shear Method.
- D6496** Standard Test Method for Determining Average Bonding Peel Strength between the Top and Bottom Layers of Needle-Punched Geosynthetic Clay Liners.
- D6768** Standard Test Method for Tensile Strength of Geosynthetic Clay Liners.
- E96** Standard Test Methods for Water Vapor Transmission of Materials.

10.1.3 Submittals

- a. Prior to the start of work, the Contractor shall furnish the following:
- i. The Contractor shall prepare and submit installation drawings (using AutoCAD or Microstation software application), description of installation procedures, and a schedule for performing/completing the work. Installation drawings shall **show a GCL sheet layout** with proposed size, number, position, and sequence of placing of all sheets and indicating the location of all field seams. Installation drawings shall also show complete detail and methods for anchoring the GCL at its perimeter.
 - ii. The Contractor shall submit six (6) representative samples of GCL material which has been made in conformance with these specifications. The samples shall be numbered and dated. Sample size shall be 4-inch x 4-inch.
 - iii. Complete material specifications, installation instructions, descriptive drawings, literature and field quality control plan.
 - iv. Method(s) for handling and storage of GCL material(s) prior to installation.
- b. Prior to shipment of the GCL material, the Contractor shall furnish the following:

- i. GCL manufacturer's QA/QC certifications to verify that the materials supplied for the project are in accordance with the requirements of these specifications. This will include the results of actual QC testing on the representative rolls from the project shipment. Those results shall include the results of index flux tests by ASTM D5887.
 - ii. The manufacturer shall submit a letter of intent to furnish manufacturer's warranty covering materials and workmanship of the GCL prorated for a period of not less than 5 years after the installation of the material. An executed original of the manufacturer's warranty shall be submitted 5 days after complete installation of the GCL material. The warranty shall warrant against manufacturing defects. The manufacturer's standard warranty shall also warrant against deterioration due to ozone, ultraviolet light or other normal weather aging. The warranty shall be limited to replacement of material only, and shall not cover installation of said material. It shall not cover damage due to vandalism, acts of animals, earthquakes and other acts of God.
 - iii. The Contractor shall furnish a written guarantee that the GCL installed is free of defects in material and workmanship. The guarantee for the GCL installed shall extend for a period of one (1) year following the final acceptance of the complete project. During the 11th month, a pre-guarantee expiration inspection of the exposed portions of the lining will be conducted to identify any necessary repair work covered by the guarantee. The Contractor shall agree to make any repairs or replacements found necessary by defects in material or workmanship which becomes evident within said guarantee period. The Contractor shall make repairs and/or replacements promptly upon receipt of written order from the County. If the Contractor fails to make repairs and/or replacements promptly, the County may do so, and the Contractor shall be liable to the County for the cost of such repairs and/or replacements.
- c. Prior to installation of the GCL material, the Contractor shall submit the following:
- i. Complete description of installation procedures including seaming procedures for field seams and repairs. Seaming procedures shall conform to the latest procedures recommended by the GCL Manufacturer and these specifications.
 - ii. Certification that the surface(s) on which the GCL will be placed is acceptable and in conformance with the recommendations of the GCL Manufacturer and these specifications. Installation of the GCL shall not commence until this certification is furnished to and accepted by the County and QA/QC Consultant.
 - iii. The Contractor shall allow at least two (2) weeks for GCL material conformance testing by QA/QC Consultant before the material is scheduled to be installed on the project.

10.1.4 QA/QC

All installation of the GCL shall be in accordance with the QA/QC plan, under the ongoing observation of the County and QA/QC Consultant. During the installation of the GCL, the County shall have the authority to order an immediate stoppage due to improper procedures or for any other reason, including but not limited to inclement weather, that, based on the County's and QA/QC Consultant's opinion, may result in a defective installation of the GCL.

Daily reports shall be submitted by the Contractor to the County prior to 11:00 a.m. documenting work accomplished the previous day including all personnel and equipment on site, quantities of material received, panels placed, seaming completed, tests performed, repairs made, weather conditions and other comments relative to the progress of the work.

10.1.5 Safety

Prior to installation of the GCL system, the Contractor shall instruct the workmen and the lining subcontractor's superintendent about safety procedures pursuant to local, State, and Federal requirements. The Contractor shall ensure that workers have and use safety gear and equipment required by local, State and Federal requirements. The Contractor shall instruct the workmen relative to the difficulties and potential hazards involved in handling the GCL, including, but not limited to installation during periods of high winds, rain, extreme heat, breathing of fine dust during bentonite seaming, walking on steep slopes, and working with and around any crane or high-lift used to place the rolls of GCL.

The Contractor shall provide safety equipment pursuant to applicable local, State, and Federal requirements for its personnel, and facilitate access to work area for the County's personnel and QA/QC Consultant's representatives for testing and inspection. Approved personal fall arrest, personal fall restraint or positioning systems shall be worn by those employees whose work exposes them to falling in excess of 7 1/2 feet from the perimeter of a structure, unprotected sides and edges, leading edges, through shaft ways and openings, sloped roof surfaces steeper than 7:12, or other sloped surfaces steeper than 40 degrees. Particular attention shall be given to relevant Division of Industrial Safety Construction. Said Orders are contained in Title 8 of the California Code of Regulations, Chapter 4, and Subchapter 4. Specific reference is made to Article 24 of said Construction Safety Orders.

The County shall have the authority to order an immediate stoppage of work because of improper installation procedures, noncompliance with the QA/QC Plan, safety infractions or for any reason which may result in a defective or unsafe installation of the GCL.

10.1.6 Product Labeling

Prior to shipment, the GCL manufacturer shall affix a label to each roll identifying the following characteristics:

- a. Product identification information (manufacturer name and address, brand name, product code)
- b. Lot number and roll number.
- c. Roll length and width.
- d. Total roll weight.

10.1.7 Packaging

The GCL shall be wound around a cardboard core to facilitate handling. The core is not intended to support the roll for lifting but should be sufficiently strong to prevent collapse during transit. All rolls shall be labeled and bagged in waterproof plastic packaging that is resistant to photo degradation by ultraviolet (UV) light.

10.1.8 Shipping, Handling, Delivery and Storage

The GCL rolls shall be delivered to the site only after the County receives and approves the required submittals. The Contractor shall assume responsibility for initial loading and shipping of the GCL, unloading, on-site handling, and storage. The Contractor shall ensure that the GCL rolls are transported on **flatbed trucks**. Unloading shall be performed **using fabric straps only**. These straps, as supplied by the Contractor, shall be ready for usage at the arrival of each shipment. If the Contractor elects to use a different type of truck or a different method of unloading, the Contractor shall in advance submit a written request outlining the type of trucks, equipment, and method detailing its plan for the County's review. The County will respond to the Contractor's request in writing and the County's decision will be final. A visual inspection of each roll shall be made as it is unloaded to identify if any packaging has been damaged. Rolls with damaged packaging shall be marked and set aside for further inspection. The packaging shall be repaired prior to being placed in storage. Minor rips or tears in the plastic packaging shall be repaired with moisture resistant tape prior to being placed in storage to prevent moisture damage. GCL rolls delivered to the project site shall be only those indicated on GCL manufacturing quality control certificates. For needlepunched GCLs, the presence of free-flowing water within the packaging shall require that roll to be set aside for further examination to ascertain the extent of damage, if any. Free-flowing water within the packaging of unreinforced GCLs shall be cause for rejection of that roll.

Prior to shipment and before unloading the GCL, the Contractor shall contact the manufacturer to ascertain the appropriateness of the proposed unloading methods and equipment to be utilized. Storage of the GCL rolls shall be the responsibility of the Contractor. The GCL shall not be stored directly on the ground. The storage area will be such that the GCL is protected from damage by UV, other sources of moisture, mud, dirt, puncture, cutting, precipitation, debris, any other damaging or deleterious conditions. Rolls of GCL material **shall not be stacked higher than three rolls** or in accordance with the GCL manufacturer's recommendations but never more than can be safely managed considering site conditions, equipment and personnel.

Rolls should be stored in accordance with the GCL manufacturer's recommendations and in a manner that prevents sliding or rolling from the stacks; and may be accomplished by the use of chock blocks or by use of the dunnage shipped between rolls. All stored GCL materials and the accessory bentonite must be covered with a water tight, ultraviolet light resistant plastic sheet or tarpaulin until installation. The Contractor's attention is directed to ASTM D 5888 "Standard Guide for Storage and Handling of GCL" in addition to the above requirements.

Bagged bentonite material shall be stored and tarped next to GCL rolls unless other more protective measures are available. Bags shall be stored on pallets or other suitably dry surface which will prevent undue prehydration.

10.2 MATERIALS

GCL materials shall be GSE BentoLiner (Coated GCL) or engineer approved alternative certified by the manufacturer to comply with the material specifications as required by the Contract Documents. GCL shall be a new, high quality product designed and manufactured specifically for the purposes of this type of work by mechanically bonding the geotextiles using a needlepunching process as described in [Section 1.2](#) to enhance frictional and internal shear strength characteristics. Its suitability and durability for this type of work shall have been adequately demonstrated by prior applications. The GCL rolls shall be shipped and stored in opaque and watertight wrappings.

The needlepunched GCL shall thermally heat set the nonwoven fibers where they protrude from the second geotextile (woven or nonwoven depending upon product) to more permanently secure the reinforcement in place. Other means may be used to lock the fibers in place if the process demonstrates similar performance to the thermal heat set process. In order to maintain these characteristics, no glues, adhesives or other non-mechanical bonding processes shall be used in lieu of the needlepunching process. Their use to enhance the physical properties of the GCL is permitted.

The GCL installation shall be performed under the ongoing observation of the County and QA/QC Consultant, and according to the QA/QC Plan. The Contractor shall be responsible for detecting and repairing all damaged areas. A "lap" line and a "match" line shall be imprinted on both edges of the upper geotextile component of the GCL as a means for providing quality assurance of the overlap. Lines shall be printed as continuous dashes in easily observable non-toxic ink. A six inch (6") lap line and a nine inch (9") match line for scrim reinforced GCLs shall be imprinted on both edges of the upper geotextile component of the GCL to assist in installation overlap quality control. A twelve inch (12") lap line and fifteen inch (15") match line for non-scrim reinforced GCLs shall be imprinted on both edges of the upper geotextile component of the GCL to assist in installation overlap quality control. These lines shall be used during CQA to ensure the minimum overlap is achieved. The minimum overlap guideline shall indicate where the edge of the panel must be placed in order to achieve the correct overlap for each panel.

Prior to considering an alternative GCL material, the Contractor shall submit certified test results and statements of quality from the proposed GCL supplier to the engineer, indicating without exception that the proposed GCL meets the requirements of this specification. Submittals shall be delivered to the engineer a minimum of five business days in advance of the bid.

The GCL material shall be in accordance with the test methods, test frequencies and material physical properties as listed in the following data sheets. The minimum acceptable dimensions for the GCL panels shall be fifteen feet (15') wide and 125 feet long. Short rolls (rolls less than 125 feet long) may be supplied, but at a rate not to exceed 5% of the total square footage produced for this project.

The Manufacturer's certification shall demonstrate that the GCL meets or exceeds the Minimum Average Roll Values (MARV) listed in the table below.

Tested Property	Test Method	Frequency	VALUE	QA/QC Conformance Testing (Y/N)
Geotextile Property				
Cap Nonwoven, Mass/Unit Area	ASTM D 5261	1/200,000 ft ²	6.0 oz/yd ² MARV ⁽¹⁾	N
Carrier Woven, Mass/Unit Area	ASTM D 5261	1/200,000 ft ²	3.1 oz/yd ² MARV	N
Bentonite Property				
Swell Index	ASTM D 5890	1/100,000 lb	24 ml/2 g min	N
Moisture Content	ASTM D 4643	1/100,000 lb	12% max	N
Fluid Loss	ASTM D 5891	1/100,000 lb	18 ml max	N
Finished GCL Property				
Bentonite, Mass/Unit Area ⁽²⁾	ASTM D 5993	1/40,000 ft ²	0.75 lb/ft ² MARV	Y
Tensile Strength ⁽³⁾	ASTM D 6768	1/40,000 ft ²	40 lb/in MARV	Y
Peel Strength	ASTM D 6496 ASTM D 4632 ⁽⁴⁾	1/40,000 ft ²	3.5 lb/in MARV 21 lb MARV	Y
Hydraulic Conductivity ⁽⁵⁾	ASTM D 5887	Periodically	5 x 10 ⁻¹⁰ cm/sec max	N
Index Flux ⁽⁵⁾	ASTM D 5887	Periodically	1 x 10 ⁻⁹ m ³ /m ² /sec max	Y
Internal Shear Strength ⁽⁶⁾	ASTM D 6243	Periodically	500 psf Typical	N
TYPICAL ROLL DIMENSIONS				
Width x Length ⁽⁷⁾	Typical	Every Roll	15.5 ft x 150 ft	N
Area per Roll	Typical	Every Roll	2,325 ft ²	N
Packaged Weight	Typical	Every Roll	2,600 lb	N

NOTES:

- ⁽¹⁾ Minimum Average Roll Value.
- ⁽²⁾ At 0% moisture content.
- ⁽³⁾ Tested in machine direction.

- ⁽⁴⁾ Modified ASTM D 4632 to use a 4 in wide grip. The maximum peak of five specimens averaged in machine direction.
- ⁽⁵⁾ De-aired, deionized water @ 5 psi maximum effective confining stress and 2 psi head pressure.
Hydraulic Conductivity and Index Flux are performed only on a periodic basis because the polypropylene coating is essentially impermeable.
- ⁽⁶⁾ Typical peak value for specimen hydrated for 24 hours and sheared under a 200 psf normal stress.
- ⁽⁷⁾ Roll widths and lengths have a tolerance of ±1%.

10.3 EXECUTION

10.3.1 Inspection

Prior to installation of the GCL on side slopes, a site inspection shall be conducted by the County, QA/QC Consultant and Contractor to verify measurements, subgrade compaction and surface conditions to support the GCL. The side slopes surface upon which the GCL is installed shall be prepared and compacted in accordance with Section 8 in these Contract Documents and Project Drawings. All surfaces to be lined shall be smooth and free of debris, material, roots and sticks, and sharp or angular rocks protruding more than 3/8-inch above finish grade. The level of compaction should be such that no rutting is caused by installation equipment or other construction vehicles.

Immediately prior to GCL deployment on side slopes, the subgrade shall be fine-graded to fill in all voids, cracks or erosion and then smooth-rolled to provide a suitable surface for the GCL installation. At completion of this activity, no sharp irregularities or abrupt elevation changes shall exist in the subgrade. Adequate drainage of the subgrade shall be provided and maintained until installation of the GCL is completed. The County will inspect the work daily to confirm that drainage is provided. The liner subcontractor shall certify to the QA/QC Consultant in writing its acceptance of the subgrade before GCL placement.

It shall be the Contractor's responsibility thereafter to inform the QA/QC Consultant or the County of any change in the condition of the subgrade that could cause the subgrade to be out of compliance with the requirements of the Contract Documents. During unwrapping of the GCL, the Contractor shall visually inspect all materials, particularly the surfaces of the geotextile portion of the GCL for imperfections and faulty areas. All such defective areas of the sheets shall be marked and repaired in accordance with approved methods.

10.3.2 Installation

a. General Requirements

The GCL installation shall be conducted in accordance with the accepted panel layout installation drawings, the manufacturer's recommendations, and the Contract Documents. Any deviations must be accepted in writing in advance by the County. The minimum panel width in the anchor trench shall be three (3) feet. It is the responsibility of the Contractor to remove any panels that may be stressed due to the three (3) feet minimum requirement. The

above requirement does not relieve the Contractor from its responsibility to maintain the integrity of the liner until final acceptance by the County.

b. GCL Deployment

The use of equipment capable of freely suspending the GCL roll is required. A spreader bar and core pipe are also required for supporting the roll and allowing it to unroll freely. The core pipe and spreader bar shall not bend or flex excessively when a full roll is lifted.

GCL panels are typically placed with the nonwoven side up (heat burnished side down) to maximize the interface shear strength resistance below the primary barrier. For this project, Coated GCL is used. Coated side should be installed facing down. In base or flat areas, the GCL does not require any particular orientation. Where possible, all slope panels should be installed parallel to the maximum slope while panels installed in flat areas require no particular orientation. If the GCL material consists of bentonite encapsulated between non-woven and slit-film woven geotextiles, then the GCL panels shall be placed with the non-woven geotextile facing down. The orientation of the GCL panels is important. When working in sloping areas, the long dimension of all panels shall be oriented up and down the slope, and the ends of these panels shall be secured at the top in an anchor trench. On the side slopes, panels shall be placed from the highest elevation to the lowest within the area to be lined, to facilitate drainage in the event of precipitation. GCL materials shall be installed in general accordance with the procedures set forth in this section, subject to site specific conditions which would necessitate modifications. Deployment should proceed from the highest elevation to the lowest to facilitate drainage in the event of precipitation. The GCL may be deployed on slopes by pulling the material from a suspended roll, or securing a roll end into an anchor trench and unrolling each panel as the handling equipment slowly moves backwards. Deployment on flat areas shall be conducted in the same manner as that for the slopes, however, care should be taken to minimize "dragging" the GCL. Slip-sheet may be used to facilitate positioning of the liner while ensuring the GCL is not damaged from underlying sources. Displaced panels shall be adjusted to the correct position and orientation. The adjusted panel shall then be inspected for any geotextile damage or bentonite loss. Damage shall be repaired per Section [10.3.2 d](#) of these Technical Provisions. End-of panel seams on slopes are permissible, but only if the slope steepness is 4H: 1V or less. End-of-roll seams shall be located at least 3 ft from the toe or crest of the slope. Panels may only be placed across the slope when the slope is less steep than 4H: 1V or when the slope length is very short (less than or equal to 9 feet) thus for this project **cross-slope or horizontal seaming of panels shall not be allowed.** Panels shall be placed free of tension or stress yet without wrinkles or folds. It is not permissible to stretch the GCL in order to fit a designated area. Panels shall not be dragged across the subgrade into position except where necessary to

obtain the correct overlap for adjacent panels. The GCL shall not be placed during rain or high winds.

The Contractor shall unwrap and install only as much GCL in one working day as can be covered with FML or other approved cover in case of emergency. **In no case shall the GCL be exposed at the end of the day.** The exposed edge of the GCL shall be covered by a temporary tarpaulin or other such water resistant sheeting until the next working day.

c. GCL Panel Seaming

All GCL seams shall be lap seams as shown on the accepted installation panel layout drawings to ensure that a continuous seal is achieved between panels. **Lapping the edges of GCL sheets a minimum of six inches (6") on side slope liner with thermal fusing.** The lap line and match lines printed on the panels shall be used to assist in obtaining this overlap. The GCL will have seam overlaps a minimum of six inches (6") for all woven/nonwoven GCLs. GCL's comprised of a nonwoven/nonwoven geotextiles will have a minimum seam overlap of six inches (6") for scrim reinforced and twelve (12") minimum for all non-scrim reinforced nonwoven GCLs. End of panel or butt end seams shall be a minimum of twelve inches (12") for all woven/nonwoven GCLs, twelve (12") for all scrim-reinforced double nonwoven GCLs, twenty-four inches (24") for non-scrim reinforced double nonwoven GCLs, and be free of wrinkles, folds or "fish-mouths". After the overlying panel is placed, its edge shall be pulled back to expose the overlap zone. Any soil or debris present in the overlap zone or entrapped in the geotextiles shall be removed. Seams shall shingle in a down slope direction, so that water flows across the seam from upslope sheet to the down slope sheet. **No horizontal seams shall be allowed on the slopes steeper than 4H:1V.** Any accessory bentonite used for sealing seams, penetrations, or repairs, shall be the same granular bentonite as used in the production of the GCL itself. Loose granular bentonite shall be placed between panel overlaps at a rate of 0.25 pound per lineal foot.

d. Damage Repair

Any damage in the form of cuts, tears, delamination of geotextiles or displaced panels in the GCL shall be identified by the Contractor and repaired by cutting a patch from unused GCL and placing it over the affected area. The damaged area should be free of all dirt and debris. Damaged GCL on flat surfaces shall be repaired by completely exposing the affected area, removing all foreign objects or soil, and by then placing a patch cut from unused GCL over the damage (damaged material may be left in place), with a minimum overlap of **eighteen inches (18") on all edges.** Accessory bentonite should be placed between the patch edges and the repaired material at a rate of a quarter pound per lineal foot of edge spread in a continuous six-inch fillet. Damaged

GCL material on slopes shall be repaired by the same procedures above, however, the edges of the patch should also be adhered to the repaired liner with an adhesive to keep the patch in position during backfill or cover operations.

e. Detail Work

Detail work, defined as the work necessary to seal the liner to pipe penetrations, walls, drainage structures, spillways, and other appurtenances, shall be performed as recommended by the GCL manufacturer and accepted by the County in writing.

f. Placement of Overlying Materials

Precautions shall be taken to prevent damage to the GCL during deployment of the FML by restricting heavy equipment traffic. Unrolling the FML can be accomplished by the use of a crane from the bottom or a cable tethered from the top from a truck or other similar equipment. Installation of the overlying geosynthetic component can be accomplished through the use of lightweight, rubber-tired equipment such as a 4-wheel all-terrain vehicle (ATV). This vehicle can be driven directly on the GCL, provided the ATV makes no sudden stops, starts, or turns. Smooth HDPE may be dragged across the GCL surface with equipment or by hand labor during positioning. Similarly, the HDPE may be unrolled with the use of low ground pressure equipment.

During the installation of the textured FML over the GCL, a **slip sheet** (such as 20-mil smooth HDPE) shall first be placed over the GCL to allow the FML to slide into its proper position. This slip sheet shall be removed prior to FML welding. Any leading edge of panels left uncovered shall be protected at the end of the working day with a waterproof sheet which is adequately secured with sandbags or other ballast.

g. Premature Hydration

If the GCL is prematurely hydrated greater than 20% moisture, installer shall notify the QA/QC technician and project engineer for a site specific determination as to whether the material is acceptable or if alternative measures must be taken to ensure the quality of the design.

h. Activation

If the GCL will be utilized for the control of non-aqueous phase liquids, prehydration may be necessary. The GCL manufacturer shall be contacted for these cases for site specific recommendations.

i. Anchor Trench Construction

Reference is made to Section 9.3 of these Technical Provisions for the construction of the anchor trench.

10.3.3 Field Quality Control

a. General Requirements

Inspection and testing shall involve the observation of the installation of the GCL, including all seaming and patches, by the QA/QC Consultant. The QA/QC Consultant shall verify proper overlap of adjacent panels used to seal the seam. The Contractor shall make a visual inspection of the GCL panels, seams and anchors as the installation progresses as well as when the installation is complete. Defective areas shall be clearly marked and repaired. The County and QA/QC Consultant shall give final acceptance of repairs.

The Contractor shall retain responsibility for the integrity of the GCL until final acceptance by the County. The County shall accept the GCL when all of the following conditions have been met:

- i. Written certification letters and "as-built" record drawings including the panel numbers and location have been received from the Contractor and accepted by the County.
- ii. Installation is completed.
- iii. Documentation of completed installation, including all submittals and reports, is complete.
- iv. Verification of adequacy of field seams and repairs is complete.
- v. The GCL and composite liner system has been installed/constructed in accordance with the Contract Documents.

During delivery of GCL material to the site, conformance samples shall be collected by the QA/QC Consultant for testing by an independent laboratory. Samples shall be taken across the entire width of the roll and shall not include the first three feet. Samples shall be 3 feet long by the roll width. The samples shall be marked with an arrow indicating the machine direction and the manufacturer's roll and lot identification number.

Conformance samples will be taken at a rate of one (1) per lot or one per 100,000 square feet, whichever results in the greater number of tests. The County will pay for the cost of conformance tests except for retests of failed samples or conformance tests for lots less than 50,000 square feet, which will be borne by the Contractor.

The independent testing agency shall save all test samples including specimens tested until notified by the County regarding their disposal. All

specimens that failed shall be returned immediately to the County for determination of corrective measures to be taken.

b. Material Acceptance Criteria (Interpretation of Conformance Test Results)

The minimum number of specimens tested per conformance sample for each tested GCL property will be determined in accordance with the respective ASTM Standard. The average value will be calculated from the specimen test values of each conformance sample and compared to the values specified in Section 10.2 of the Technical Provisions. A conformance sample that yields any tested property less than the specified value will be recorded as a failure and an additional two (2) rolls will be sampled from the same 100,000 square feet or lot and tested for the failed properties. If a second conformance sample fails, all rolls within the sampled 100,000 square feet or lot will be rejected for use on the project. If no additional conformance tests fail, only the roll which yielded a failure will be rejected from use on the project. The decision of the County shall be final.

10.4 MEASUREMENT AND PAYMENT

- a. The **measurement** of the final quantity for **Bid Item No. 12** "Furnish & Install GCL" shall be based on the final in-place square footage of ground covered by the GCL material after it has been installed, tested, and verified by the QA/QC Consultant to the satisfaction of the County. The area of the final surface shall be verified by County based on conventional ground surveying. Quantity shall be calculated based on "true" area and to the nearest square foot utilizing digital terrain modeling methods. **Payment** shall be made, after verification and acceptance, at the unit price per square foot, as stated in the Contractor's Proposal, **Bid Item No. 13**. No additional compensation shall be made for any GCL waste materials from trimming of panels, seam overlaps, patches, repairs or any material damaged during construction by negligence on the part of the Contractor in providing adequate protection for the material. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 10

11. FLEXIBLE MEMBRANE LINER (FML)

11.1 GENERAL

11.1.1 Section Includes

This section covers the work necessary to furnish and install the Flexible Membrane Liner (FML) as described by the Contract Documents. The intent of these specifications is to provide a watertight lining system at the completion of the work.

The FML shall consist of the 60 -mil single sided textured High Density Polyethylene (HDPE) liner material.

The 60-mil single sided textured HDPE shall be installed as a component of the side-slope liner system in the area limits shaded on the Project Drawings (smooth side up). The HDPE materials shall be used as sacrificial strips and chaffing sheets when required by the project.

The Contractor shall provide all labor, supervision, tools, equipment and materials necessary to install the flexible membrane lining system required by the Contract Documents.

11.1.2 References

Reference Standards and Specifications: The following standards and specifications, including documents referenced therein, form part of these Technical Provisions and are incorporated herein by reference.

American Society for Testing Materials (ASTM)

- | | |
|----------------------|---|
| D413-98(2007) | Standard Test Methods for Rubber Property Adhesion to Flexible Substrate |
| D638-10 | Standard Test Method for Tensile Properties of Plastics |
| D696-08 | Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics |
| D746-07 | Standard Test Method for Brittleness Temperature and Elastomers by Impact |
| D792-08 | Standard Test Method for Specific Gravity and Density of Plastics by Displacement |

- D882-10** Standard Test Methods for Tensile Properties of Thin Plastic Sheeting
- D1004-09** Standard Test Method for Initial Tear Resistance of Plastic Film and Sheeting
- D1149-07** Standard Test Method for Rubber Deterioration-Cracking in an Ozone Controlled Environment
- D1204-08** Standard Test Method for Linear Dimensional Changes of Non-rigid Thermoplastic Sheeting or Film at Elevated Temperature
- D1505-10** Standard Test Method for Density of Plastics by Density Gradient Technique
- D1603-06** Standard Test Method for Carbon Black in Olefin Plastics
- D1693-08** Standard Test Method for Environmental Stress-Cracking of Ethylene Plastics
- D4437-08** Standard Practice for Non-Destructive Testing (NDT) for Determining the Integrity of Field Seams Used in Joining Flexible Polymeric Sheet Geomembranes
- D4545-(withdrawn 2008)** Standard Practice for Determining the Integrity of Factory Seams used in Joining Manufactured Flexible Sheet Geomembrane
- D4833-07** Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
- D5596-03(2009)** Standard Test Method for Microscopic Evaluation of the Dispersion of Carbon Black in Polyolefin Geosynthetics
- D5994-10** Standard Test Method for Measuring Core Thickness of Textured Geomembranes
- D5321-08** Standard Test Method for Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Geosynthetic Friction by Direct Shear Method
- D5397-07** Standard Test Method for Evaluation of Stress Crack Resistance of Polyolefin Geomembranes Using Notched Constant Tensile Load Test
- D5641** Standard Practice for Geomembrane Seam Evaluation by Vacuum Chamber

- D5820** Standard Practice for Pressurized Air Channel Evaluation of Dual-Seamed Geomembranes
- D6243-09** Standard Test Method for Determining the Internal and Interface Shear Resistance for Geosynthetic Clay Liner by the Direct Shear Method
- D6392-08** Determining the Integrity of Nonreinforced Geomembrane Seams Produced Using Thermo-Fusion Methods
- D7007-09** Electric Methods for Locating Leaks in Geomembranes Covered with Water or Earth Materials
- D8265** Standard Practices for Electrical Methods for Mapping Leaks in Installed Geomembranes

11.1.3 Submittals

The Contractor shall submit in advance complete material specifications and descriptive literature for acceptance by the County. The Contractor shall also submit installation panel layout drawings, which show the layout of all FML sheets with proposed size, numbers, position, and sequence of placing all sheets and indicating the location of all field seams. The installation drawings shall also show complete details and methods for anchoring the FML at its perimeter and making field welds. The Contractor shall prepare these installation panel layout drawings by using either AutoCAD or Microstation software applications, and shall submit these drawings to the County in digital format (on a compact disc) as well as hard copies.

The Contractor shall submit written certification by the FML manufacturer that the FML materials conform to the requirements of the Contract Documents; are similar and of same formulation as that for which certification is submitted; and have been demonstrated by actual usage to be satisfactory for the intended application.

The Contractor shall submit **six (6)** 8-inch x 10-inch samples of FML material(s), **six (6)** three foot samples of welding rod used for extrusion welding, and **six (6)** samples of field welds which have been made in conformance with these Contract Documents (three each fusion and extrusion). The Contractor using the same materials, equipment and procedures specified for the FML shall fabricate the field seam samples. Sample width shall measure twelve-inches (12") plus weld width and sample length shall measure eighteen-inches (18"). The samples shall be numbered and dated. The Contractor shall submit a complete description of welding procedures for making field welds and repairs. The welding procedures shall conform to the latest procedures recommended by the FML Manufacturer and to these specifications.

The Contractor shall submit for acceptance by the County a method of handling and storing FML material(s) prior to installation. The Contractor shall install the FML only on surface(s) that it has formally accepted from the Contractor by submitting a written "release" form. This form shall be furnished to the QA/QC Consultant and is subject to

acceptance by the County to ensure that the surfaces meet all the requirements for installation as detailed in these specifications.

The FML manufacturer shall submit a letter of intent to furnish a written lining material warranty on a prorated basis for a period of 20 years after the installation of material. An executed original of the manufacturer's warranty shall be submitted 5 days after complete installation of the FML material. The warranty shall protect against manufacturing defects; and the manufacturer warranty shall warrant against deterioration due to ozone, ultraviolet light, or other normal weather aging. The warranty shall be limited to replacement of material only and shall not cover installation of said material. It shall not cover damage due to vandalism, acts of animals, earthquakes, or acts of God.

The Contractor shall furnish a written guarantee that the FML work constructed by him is free of defects in material and workmanship. The guarantee for the FML installed pursuant to these Contract Documents shall extend for a period of one (1) year following final acceptance of the entire project. During the 11th month of the warranty period, a pre-guarantee expiration inspection of the exposed portions of the FML material will be conducted to identify any necessary repair work covered by the guarantee. The Contractor shall agree to make any repairs or replacements found to be necessary by defects in material or workmanship, which become evident within this guarantee period. The Contractor shall make repairs and/or replacements promptly upon receipt of written order from the County. If the Contractor fails to make repairs and/or replacements promptly, the County may do so, and the Contractor shall be liable to the County for the cost of such repairs and/or replacements.

11.1.4 QA/QC

Prior to installation of FML material, the Contractor shall allow at least two (2) weeks for FML material conformance testing by QA/QC Consultant before the material is scheduled to be integrated into the project. The Quality Control Plan(s) to be implemented for the work by the FML manufacturer, the Contractor and the lining subcontractor shall be in accordance with the Contract Documents and the QA/QC Plan. The County shall have the authority to order an immediate stoppage of work because of improper installation procedures, noncompliance with the QA/QC Plan, safety infractions or for any reason which may result in a defective or unsafe installation of the FML.

Daily reports shall be submitted by the Contractor to the County prior to 11:00 a.m. documenting work accomplished the previous day including all personnel and equipment on site, quantities of material received, panels installed, seaming completed, tests performed, repairs made, weather conditions and other comments relative to the progress of the work.

11.1.5 Safety

Prior to installation of the FML, the Contractor shall instruct the workmen on the safety procedures pursuant to local, State, and Federal requirements. The Contractor shall ensure that workers have and use safety gear and equipment required by local, State and

Federal requirements. The Contractor shall instruct the workmen relative to the difficulties and potential hazards involved in handling the FML, especially during periods of high winds. The Contractor shall provide safety equipment pursuant to applicable local, State, and Federal requirements for his personnel, the County personnel and QA/QC Consultant's representatives when working.

Approved personal fall arrest, personal fall restraint or positioning systems shall be worn by those employees whose work exposes them to falling in excess of 7 1/2 feet from the perimeter of a structure, unprotected sides and edges, leading edges, through shaft ways and openings, sloped roof surfaces steeper than 7:12 (Horizontal: Vertical), or other sloped surfaces steeper than 40 degrees. Particular attention shall be given to relevant Division of Industrial Safety Construction. Said Orders are contained in Title 8 of the California Code of Regulations, Chapter 4, and Subchapter 4. Specific reference is made to Article 24 of said Construction Safety Orders.

11.1.6 Delivery, Storage and Handling

The FML shall be shipped, stored and handled in accordance with the manufacturer's recommendations and as in the Contract Documents. Contractor shall be completely responsible for shipping, storage and handling of all FML. The FML rolls shall be delivered to the site only after the County receives and approves the required submittals.

Contractor shall notify the County at least twenty-four (24) hours (one full work day) prior to scheduled delivery. No materials shall be unloaded except in the presence of the QA/QC Consultant's representative. The FML delivered to the site shall be inspected for damage and unloaded and stored with minimal handling. Damaged rolls shall be separated from undamaged rolls until proper disposition of material is determined by the County. The County will be the final authority on the determination of damage.

No hooks, tongs, or other sharp tools or instruments shall be used for handling the FML. Contractor shall use cloth chokers and spreader bars for loading and unloading and spreader bars and roll bars for deployment. The FML shall not be folded or dragged along the ground.

The FML shall be wound onto a minimum 6 inch (6") heavy cardboard or plastic hollow core which is stable enough to support the roll without deflecting, buckling or otherwise falling during handling, storage, and transportation.

The FML shall be protected from storm water, soil, mud, dirt, debris, puncture, cutting, or other damaging or deleterious conditions. The FML rolls shall not be stored on wooden pallets and shall not be stacked more than three (3) rolls high. The welding rod delivered to the site shall be kept covered and dry.

Under no circumstances shall the installed FML be subjected to materials, sandbags, equipment or other items being dragged across its surface, nor shall workmen and others slide down slopes atop the FML. All damaged surfaces resulting from abuse of any kind

caused by the Contractor in performance of the work shall be repaired at the Contractor's expense.

11.2 MATERIALS

A. FML Resin

Resin for the geomembrane shall be virgin, first quality high density polyethylene (HDPE) resin produced in North America and compounded and manufactured specifically for the purpose of producing HDPE geomembranes. There shall be no intermixing with other resin types. Reclaimed polymer shall not be added to the geomembrane resin.

HDPE resin shall meet the following minimum specifications:

Test	Test Method	Unit	Requirements
Density*	ASTM D1505	g/cc	0.94 minimum
Melt Flow Index	ASTM D1238 Condition E	g/10 min	<1.0

*Base resin density without carbon black added.

One set of tests shall be performed per batch of resin. At a minimum, the geomembrane manufacturer shall sample and test each compartment of each rail car or truck to ensure that product purity was maintained during shipment. Certified test results shall be submitted to and approved by the QA/QC Consultant at least five (5) working days prior to shipping geomembrane to the site.

B. FML Rolls

The material shall be new FML, high quality product designed and manufactured specifically for the purpose of this project. Its suitability and durability for this type of work shall have been adequately demonstrated by prior applications. Labels on the rolls of HDPE material shall identify the thickness of the material, the length and width of the roll, and the manufacturer's run number. The textured surface of the HDPE shall be coextruded textured surface as manufactured by GSE or Polyflex, or approved equal. The textured HDPE lining material shall be certified in writing by the lining manufacturer to meet thickness and material specifications. The texturing of HDPE lining material shall be of the same type of polymer and formulation as that of the base sheet material. The surface texturing material shall be uniform and consistent, shall remain intact and shall be resistant to separation from the base sheet as a result of abrasion and contact with chemicals encountered in solid waste landfill applications. All work associated with the texturing process shall be performed by the manufacturer of the base sheet.

Extrusion resin used for extrusion welding associated with repairs or difficult welding shall be of the same HDPE material used in the supplied sheet. Physical properties shall be the same as in the HDPE sheets. The FML installation shall be performed under the ongoing observation of the County and QA/QC Consultant, and according to the QA/QC Plan. The Contractor shall be responsible for repairing all damaged areas. The material shall have or exceed the following Minimum Average Roll Values (MARV) listed in the table below. Exceeding the MARV listed below does not relieve the FML material from meeting or exceeding the additional requirements listed within these technical provisions, including but not limited to interface shear strength.

Property	Unit	Test Method	Value 60- mil	QA/QC Conf. Testing (Y/N)
Thickness MARV	mils	ASTM D 5994	Min. 60	Y
Minimum thickness (lowest individual for any of 10 values)	mils	ASTM D 5994	54	Y
Asperity Height	mils	ASTM D7466	Min. 15	Y
Density	g/cm ³	ASTM D1505	.94 min	Y
Tensile Strength at Yield	ppi	ASTM D638 TYPE IV Specimen 2 ipm	126	Y
Elongation at Break	%	ASTM D638 TYPE IV Specimen 2 ipm	> 150	Y
Elongation at Yield	%	ASTM D638 TYPE IV Specimen 2 ipm	>12	Y
Tear Resistance	lbs	ASTM D1004 Die C	42	N

Property	Unit	Test Method	Value 60- mil	QA/QC Conf. Testing (Y/N)
Stress Crack Resistance	Hours	ASTM D5397	200	N
Carbon Black Content	%	ASTM D1603	2 to 3	Y
Puncture Resistance	lbs	ASTM D4833	90	Y
Carbon Black Dispersion ¹	Rating	ASTM D5596	See Note ¹	Y

Note 1: Acceptance Criteria: The test result will be accepted if 8 or more specimens are in Category 1 and 2; and if 10 or more specimens are in category 1, 2 and 3; and if no specimens are in category 4 and 5.

C. Geomembrane Seam Testing Requirements (For Integrity of Field Seams):

Property	Unit	Test Method	Value 60- mil	QA/QC Conf. Testing (Y/N)
Shear Seams	ppi (lb/in.)	ASTM D 6392	120- lb/in.	Y
Peel Strength Fusion	ppi (lb/in.)	ASTM D 6392	91- lb/in.	Y
Peel Strength Extrusion	ppi (lb/in.)	ASTM D 6392	78- lb/in.	Y

11.3 EXECUTION

11.3.1 Inspection

Prior to installation of 60-mil HDPE on the side-slopes, protection of the underlying GCL is required. Removal of all sharp or abrasive objects on top of the GCL and inspection of the GCL for punctures, tears or other unacceptable conditions is required prior to the placement of FML. Any defects in the underlying GCL shall be repaired to the satisfaction of the County and QA/QC Consultant prior to the placement of the FML. No vehicles shall be permitted to travel on the completed subgrade except for approved equipment necessary to install the lining. Costs for any required repair of the GCL shall be borne by the contractor with no further compensation allowed.

Before the work begins, the Contractor and QA/QC Consultant shall inspect all FML materials for damage from transit. Materials that cannot be repaired shall be rejected, removed from the project site, and disposed of in accordance with federal, state, and local requirements at the Contractor's expense. Prior to transport of FML materials from the storage area for use and placement, the Contractor and QA/QC Consultant shall visually inspect all materials for imperfections and faulty areas. All such defective places shall be marked and repaired in accordance with approved methods and the QA/QC Plan.

11.3.2 Installation

The FML shall be installed as shown on the Project Drawings and the accepted panel layout installation drawings. Sheets of FML shall be of such lengths and widths and shall be placed in such a manner as to reduce field welding to a minimum. All FML panels over 25 square feet in area shall be designated with a panel number. The Contractor shall be responsible for assigning the number and shall locate the number marking near the middle of panels less than 50 feet in length and at both ends of panels over 50 feet in length. **Panels less than 25 square feet in area shall be considered a patch** and shall not require a number; these shall be used as seldom as possible. The above requirement does not relieve the Contractor from its responsibility to maintain the integrity of the liner until final acceptance by the County.

The FML shall be attached at the top and bottom of the slopes, and other places in accordance with details shown on the Project Drawings and the accepted panel layout installation drawings. The FML shall be anchored and sealed to structures, pipes and other types of penetrations in accordance with the details shown on the Project Drawings and the accepted panel layout installation drawings.

All changes in accepted panel layout installation plans and procedures must be accepted by the County in writing in advance. Requests for field changes to the accepted installation drawings, procedures, and schedules shall be submitted in writing to the County for review and comment. No changes shall be allowed prior to written acceptance by the County. The Contractor shall document changes on record drawings.

Extreme care shall be taken during installation of the FML to be certain no damage is done to the prepared supporting surfaces, or to any part of the installed GCL or to the FML texturing. Dragging of the FML material on any rough surfaces including, but not limited to, subgrade, compacted engineered fill grade, compacted LPL, or GCL shall not

be permitted. **Smoking shall not be permitted within 100 feet of the FML** by anyone connected with the Contractor's work. No foot traffic shall be allowed on the FML except with approved smooth-sole shoes. No vehicular traffic shall be allowed on the FML. Vehicles used at the job site shall not exceed 15 mph. Excessive speed and/or reckless driving may result in suspension or dismissal of the vehicle operator. All motor equipment using fuel shall have spark arrestors. No gasoline powered generators, gasoline cans, or solvent shall be placed directly on the FML. Under no circumstances shall the FML be used as a work area or to store tools and supplies. If needed, a tarpaulin of approved material shall be spread out as a work area.

During installation, the Contractor shall be responsible for protecting the FML against adverse effects of high winds such as uplift. Sand bags shall be used as required to hold the FML material in position during installation. Sand bags shall be sufficiently close-knit to preclude fines from working through the bottom, sides or seams. Paper bags, whether or not lined with plastic, will not be permitted. Burlap bags, if used, must be lined with plastic. Bags shall contain not less than 40, nor more than 60 pounds of sand having 100 percent passing a number 8 screen and shall be tied closed after filling, using only plastic ties. Metal or wire ties shall not be allowed. Bags that are split, torn, or otherwise losing their contents shall be immediately removed from the work area and any spills immediately cleaned up.

The HDPE lining shall not be installed under adverse climatic conditions, unless the Contractor can demonstrate that its installation techniques adequately compensate for such adverse conditions and quality of workmanship is not compromised. Adverse climatic conditions occur when the air temperature measured six (6) inches above the FML surface is less than 40°F or more than 104°F; when the relative humidity is more than 80 percent; when it is raining; or when there is frost on the ground; or during conditions of excessive winds. Installation of HDPE lining at high temperatures (greater than 104°F) may be performed if approved by the QA/QC Consultant and the County, but **no field seaming shall be permitted** at those temperatures.

HDPE field seams shall be lap seams formed by lapping the edges of HDPE sheets a **minimum of 4 inches**. The contact surfaces of the sheets shall be wiped clean to remove dirt, dust, moisture, and other foreign objects. For fillet extrusion weld seams, the edge of the FML shall be beveled and oxidation shall be cleaned from the surfaces to receive extrudate by disk grinding (buffing) or equivalent not more than one hour (1-hr) before welding.

Lap seam intersections involving more than three (3) FML panels of lining material shall be avoided, and all seam intersections shall be offset at least two (2) feet. No base T-seam shall be closer than five (5) feet from the toe of slope. **No horizontal intersections or seams shall be allowed on the slopes** and sheets of lining material on the slope shall extend down slope out onto benches or anchor trenches as shown on the Project Drawings.

Field seams between sheets of FML shall be made using approved welding systems, equipment and techniques. **Approved welding systems include fillet weld using extrudate (extrusion weld), lap weld using extrudate (extrusion welds); and lap weld using either a single or double wedge welder (fusion welds for 60-mil).** All wedge welders shall be specifically designed for and be compatible with the liner material and recommended by the FML manufacturer. The extrusion welder is to be purged of all heat degraded extrudate in the barrel prior to beginning a seam for approximately 30 seconds. This must be done every time the extruder is restarted after a 2 minute or longer, down time. The purged extrudate shall not be discharged onto the surface of previously placed liner nor on the prepared subgrade where it would eventually form a hard lump under the liner.

Any necessary repairs to the FML shall be made with the FML material itself, using approved welding systems, equipment and techniques. The **patch size** shall be **six (6)** inches larger in all directions than the area to be patched. All corners shall be rounded with a one (1) inch minimum radius. All seams of the FML shall be tightly bonded on completion of the work. Any FML surface showing injury due to scuffing and/or penetration by foreign objects or showing distress shall be replaced or repaired.

The Contractor shall mark adjacent to all welds and repairs, the seam number, date, time, equipment number, mated panel numbers and technician performing the welding. Cleanup within the work area shall be an ongoing responsibility of the Contractor. Particular care shall be taken to insure that no trash, tools, and other unwanted materials are trapped beneath the FML. Care should also be taken to ensure that all scraps of lining material are removed from the work area prior to completion of the installation.

Wrinkle Management: The Contractor shall work to minimize the overall length, interconnectedness, and overall number of wrinkles in geomembranes during deployment by working during times of the day when solar radiation and ambient weather conditions do not adversely affect such. The maximum allowable wrinkle height that may be covered by overlying materials is 3 inches. Larger wrinkles must be pushed out. Before wrinkles of any size fold over, Contractor shall attempt to push them out. For wrinkles that cannot be pushed out, they can be cut out and repaired prior to covering or burial or at the direction of the County. Every attempt will be made to avoid repair with horizontal seams on side slopes.

11.3.3 Field Quality Control

a. General

Inspection and testing shall involve the observation of the installation of the FML, including the making and testing of field welds and patches. After initial welding of any seam, seam testing and repairs shall be completed within 5 working days.

Samples for conformance testing shall be taken by the Contractor from rolls of FML after delivery to the site. Samples shall be taken across the entire width of the roll and shall

not include the first three (3) feet. Samples shall be three (3) feet long by the roll width. The samples shall be marked with the machine direction by an arrow and the manufacturer's roll and lot identification number. One sample per lot or one sample per 100,000 square feet of FML shall be taken, whichever results in the greater number of conformance tests. The cost of conformance tests shall be paid for by the County, except for retests of failed samples or conformance tests for lots of less than 50,000 square feet, which will be borne by the Contractor.

The delivery of FML in small quantities from different lots is discouraged. The Contractor shall absorb the cost for excessive conformance testing due to delivery of FML from different lots.

Conformance and destructive weld sample testing shall be conducted by an independent testing laboratory and paid for by the County. However, the laboratory cost of retesting work or material, which fails the first test, will be billed to the Contractor. The independent testing laboratory shall save all test samples including specimens tested until notified by the County relative to their disposal. All specimens which have failed under testing shall be returned immediately to the County for determination of corrective measures to be taken.

b. Material Acceptance Criteria and Corrective Measures

i. Conformance Testing

The minimum number of specimens tested per conformance sample for each tested FML property will be determined in accordance with the respective ASTM Standard. The average value will be calculated from the specimen test values of each conformance sample and compared to the values specified in Section 11.2 of the Specifications. A conformance sample that yields any tested property less than the specified value will be recorded as a failure and an additional two (2) rolls will be sampled from the same 100,000 square feet or lot and tested for the failed properties. If a second conformance sample fails, all rolls within the sampled 100,000 square feet or lot will be rejected for use on the project. If no additional conformance tests fail, only the roll which yielded a failure will be rejected from use on the project. The decision of the County shall be final.

ii. Start Up Welds

Test welds shall be made to verify that adequate conditions exist for field seaming to proceed. Each welder shall produce a test seam at the beginning of each shift and that sample should be submitted for the peel and tensile shear strength of the seam. The County and QA/QC Consultant may require a sample field seam be made at any time during seaming production to verify equipment/operator performance and seam integrity. In addition, *if a seaming operation has been suspended for more than 30 minutes or if a breakdown of the welding equipment occurs, a test seam shall be produced prior to resumption of seaming operations.* The Contractor shall continually arrange for one (1) extra welding setup (welder and all related equipment) per crew as

a backup at all times in case of a breakdown. The welding equipment shall follow the same procedures for startup welds.

During the field welding operation, the Contractor shall make representative, non-destructive samples of field welds. These samples shall be made of the same HDPE sheet and fusion weld materials using the same installation procedures as the HDPE installation itself. Samples shall have a width of twelve (12) inches plus the seam width and a length of thirty-six (36) inches. A minimum of one (1) sample per crew each morning and each afternoon shall be made. All field seams shall have a film-tearing bond in peel and shear as required herein under Section 11.2 of these Technical Provisions when tested.

iii. Destructive Testing of Field Seam Samples

During the field welding operation for 60-mil HDPE material, the Contractor at locations selected by the QA/QC Consultant and the County shall remove destructive samples from field seams. Repairs to the field seams shall be made in accordance with repair procedures specified in these specifications. Samples shall have a width of 12 inches plus the seam width and a length of 36 inches. A minimum of one sample per 500 feet of field seam shall be made. All field seams of 60-mil HDPE material shall have the minimum required film tearing bond in peel and shear when tested as specified in these Technical Provisions.

All destructive field seam specimens tested by the independent testing laboratory (sets of five test specimens are performed) shall allow for one failure out of five tested, and the rest shall pass. If two specimens out of five fail, the entire sample shall be considered as a failure, and the field weld(s) performed by the same welding equipment between adjacent destructive samples on either side of the failed sample shall be considered to be not in conformance with the Specifications and corrective measures are to be followed.

Corrective measure shall include the following:

New test samples shall be taken ten (10) feet on both sides of the failed destructive sample and they shall be tested using the same procedures outlined above. If these new test samples PASS, the weld need only be capped between the two passing tests. If these new test samples FAIL, the iterative process of sampling as outlined above is repeated until passing test results are observed. In this case, the entire seam between the two successful test samples shall be capped. If capping a field seam is required, the Contractor shall use a cover strip of the same material (and from the same roll if available) and a minimum of 8 inches in width. The cap strip shall be extrusion welded and tested as required for extrusion welding. One additional destructive sample shall be taken from the extrusion welded cap strip.

The cost of all additional testing of destructive samples due to failure of the original sample to pass specifications shall be borne by the Contractor. The Contractor shall

pay for any and all laboratory failures in addition to any and all passing lab tests resulting from laboratory field failures.

iv. Nondestructive Testing of Field Seam Samples

Non-destructive testing of field seam samples shall be performed for the 60-mil HDPE seams. All field seams tested using nondestructive methods by the Contractor and observed by the QA/QC Consultant in the field shall pass. If any welds fail, the weld shall be considered not in conformance with the specifications and corrective measures shall be taken.

If the **fillet extrusion weld or single hot-wedge fusion lap weld** is used to weld seams, the Contractor shall test all seams and repairs in the HDPE lining by vacuum box. The vacuum box shall be an American Vacuum Seam Tester, Series A100 as manufactured by American Parts and Service Company, Alhambra, California, or an approved equal. All vacuum box testing shall be done in the presence of the QA/QC Consultant. The area to be tested shall be cleaned of all dust, debris, dirt and other foreign matter. A soap solution shall be applied to the test area with a paint roller or spray bottle and a vacuum of 5 psi shall be induced and held as long as necessary to visually inspect and mark for repair any suspicious areas as evidenced by bubbles in the soap solution or failure of a vacuum to be formed.

All **flat extrusion welds**, the Contractor must test all seams using a vacuum box. In the case of the **fillet extrusion weld**, the Contractor may, in lieu of vacuum box testing, test all seams and repairs in the HDPE lining by using a high voltage spark detector, such as Tinker and Razor Holiday Detector (Model AP-W) or approved equivalent. The setting of the detector shall be 20,000 volts. In order to conduct this test, all seams to be tested shall be provided with not less than a 24 gauge copper wire properly embedded in the seam and grounded. All wire installation and spark testing shall be done in the presence of the QA/QC Consultant. All defective areas shall be marked for repair.

If the **double hot-wedge fusion weld** is used, the Contractor shall test all seams in the HDPE lining by using the air pressure test. This test consists of inserting a needle with gauge in the air space between welds. Air shall be pumped into the air space to 30 psi and held for 5 minutes. If the pressure loss exceeds 4 psi during air pressure testing the outside weld edge (not free edge) shall be sprayed with a soap solution and visually examined for bubbles. If no bubbles appear, the problem is with the inside weld and the seam is acceptable. If any bubbles appear, the defect shall be repaired by extrusion welding and tested by vacuum box or spark detector. If pressure loss is not more than 4 psi, puncture the opposite end of the seam to release the air. If a blockage is present, locate and test seam on both sides of blockage. Extrusion welding shall seal all penetration holes created during testing.

If **capping a field seam** is required, the Contractor shall use a cover strip of the same material (and from the same roll, if available) and a minimum of eight-inches (8") in

width. The cap strip shall be extrusion welded and tested as required for extrusion welding. One additional destructive sample shall be taken from the extrusion welded cap strip. The cost of all-additional testing of nondestructive samples due to failure of the original sample to pass specifications shall be borne by the Contractor.

v. Electronic Leak Location (ELL) Survey

Prior to acceptance by the County, Contractor shall facilitate performance of an Electronic Leak Location (ELL) survey on all final in-place furnished and installed 60-mil HDPE liners. The ELL survey is performed to detect and locate cuts, holes, or other defects in installed HDPE. Any defects revealed during the ELL survey shall be repaired by the Contractor at no additional cost to the County.

Given that the ELL survey will be performed on 1.5H: 1V (Horizontal: Vertical) compositely-lined side slopes, an appropriate ELL survey method should be proposed by the Contractor and approved by the County. The proposed ELL method shall be equivalent to a dipole method ASTM D7007 or for covered geomembrane, ELL dipole method ASTM D8265.

A certified third-party ELL contractor shall be hired by the Contractor. The ELL contractor's work should be aided and supervised by the Contractor and his work products should be documented in a peer-reviewed report. The ELL survey or testing plan and surveyed completion report shall be submitted to the County and QA/QC Manager for review and acceptance.

a. Submittals

- i. ELL Contractor shall provide instruction for placement of any electrodes or ground wires to the Contractor prior to the installation of geomembrane cover.
- ii. ELL Contractor shall submit a testing plan and schedule to the Contractor and County prior to mobilization of field personnel. The County must accept the ELL testing plan prior to its implementation.
- iii. ELL Contractor shall report the general results on the survey to the Contractor and County during the daily progress of the field work.
- iv. Prior to the demobilization of the survey personnel from the Site, the ELL Contractor shall submit a list of locations of the leaks detected to the Contractor, County, QA/QC Manager and Liner Sub-Contractor.
- v. The ELL Contractor shall submit a letter report documenting the field work and results of the surveys to the County and QA/QC Manager within twenty-one (21) days after completion of the field work signed by a Registered Civil Engineer in the State of California.

b. Execution

- i. The ELL Contractor shall provide installation instruction for any permanent ground wire (supplied by the Contractor) used for the leak detection surveys.

- ii. Contractor shall provide the County with an updated project schedule for scheduling of the ELL surveys a minimum of two (2) weeks prior to the preferred survey date. Contractor shall allow one (1) week for mobilization.
- iii. Contractor is responsible for preparing the survey area for the leak detection surveys.
- iv. Contractor shall repair all identified damage by the Leak Location Survey, as recommended by the ELL Survey Contractor/Consultant at no additional cost to the County.
- v. Following repair(s), the leak location survey shall be repeated on the two closest survey lines for a distance extending 20 feet before and beyond the leak. If another leak signal is detected, the entire repair and resurvey process shall be repeated until no additional leaks are detected.
- vi. The ELL Contractor will mark the locations of all identified or indicated leaks with flags, sandbags, or spray paint. Contractor shall survey the identified leak locations. Contractor shall identify the leak location on the HDPE liner layout drawing with coordinates and then provide to the Engineer.

11.4 MEASUREMENT AND PAYMENT

- a. The **measurement** of the final quantity for **Bid Item No. 13** "Furnish & Install 60-mil HDPE Liner" shall be based on the final in-place square footage of ground covered with material placed within the limits specified in the Project Drawings and after it has been installed and tested by the QA/QC Consultant to the satisfaction of the County. The area of the final surface shall be verified by the County based on conventional ground surveying. Quantity shall be calculated based on "true" area and to the nearest square foot utilizing digital terrain modeling method. **Payment** shall be made, after acceptance, at the contract unit price per square foot as stated in the Contractor's Proposal, **Bid Item No. 13**. Payment shall constitute full compensation to the Contractor for all work related to the furnishing and installation of the FML as required by the Contract Documents. No additional compensation shall be given for waste material from trimming of rolls, seam overlaps, patches, or related items. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 11

12. GEOTEXTILES

12.1 GENERAL

12.1.1 Section Includes

This section covers the work necessary to furnish and install the geotextile fabrics. The intent of these specifications is to provide protection to the HDPE lining.

In general, sixteen (16) oz/sy geotextile is to be placed above the FML on the side slopes and benches. The Contractor shall provide all labor, supervision, tools, equipment, and materials necessary to install the geotextiles as described in the Contract Documents.

12.1.2 References

Reference Standards and Specifications: The following standards and specifications, including documents referenced therein, form part of these Technical Provisions and are incorporated herein by reference.

American Society for Testing Materials (ASTM)

<i>D1777-96(2007)</i>	Standard Test Method for Measuring Thickness of Textile Materials
<i>D3776-09a</i>	Standard Test Method for Weight (Mass) per Unit area of Fabric
<i>D4354-99(2009)</i>	Standard Test Method for Practice for Sampling of Geotextiles for Testing
<i>D4355-07</i>	Standard Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Zenon-Arc Type Apparatus)
<i>D4491-99a(2009)</i>	Standard Test Methods for Water Permeability of Geotextiles by Permittivity
<i>D4533-04(2009)</i>	Standard Test Method for Trapezoid Testing Strength of Geotextiles
<i>D4632-08</i>	Standard Test Method for Breaking Load and Elongation of Geotextiles (Grab Method)
<i>D4751-04</i>	Standard Test Method for Determining Apparent Opening Size of a Geotextile
<i>D4833-07</i>	Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembrane, and Related Products.

- D4759-02(2007)** Standard Practice for Determining the Specification Conformance of Geosynthetics
- D4873-02(2009)** Standard Guide for Identification, Storage, and Handling of Geosynthetic Rolls
- D6241-04(2009)** Standard Test Method for the Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe

12.1.3 Submittals

The Contractor shall submit in advance complete material specifications and descriptive literature for acceptance by the County. The Contractor shall also submit complete details and/or methods for anchoring the geotextile at its perimeter and making field sewn seams.

The Contractor shall submit written certification by the geotextile manufacturer that the geotextile materials conform to the requirements of these specifications; are similar and of same formulation as that for which certification is submitted; and have been demonstrated by actual usage to be satisfactory for the intended application.

The Contractor shall submit six (6) eight-inch (8") x ten-inch (10") samples of geotextile material(s), six (6) one-yard samples of thread, and six (6) samples of sewn field seams which have been made in conformance to these specifications. The Contractor using the same materials, equipment and procedures specified for the geotextile shall fabricate the field seam samples. Sample width shall measure twelve inches (12") plus seam width and sample length shall measure eighteen inches (18"). The samples shall be numbered and dated.

The Contractor shall submit a complete description of sewing procedures for making field seams and repairs. The sewing procedures shall conform to the latest procedures recommended by the geotextile manufacturer and to these specifications. The Contractor shall submit for acceptance by the County a method(s) for handling and storage of geotextile material(s) prior to installation. The Contractor shall install the geotextile only on surface(s) that have been accepted by the geotextile sub-contractor and with written certification furnished to the County that the surfaces meet the requirements for installation and these specifications.

Daily reports shall be submitted by the Contractor to the County prior to 11:00 a.m. documenting work accomplished the previous day including all personnel and equipment on site, quantities of material received, panels placed, seaming completed, tests performed, repairs made, weather conditions and other comments relative to the progress of the work.

12.1.4 QA/QC

Prior to installation of geotextile, the Contractor shall allow two (2) weeks for geotextile material conformance testing to be completed by the QA/QC Consultant before the material is scheduled to be integrated into the project. The Quality Control Plan(s) to be implemented for the work by the manufacturer, the Contractor and/or the lining subcontractor shall be in accordance with the QA/QC Plan. The County shall have the authority to order an immediate stoppage of work because of improper installation procedures, noncompliance with the QA/QC Plan, safety infractions or for any reason, which may result in defective or unsafe installation of the geotextile.

12.1.5 Safety

Prior to installation of the geotextile, the Contractor shall instruct the workmen of the hazards of installation, such as handling sheets of geotextiles in high winds and on steep slopes; use of equipment; and walking on geotextile surfaces. Work gloves, safety glasses, hard hats, and smooth-soled shoes are minimum safety wear requirements. Approved personal fall arrest, personal fall restraint or positioning systems shall be worn by those employees whose work exposes them to falling in excess of 7 1/2 feet from the perimeter of a structure, unprotected sides and edges, leading edges, through shaft ways and openings, sloped roof surfaces steeper than 7:12 (Horizontal: Vertical), or other sloped surfaces steeper than 40 degrees. Particular attention shall be given to relevant Division of Industrial Safety Construction. Said Orders are contained in Title 8 of the California Code of Regulations, Chapter 4, and Subchapter 4. Specific reference is made to Article 24 of said Construction Safety Orders.

12.1.6 Delivery, Storage and Handling

Geotextile shall be shipped, stored and handled in accordance with ASTM D4873, the manufacturer's recommendations, and as specified herein. Contractor shall be completely responsible for shipping, storage and handling of all geotextile. The Contractor shall ensure deliveries of these rolls are transported on flatbed trucks. Unloading shall be performed by using fabric straps only. These straps, as supplied by the Contractor, shall be ready for usage at the arrival of each shipment. If the Contractor elects to use a different type of truck or a different method of unloading, the Contractor shall submit written request to the County outlining the type of trucks, equipment and method detailing plan for the County's review and acceptance. The County will respond to the Contractor in writing.

Geotextile shall be shipped and stored in opaque and watertight protective coverings. Contractor shall notify the County at least 24 hours prior to scheduled delivery. No materials shall be unloaded except in the presence of a QA/QC Monitor. Geotextile delivered to the site shall be inspected for damage and unloaded and stored with minimal handling. Contractor shall, upon material delivery, assist QA/QC Monitor in conducting inventory, handling and sampling of geotextile at no additional cost to the County.

No hooks, tongs, or other sharp tools or instruments shall be used for handling geotextile. Contractor shall use slings or a pole which extends at least one (1) foot beyond each end to unload or handle geotextile. Geotextile shall not be dragged along the ground.

Geotextile shall be protected from ultraviolet light exposure, precipitation or other inundation, soil, mud, dirt, debris, puncture, cutting, or other damaging or deleterious conditions. Geotextile shall not be stored directly on the ground. Rolls of geotextiles should not be stacked upon one another to the extent that deformation of the core occurs or to the point where accessibility can cause damage in handling. **Rolls of geotextile shall not be stacked higher than three (3) rolls.**

Under no circumstances shall the installed geotextile be subjected to materials, sandbags, equipment or other items being dragged across its surface, nor shall workmen and others slide down slopes on top of the geotextile. All damaged surfaces resulting from abuse of any kind caused by the Contractor in performance of the work shall be repaired at the Contractor's expense.

12.2 MATERIALS

The geotextile material shall be a new, high quality product designed and manufactured specifically for the purposes of this project. Its suitability and durability for this type of work shall have been adequately demonstrated by prior applications. The geotextile shall be 100 percent polyester or polypropylene, needle-punched, and non-woven. Geotextile rolls shall be shipped and stored in opaque and watertight wrappings. The geotextile fabric installation shall be performed under the ongoing observation of the County and QA/QC Consultant, and according to the Contract Documents. The Contractor shall be responsible for detecting and repairing all damaged areas.

The manufacturer's certification shall demonstrate that the geotextile meets or exceeds the following Minimum Average Roll Values (MARV) (in the weakest principal Direction) listed in the table below. Exceeding the MARV listed below does not relieve the geotextile material from meeting or exceeding the additional requirements listed within these technical provisions, including but not limited to interface shear strength.

Property	Unit	Test Method	Value 16 oz.	QA/QC Conformance Testing Y/N
Mass per unit Area	oz/sy	ASTM D5261	16	Y
Apparent Opening Size	US Std. Sieve	ASTM D4751	70-140	Y
Permittivity	sec ⁻¹	ASTM D4491	0.7	Y
Puncture Resistance	lbs	ASTM D4833	170	Y
Static Puncture Strength	lbs	ASTM D6241	900	Y

Trapezoidal Tear Strength	lbs	ASTM D4533	145	Y
Grab Tensile/Elongation	lbs/%	ASTM D4632	320/50	Y
UV Resistance – 70% Strength Retained	hrs	ASTM D4355	500	N

12.3 EXECUTION

12.3.1 Inspection

The geotextile shall be installed only on surfaces for which the Contractor has furnished written certification to the County as being acceptable for installation of the geotextile. Any problems in the completed layers underneath the geotextile shall be repaired to the satisfaction of the County and QA/QC Consultant prior to the placement of the geotextile.

Before work begins, the Contractor and QA/QC Consultant shall inspect all geotextiles for damage from transit. Materials that cannot be repaired shall be rejected, removed from the project site, and disposed of in accordance with federal, state, and local requirements at the Contractor's expense.

During unwrapping of geotextile materials for use and placement, the Contractor and QA/QC Consultant shall visually inspect all materials for imperfections and faulty areas. All defects shall be marked and repaired in accordance with approved methods.

12.3.2 Installation

The geotextile shall be installed as shown on the Project Drawings and accepted installation drawings. Sheets of geotextile shall be of such lengths and widths and shall be placed in such a manner as to reduce field seaming to a minimum. The geotextile shall be placed in accordance with details shown on accepted plans. The County and QA/QC Consultant must approve in advance all changes in accepted installation plans and procedures.

Extreme care shall be taken during installation of the geotextile to be certain no damage is done to the prepared supporting surfaces. No foot traffic shall be allowed on the geotextile except with approved smooth-sole shoes. No vehicular traffic shall be allowed on the geotextile. Under no circumstances shall the geotextile be used as a work area or to store tools and supplies. If needed, a tarpaulin of accepted material shall be spread out as a work area.

During installation, the Contractor shall be responsible for protecting the geotextile against adverse effects of high winds such as uplift. Sand bags shall be used as required

to hold the geotextile material in position during installation. Sand bags shall be sufficiently close-knit to preclude fines from working through the bottom, sides or seams. Paper bags, whether or not lined with plastic, will not be permitted. Burlap bags, if used, must be lined with plastic. Bags shall contain not less than 40, nor more than 60 pounds of sand having 100 percent passing a 3/8 inch screen and shall be tied closed after filling, using only plastic ties. Metal or wire ties shall not be allowed. Bags that are split, torn, or otherwise losing their contents shall be immediately removed from the work area and any spills shall be cleaned up immediately.

A temporary protective membrane to protect portions of the lined side slope area from ultraviolet (UV) degradation where protective cover soil will not be placed as part of this Contract shall be installed over the existing side slope liner system as shown on the Project Drawings in accordance with Section 14 of these Technical Provisions and as shown on the Project Drawings.

Any necessary repairs to the geotextile shall be made with the geotextile material itself, using approved seaming methods, equipment and techniques. Heat bonding may be used for geotextile seams for the bench liner or for repairs as shown on the Project Drawings and when in the opinion of the County and QA/QC Consultant, the seaming or repair area is too contaminated with dirt or the area to be seamed or repaired is not accessible by sewing machines. **The patch size shall be 12 inches larger in all directions than the area to be patched.** All corners shall be rounded. Should any tear exceed 10 percent of the roll width, the roll of geotextile shall be removed and replaced.

All seams of the geotextile shall be tightly seamed on completion of the work. Any geotextile surface showing injury due to penetration by foreign objects or showing distress shall be replaced or repaired. **Geotextile field seams shall be made as follows:**

Material	Seaming Requirement
16-oz on slopes and benches	Sewn with minimum 3-inch overlap

The sewn seams shall be overlapped a minimum of three inches (3") as accepted by the County and QA/QC Consultant. The sewn seams shall be formed by joining the edges of geotextile sheets and sewing with stitches located a minimum of two inches (2") from the joined edges (prayer seam). A two-thread, double-locked stitch with a minimum of five (5) stitches per inch shall be used. The sewing thread shall be a strong nylon or polyester thread, the color of the sewing thread should contrast that of the color of the geotextile for ease in visual inspection subject to acceptance of the County and QA/QC Consultant. All seams shall be continuously sewn. **Spot sewing will not be allowed.** No horizontal seams shall be allowed on the slopes. The geotextile shall be cut only with an approved geotextile cutter, and not torn or ripped to size.

All cleanup within the work area shall be an ongoing responsibility of the Contractor. Particular care shall be taken to insure that no trash, tools, and other unwanted materials are trapped beneath the geotextiles.

12.3.3 Field Quality Control

a. General

Inspection and testing shall involve the observation of the installation of the geotextile, including the making of field sewn seams and patches. Samples for conformance testing shall be taken by the Contractor under direction of the QA/QC Consultant from rolls of geotextile after delivery. One (1) sample per lot or one (1) sample per 100,000 square feet of geotextile shall be taken, whichever results in the greater number, for conformance testing. The delivery of geotextile in quantities less than one (1) lot is discouraged. The Contractor shall absorb the costs for excessive conformance testing on delivery of geotextile that is less than one (1) lot. Samples shall be taken across the entire roll width and shall not include the first three feet (3'). Unless otherwise specified, samples shall be three feet (3') long by the roll width. The manufacturer's roll identification number shall be marked on the sample.

Sample testing shall be conducted by an independent testing laboratory paid for by the County. However, the laboratory cost of retesting work or materials that fail the first test will be billed to the Contractor. The independent testing laboratory shall save all test samples including specimens tested until notified by the County relative to their disposal. All specimens which have failed under testing shall be returned immediately to the County and QA/QC Consultant for determination of corrective measures to be taken.

b. Material Acceptance Criteria and Corrective Action

The minimum number of specimens tested per conformance sample for each tested geotextile property will be determined in accordance with the respective ASTM Standard. The average value will be calculated from the specimen test values of each conformance sample and compared to the values specified in Section 12.2 of the Specifications. A conformance sample that yields any tested property less than the specified value will be recorded as a failure and an additional two (2) rolls will be sampled from the same 100,000 square feet or lot and tested for the failed properties. If a second conformance sample fails, all rolls within the sampled 100,000 square feet or lot will be rejected for use on the project. If no additional conformance tests fail, only the roll which yielded a failure will be rejected from use on the project. The decision of the County shall be final.

12.4 MEASUREMENT AND PAYMENT

- a. The **measurement** of the final quantity for **Bid Item No. 14** "Furnish and Install 16 oz./sy geotextile" shall be based on the final in-place square footage of ground covered with material placed within the limits specified in the project and after it has been installed, tested, and verified by the QA/QC Consultant to the satisfaction of the County. The area of the final surface shall be verified by the County based on conventional ground surveying. Quantity shall be calculated based on "true" area and to the nearest square foot utilizing digital terrain modeling methods. **Payment** shall be made, after acceptance, at the unit price per square foot, as stated in the Contractor's Proposal, **Bid Item 14**. Payment shall constitute full compensation to

the Contractor for all work related to the furnishing and installation of geotextiles as required by the Contract Documents. No additional compensation shall be given for any geotextile waste materials (trimming of rolls, seam overlaps, patches, or related items). The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 12

13. PROTECTIVE COVER SOIL (PCS) LAYER CONSTRUCTION

13.1 GENERAL

13.1.1 Section Includes

This work shall include furnishing all labor, supervision, tools, equipment, and materials necessary to complete the work of placing a minimum 2-foot-thick PCS layer as shown on the Project Drawings and as directed by the County. The remaining portions of the side slope lined area shall be covered with Temporary Protective Membrane as described below in Section 14 of these Technical Provisions and as shown on the Project Drawings. All construction operations related to the screening, stockpiling, placement, grading, and compacting the PCS layer shall conform to the applicable requirements of the Standard Specifications, Appendix E – “Procedures for the Placement of Protective Cover Soil (PCS) Material”, Appendix F – “Procedures for the Removal of Protective Cover Soil (PCS) Material”, and to the requirements of the Contract Documents.

13.2 MATERIALS

The Contractor shall screen material directly from the liner expansion area and/or Canyon 6 Stockpile area to produce maximum 1-inch particle size (that is, particles no greater than 1-inch in size) material. This select material will then be both: placed within the liner limits on side slopes, within anchor trenches and on benches, as shown on the Project Drawings and stockpiled in an area adjacent to the screening location as designated by the County. This select material shall be carefully protected to avoid contamination with any other material containing particle size larger than 1 inch. The QA/QC Consultant shall continually monitor the screened material stockpile and material placement to ensure that the specified maximum particle size is not exceeded under any circumstances. The Contractor at its own expense shall be responsible for removing or reprocessing the screened material stockpile in the event any greater than maximum 1-inch material is found in that screened material.

13.3 EXECUTION

The PCS layer shall be placed in a method that prevents damage to the underlying liner. The material shall be placed in uniform lifts and the depth of each lift shall be what is required to achieve a thickness of at least two feet (2') after grading and applying reasonable compaction efforts as directed by the County and the QA/QC Consultant and as specified on the Project Drawings. **Wheeled equipment shall operate on no less than two feet (2') of PCS.**

Only low ground pressure up to 5 pounds per square inch (5 psi) compaction equipment shall be used, operating on no less than twelve inches (12") of soil cover above any geosynthetics. Unless otherwise specified on the Project Drawings, the PCS layer on the benches shall be placed, graded, and compacted to 85% relative compaction. Compaction of the protective layer on the bottom and side slope areas shall be achieved by track walking, with at least one pass, over the entire surface. Additional track walking may be required when the QA/QC Consultant observes that adequate protection of the liner is not being met.

The **minimum thickness** of the PCS layer over the composite liner system shall be 2 feet thick. If damage occurs to the geotextile, FML, or GCL during the spreading or compaction operation, the PCS layer material shall be removed from the damaged area and the damaged section shall be repaired as specified in the QA/QC Plan at no additional cost to the County.

Contractor shall screen an extra volume of 25,000 cy of PCS material and stockpile in a designated area as directed by the County for future use. The select material shall be stockpiled in a manner to avoid contamination with adjacent material.

13.4 MEASUREMENT AND PAYMENT

- a. The **measurement** of the final quantity for **Bid Item No. 15** "Construct PCS Layer" on Side Slopes, and Trenches shall be measured in place, after proper moisture content and compaction have been applied, and finished grading is achieved in accordance with the project requirements. The **measurement** of the final quantity shall be calculated utilizing digital terrain modeling methods, to the nearest cubic yard of true Volume, based on survey measurements of ground before and after placement of the PCS layer. **Payment** for the construction of the PCS layer shall be at the contract unit price per cubic yard as stated in the Contractor's Proposal, **Bid Item No. 15.** **Payment** shall constitute full compensation to the Contractor for the work specified herein, and no additional compensation will be given for water supply or removal and re-compaction of material that does not meet the specifications described in this section. **Payment** shall also constitute full compensation for furnishing all labor, supervision, materials, tools, and equipment necessary to screen the material and construct the PCS layer in accordance with the Contract Documents.
- b. The **measurement** of the final quantity for **Bid Item No. 16** "Stockpile PCS Material" shall be measured in place after stockpiling in area designated by the County. The measurement of the final quantity shall be calculated utilizing digital terrain modeling methods, to the nearest cubic yard of true Volume, based on survey measurements of ground before and after stockpiling of the PCS material. **Payment** for the stockpiling of the PCS material shall be at the contract unit price per cubic yard as stated in the Contractor's Proposal, **Bid Item No. 16.** **Payment** shall constitute full compensation to the Contractor for the work specified herein, and no additional compensation will be given for screening or removal of oversized particles that do not meet the specifications described in this section. **Payment** shall also

constitute full compensation for furnishing all labor, supervision, materials, tools, and equipment necessary to screen the material in accordance with the Contract Documents.

- c. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 13

14. TEMPORARY PROTECTIVE MEMBRANE

14.1 GENERAL

14.1.1 Section Includes

This section covers the work necessary to furnish and install a temporary protective membrane to protect portions of the side slope lined area from ultraviolet (UV) degradation. The remaining portions of the side slope lined area shall be covered with PCS Layer as described above in Section 13 of these Technical Provisions and as shown on the Project Drawings.

The temporary protective membrane work includes the supply and installation of polyethylene cover sheets with reinforcing scrim over the existing side slope liner system as shown on the Project Drawings. The Contractor shall provide all labor, supervision, tools, equipment, and materials and anchorage necessary to install the temporary protective membrane.

14.1.2 References

Reference Standards and Specifications: The following standards and specifications, including documents referenced herein, form part of these Technical Provisions and are incorporated herein by reference.

American Society for Testing Materials (ASTM)

<i>D751-06</i>	Test Methods for Coated Fabrics
<i>D2103-10</i>	Specification for Polyethylene Film and Sheeting
<i>D4533-04(2009)</i>	Test Method for Trapezoid Tearing Strength of Geotextiles
<i>D5261-10</i>	Test Method for Measuring Mass per Unit Area of Geotextiles
<i>E96/E96M-10</i>	Test Methods for Water Vapor Transmission of Materials

14.2 SAFETY

The Contractor shall instruct workmen of the hazards of installation such as handling the sheets of protective membrane in winds and on the slopes; use of equipment; and walking on the polyethylene cover sheet surface. The Contractor shall ensure that workers have and use proper safety gear and equipment. Approved personal fall arrest, personal fall restraint or positioning systems shall be worn by those employees whose work exposes them to falling in excess of 7 1/2 feet from the perimeter of a structure, unprotected sides

and edges, leading edges, through shaft ways and openings, sloped roof surfaces steeper than 7:12 (Horizontal: Vertical), or other sloped surfaces steeper than 40 degrees. Particular attention shall be given to relevant Division of Industrial Safety Construction. Said Orders are contained in Title 8 of the California Code of Regulations, Chapter 4, and Subchapter 4. Specific reference is made to Article 24 of said Construction Safety Orders.

14.3 DELIVERY, STORAGE, AND HANDLING

Protective membrane shall be shipped, stored and handled in accordance with the manufacturer's recommendations and as specified herein and as directed by the QA/QC Consultant. The material shall be delivered to the site only after the County and the QA/QC Consultant receive and accept the required submittals. Material shall be protected from damage and degradation.

14.4 MATERIALS

The protective membrane material shall consist of an UV-stabilized, 8-mil, 3-ply, linear low-density polyethylene copolymer, with a nonwoven nylon yarn scrim. Material shall be Duraskrim 8BV or equivalent, as manufactured by Raven Industries, Inc. The manufacturer's certification shall demonstrate the cover material meets the following MARV:

Properties	Test Method	Specified Value
Thickness, Nominal	ASTM D2103	8 mil
Weight	ASTM D5261	40 lbs/1,000 sq ft
Grab Tensile	ASTM D751	70 lbf
Elongation at Break	ASTM D751	600%
Trapezoid Tear	ASTM D4533	55 lbf
Hydrostatic Resistance	ASTM D751	70 psi
Maximum Use Temperature	-	180°F
Minimum Use Temperature	-	-70°F
WVTR	ASTM E96	0.030
Perm Rating	ASTM E96	0.066

Prior to use of an alternative material, the Contractor shall submit for the County's acceptance the material specifications.

Manufacturer's Warranty: The Contractor shall deliver to the County the Manufacturer's Warranty for the material supplied.

Sandbags shall be Duraskrim 8BBR ultra violet resistance or approved equal. Ropes used to secure the sandbags shall be rated at 700 lb (ultra violet resistance twisted polypropylene rope or approved equal). Placement and type of anchor for the rope shall be accepted by the County and the QA/QC Consultant prior to use.

14.5 INSTALLATION

The Contractor shall take steps to prevent damage to the existing geosynthetic liner layers during the installation of the protective membrane. The Contractor shall predetermine the liner layout and shall submit to the County for acceptance prior to installation. All panels should be placed as straight as possible and **all seams shall be tightly sewn** on completion of work. **No horizontal seams, pre-manufactured or field sewn will be allowed.** Before the sewing process begins, sandbags shall be ready for placement on the liner edges in the event of wind. Seams shall be **overlapped and sewn a minimum of three (3) inches**, and a maximum of six (6) inches, from the edges of seamed panels. A two-thread, double-locked stitch shall be used. **All seams shall be continuously sewn. Spot sewing will not be allowed.**

The protective membrane shall be cut only with an approved cutter, and not torn or ripped to size. The material shall not be pulled tight. Sufficient slack shall exist throughout the protective membrane. A 5% allowance of excess material in both directions shall be incorporated into the liner for seasonal expansion/contraction. If possible, edge anchorage shall be delayed overnight to allow for preliminary shrinkage.

To avoid wind or other weather related damage, the membrane shall be properly secured and anchored as shown on the Project Drawings. The membrane shall be secured to the slope with **sandbags and rope placed ten (10) foot on center** along the entire length of slopes and anchored with stakes at the top of slope as shown on the Project Drawings. **The sandbags shall be installed at 10-foot intervals along each rope**, and shall be filled with 1-in maximum particle size screened material. In addition, these vertical ropes with sand bags shall be connected together with **horizontal ropes at 10-ft vertical interval** as shown on the Project Drawings and as directed by the County.

When anchor trenches are required along the termination boundary of the protective membrane as shown on the Project Drawings, anchor trenches shall be constructed in accordance with the requirements of Section 9 of these Technical Provisions.

No foot traffic shall be allowed on the membrane except with approved smooth-sole shoes. No vehicular traffic shall be allowed on the membrane. The completed membrane shall be free of holes, tears, and punctures. Repair, if necessary, shall require a **patch extending 18 inches in all directions** beyond the damaged area, secured with tape and anchored as necessary.

14.6 MEASUREMENT AND PAYMENT

- a. The **measurement** of the final quantity for **Bid Item No. 17** "Furnish and Install 8-mil Temporary Protective Membrane" on side slopes shall be based on the final in-place square footage of ground covered with protective membrane material placed within the limits specified in the Project Drawings and after it has been installed to the satisfaction of the County and the QA/QC Consultant. The area of the final surface shall be verified by the County based on conventional ground surveying. Quantity shall be calculated based on "true" area and to the nearest square foot utilizing digital terrain modeling method. **Payment** shall be made, after acceptance, at the contract unit price per square foot as stated in the Contractor's Proposal, **Bid Item No. 17**. Payment shall constitute full compensation to the Contractor for all work related to the furnishing and installation of the protective membrane material including but not limited to all construction, ropes, sand bags, plywood strips, anchor stakes, and any other material or other work required by the Contract Documents. Payment shall also constitute full compensation for furnishing all labor, supervision, materials, tools, and equipment necessary to install this protective membrane layer in accordance with the Contract Documents. No additional compensation shall be given for waste material from trimming of rolls, seam overlaps, or related items. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 14

15. AGGREGATE BASE

15.1 GENERAL

The work covered by this section shall consist of furnishing all necessary labor, materials, equipment, tools, and supervision for construction and installation of aggregate base features including but not limited to wet weather pads, access roads and equipment and vehicle crossings. The work shall include, but is not limited to aggregate base subgrade preparation and construction of the aggregate base features at the locations shown on the Project Drawings or as directed by the County.

15.2 SUBMITTALS

- a. Contractor shall submit Certificates of Compliance for aggregate base materials used in this project. The certificates shall be signed by the manufacturer of the materials and shall state that materials involved shall comply in all respects with the requirements of these specifications.
- b. Contractor shall submit to the County gradation test reports before delivery of aggregate base materials to the project site. Contractor shall obtain the County's approval of the aggregate base material and source in advance of the use of such material in the work.

15.3 MATERIALS

- a. All Crushed Miscellaneous Base (CMB) must be clean and consist of materials as described in the Standard Specifications Section 200-2.4 for Crushed Miscellaneous Base.
- b. Materials for CMB shall be uniformly graded and shall conform to the gradation for "fine" as listed in Table 200-2.4.2 of the Standard Specifications:

Sieve Size	Percentage Passing Sieve
1-1/2"	100
3/4"	85-100
3/8"	55-75
No. 4	35-60
No. 30	10-30
No. 200	2-9
ASTM C131 Test Grading	B

- c. Materials for 2" to 4" Aggregate Rock shall consist entirely of crushed rock greater than two inches in size, but smaller than four inches.
- d. Aggregate base shall be mixed in a stationary or traveling plant. Proportion aggregates by weight or volume in quantities to meet the project-specified requirements for the aggregate base material. Incorporate, during the mixing operation, water in quantities sufficient to provide the necessary moisture content for the specified compaction. Mixing operations shall produce satisfactory uniform blending and the method of discharging into trucks shall not produce segregation.

15.4 EXECUTION

- a. Subgrade preparation for aggregate base placement shall be performed in accordance to Section 301-1.2 of the Standard Specifications.
- b. Placing aggregate base shall be in accordance with Section 301-2.2, "Spreading" of the Standard Specifications. The Contractor shall not process or drag base material to which may cause the segregation or loss of gradation of the base material.
- c. Aggregate Base shall be placed in various thicknesses as depicted in the Project Drawings and compacted to a minimum of 90 percent relative compaction as determined by ASTM D1557. Compacting and finishing shall be in accordance with Section 301-2.3, "Compacting" of the Standard Specifications."
- d. The Contractor shall construct the aggregate base on a prepared and approved subgrade, as required by the Contract Documents. The Contractor shall provide construction stakes to control line and grade. Placement of grade stakes shall be parallel to the construction aggregate base placement lifts and spaced for string lining or other control methods. The Contractor shall be solely responsible for protection of completed areas against detrimental effects. Reconditioning, reshaping, and re-compacting of areas damaged by rainfall, or other weather conditions shall be the Contractor's responsibility.
- e. Place earth or other accepted materials along the edges of the aggregate base material in such a quantity that it will compact to the thickness of the course being constructed. When the aggregate base is being constructed in two or more layers, place material to the width of the shoulder to be rolled and compacted simultaneously with the rolling and compacting of each base layer.
- f. After placement is completed, the Contractor shall maintain the aggregate base course throughout, except where portion of the succeeding course is under construction thereon. Maintenance includes drainage, rolling, shaping, and watering, as necessary, to maintain the course in proper condition. Correct deficiencies in thickness, composition, construction, smoothness, and density, which develop during the maintenance, to conform to the requirements specified herein. Maintain sufficient moisture by light sprinkling with water at the surface to prevent a dusty condition.

15.5 MEASUREMENT AND PAYMENT

- a. The **measurement** of the final quantity for **Bid Item No. 18** "Furnish and Install 2"-4" Rock" shall be at the contract unit price per ton as stated in **Bid Items No. 18** "Furnish and Install 2"-4" Rock" and shall constitute full compensation to the Contractor for all work related to the construction of the aggregate base features including but not limited to: subgrade preparation, excavation, hauling and spreading material, compaction, and furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in constructing aggregate base roads and features, complete in place, as shown on the Project Drawings or as directed by the County. The total cubic tonnage shall be based on the submitted aggregate base truck delivery tickets. **Measurement and Payment** for the construction of rock section, including, but not limited to; excavating existing ground surface, subgrade preparation and compaction, hauling and stockpiling excess material, supplying and installing 2"-4" rock, compaction, and finish grading shall be made after County acceptance, at the unit price per ton as stated in the Contractor's proposal.
- b. The **measurement** of the final quantity for **Bid Item No. 19** "Furnish and Install Crushed Miscellaneous Base (CMB)" shall be at the contract unit price per Ton as stated in **Bid Item No. 19** "Furnish and Install Crushed Miscellaneous Base (CMB)" and shall constitute full compensation to the Contractor for all work related to the construction of the aggregate base features including but not limited to: subgrade preparation, excavation, hauling and spreading material, compaction, and furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in constructing aggregate base roads and features, complete in place, as shown on the Project Drawings or as directed by the County. The total cubic tonnage shall be based on the submitted aggregate base truck delivery tickets. **Measurement and Payment** for the construction of CMB section including, but not limited to: excavating existing ground surface, subgrade preparation and compaction, hauling and stockpiling excess material, supplying and installing CMB, compaction, and finish grading shall be made after County acceptance, at the unit price per ton as stated in the Contractor's proposal.
- c. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 15

16. SILT FENCE

16.1 GENERAL

The work covered by this section shall consist of furnishing all necessary labor, materials, equipment, tools, and supervision for the installation of High-Density Polyethylene (HDPE) silt fence including sandbag checkdams at the locations indicated on the Project Drawings or as directed by the County.

16.2 SUBMITTALS

Contractor shall submit product data sheet, and manufacturer's application instructions for all materials to the County for approval.

16.3 MATERIALS

- a. The HDPE silt fence shall consist of an HDPE outer jacket with an integrated particle filter. HDPE silt fence shall be a minimum of 20" in height and come in sections of 7-feet in length. The HDPE silt fence shall be S-Fence, SF20, as manufactured by ERTEC Environmental Systems or approved equal.
- b. Steel stakes shall be a minimum of 1.5" (width) x 24" (height) x 3/8" (thick) in size or approved equal.
- c. Sandbags shall be Duraskrim 8BBR ultra violet resistance or approved equal. Sandbags shall be filled with clean soil and shall not contain brush, roots, sod, or other deleterious or unsuitable materials.

16.4 EXECUTION

HDPE Silt fence shall be installed as follows:

- a. Contractor shall furnish and install the HDPE Silt fence in strict conformance with the manufacturer's instructions, Contract Documents, or as directed by the County.
- b. Contractor shall excavate anchor trenches in accordance with the Project Drawings and as specified in the manufacturer's instructions.
- c. Contractor shall install the HDPE silt fence in slot against the downstream side of the trench wall and backfilled to grade level.
- d. Contractor shall provide a minimum of 4-inch overlap between adjacent HDPE silt fence sections. Steel stakes shall be installed on the downstream side of each overlap.

Additional stakes shall be installed at the middle of each section. Contractor shall use zip-ties, bailing wires or approved equal to attach the silt fence to the steel stakes.

e. HDPE silt fence shall be placed along the edges of drainage structures as shown on the Project Drawings.

f. Sandbag checkdams shall consist of a total of four (4) sandbags stacked two high as shown in the Project Drawings or as directed by the County. Sandbags checkdams shall be placed behind all installed S-fences and spaced every 25' or as directed by the County.

16.5 MEASUREMENT AND PAYMENT

b. The **measurement** of the final quantity for **Bid Item** No. 20 "Furnish and Install S-Fence" shall be determined by the County based on field measurements of the axial length (linear feet) of silt fence installed at the locations and to the dimensions shown on the Project Drawings. Joining and overlapping of HDPE silt fence sections will not be measured. **Payment** for the HDPE silt fence shall be at the contract unit price per linear foot as stated in the Contractor's Proposal, **Bid Item** No. 20 and shall constitute full compensation to the Contractor for all work related to the supply and installation of HDPE silt fence in the project including but not limited to: furnishing all labor, supervision, materials, tools, equipment, excavating and backfilling trenches, hauling excavated material, steel stake anchors, installing silt fences, sandbag checkdams, and any other requirements by the Contract Documents for the supply and installation of HDPE silt fence. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 16

17. 8" HDPE CLEANOUT PIPE

17.1 GENERAL

This work covered by this section shall consist of furnishing all labor, supervision, tools, equipment, and materials necessary to extend an eight-inch (8") HDPE cleanout line and install protective bollards at the termination as required by the Contract Documents, and as directed by the County and the QA/QC Consultant. This section covers the work necessary to extend the cleanout line, which consists of but is not limited to: installing eight-inch (8") HDPE solid pipe, protective bollards adjacent to cleanout cap; geotextile and HDPE fittings. The work shall include butt-fusion welding of HDPE pipe, excavation for concrete footings and backfilling of HDPE pipe with PCS materials. All pipe and fittings shall be kept clean and undamaged during the progress of the work. Any pipe that becomes either partially or fully clogged or damaged before final acceptance, shall be cleaned, repaired, or replaced to the satisfaction of the County, by the Contractor, at the expense of the Contractor. All work shall conform to applicable requirements of the Standard Specifications, relevant manufacturer's and supplier's specifications, and the Contract Documents.

17.2 SUBMITTALS

The Contractor shall submit in advance complete material specifications and descriptive literature for approval by the County prior to delivery of material to the Site.

Prior to delivery to the Site, the Contractor shall submit written certification by the pipe manufacturer that the pipe materials conform to the requirements of the Contract Documents; are similar and of same formulation as that for which certification is submitted; and have been demonstrated by actual usage to be satisfactory for the intended application.

Prior to delivery to the Site, the Contractor shall submit for approval by the County a method of handling and storing pipe material(s). The pipeline (sub)contractor shall install the pipe only on surface(s) that it has formally accepted from the Contractor by submitting a written "release" form. This form shall be furnished to and is subject to approval by the County to ensure that the surfaces meet all the requirements for installation as detailed in these specifications.

The Contractor shall furnish a written guarantee, within one month of receiving a notice of completion, that the pipe system work constructed by him is free of defects in material and workmanship. The guarantee for the pipe system installed pursuant to these Contract Documents shall extend for a period of one (1) year following the recording of the Notice of Acceptance for the entire project. The Contractor shall agree to make any repairs or replacements found to be necessary by defects in material or workmanship, which become evident within this guarantee period. The Contractor shall make repairs and/or replacements promptly upon receipt of written order from the County. If the Contractor fails to make

repairs and/or replacements promptly, the County may do so, and the Contractor shall be liable to the County for the cost of such repairs and/or replacements.

Mix design and certifications:

The Contractor shall submit a mix design and certifications to the County for review and acceptance at least two (2) weeks prior to beginning placement of concrete for each mix design incorporated for use in this project.

Concrete delivery load tickets

Each and every concrete load ticket shall be delivered to the County by truck drivers at the point of delivery. The mix plant shall supply delivery ticket for each batch of concrete. The Contractor shall submit delivery tickets to the County. Delivery tickets shall show following:

- i. Name of ready-mix batch plant
- ii. Serial number
- iii. Date and truck number
- iv. Name of Contractor
- v. Name and location of job
- vi. Specific classes or designation of concrete in conformance with that required in job specification
- vii. Amount of concrete
- viii. Time loaded
- ix. Type, name, and amount of admixtures used
- x. Amount and type of cement
- xi. Total water content
- xii. Water added by receiver of concrete with his or her signature initials

17.3 MATERIALS

HDPE pipes shall be sized as shown on the Project Drawings and described in these specifications. Eight-inch (8") nominal diameter pipe shall have a design working pressure of 160 psi or greater at 73.4°F and an SDR of 11 or less.

Pipe material shall be of ultra-high molecular weight, high-density polyethylene conforming to ASTM D3350 Cell Classification PE 345434C through 355434C, manufactured from PE 3408 resin.

The material shall exceed 1,500 hours on environmental stress crack resistance (ESCR) with no failures and no indication of stress crack initiation, as determined by ASTM D1693, Condition C. Certified laboratory test results documenting cell classification, melt flow index, and tensile strength of actual pipe to be used on the project shall be submitted to the County for acceptance prior to delivery.

Additional, nominal, engineering design specifications required are:

Property	Unit	Test Method	Value	QA/QC Conf. Testing (Y/N)
Elongation at Break	%	ASTM D638 - 10	600-900	N
Flexural Modulus	psi	ASTM D790 - 10	>100,000	N
Impact Strength	N/A	ASTM D256 - 10	no break	N
Resin Density	gm/cm ³	ASTM D1505/D2839	0.95-0.96	N
Melt Index	gm/10 min	ASTM D1238*	0.11* *	N
Hardness	shore "D"	ASTM D2240 - 05(2010)	62-65	N

* Perform test at 216 kg/190oC

** Average melt index value with a standard deviation of 0.01

The HDPE pipe shall be homogeneous throughout, and shall be free of visible cracks, holes, foreign inclusions, or other defects. Any pipe with nicks, scrapes, or gouges deeper than 5% of the nominal wall thickness shall be rejected. Pipe material shall be uniform in color, capacity, density, and other physical properties.

The following shall be continuously printed on the pipe:

- i. Name and trademark of the pipe manufacturer
- ii. Nominal pipe size
- iii. Standard dimension ratio (SDR)
- iv. The letters HDPE, followed by the hydrostatic design basis in 100's of psi
- v. Manufacturing standard reference (e.g. ASTM D3035 or ASTM F714)
- vi. A production code from which date and place of manufacture can be determined

HDPE fittings shall be molded from polyethylene compound having a cell classification equal to or exceeding the compound used in the pipe or shall be manufactured using

polyethylene compound having a cell classification equal to or exceeding the cell classification of the pipe as specified herein. Cleanout sealing cap shall be eight-inch (8") PVC vacuum type fitting.

Geotextile used to wrap cleanout pipe shall be in accordance with Section 12 "Geotextiles".

Temporary protective membrane and sandbags used to cover cleanout pipe shall be in accordance with Section 14 "Temporary Protective Membrane".

Bollards protecting cleanout access on Bench N shall be schedule 40 steel pipe and conform to ASTM A36 or approved equal; A half-inch (1/2") diameter ten-inch (10") long footing rod anchor shall be securely centered through each vertical pipe six-inches (6") above the bottom of pipe; Anchor rod shall conform to the requirements of ASTM A36 or approved equal. Concrete used to fill bollards and construct footings shall be Class 560-C-3250 and shall conform to Section 201-1 of the Standard Specifications. Bollards shall be hot-dipped galvanized in accordance with Standard Specifications Section 210-3.

17.4 EXECUTION

17.4.1 Storage and Handling

During storage and installation, caution shall be exercised to avoid compression, damage, or deformation to the pipe. If pipe is to be exposed to direct sunlight for more than 14 days, pipe must be covered with an opaque material while permitting adequate air circulation above and around the pipe to prevent excessive heat accumulation.

Pipe, fittings, and accessories shall be carefully inspected before and after installation and those determined to be defective shall be rejected. Pipe and fittings shall be free from fins and burrs. Before being placed in position, pipe, fittings, and accessories shall be cleaned and shall be maintained in a clean condition.

17.4.2 Installation

Cleanout pipe shall be joined by butt-fusion welding or by other appropriate techniques.

Cleanout pipe shall be placed on top of the 16 oz/sy geotextile layer as shown on the Project Drawings.

The portion of the cleanout pipe located within the protective soil layer along benches shall be backfilled in accordance with Section 13 "Protective Cover Soil (PCS) Layer Construction" of these Technical Provisions. The portions of the cleanout pipe located outside of the construction of the PCS layer shall be covered with two-foot by two-foot (2' x 2') sections of 16 oz/sy geotextile at ten-foot (10') intervals in accordance with Section 12.3.2 "Geotextile Placement" of these Special Provisions. The cleanout pipe shall also be

covered by temporary protective membrane in accordance with Section 14.5 “Temporary Protective Membrane Installation”.

Bollards protecting cleanout cap shall be coated with primer and painted safety yellow.

Concrete used to fill bollards and for footings as shown on plans shall be placed in conformance with Section 303-1 of the Standard Specifications.

17.4.3 Inspection and Testing

The Contractor shall perform air pressure testing for 100% of the pipelines installed. Pipes shall be tested by air pressure in accordance with ASTM F1417 for air as follows:

Low Pressure Air Test – After pipe fusion has been completed, the air test shall be conducted by the Contractor between two consecutive pipe ends with suitable test plugs. Air shall be supplied slowly to the test section until the internal pressure reaches four (4) pounds per square inch (psi). At least two (2) minutes shall be allowed for the air pressure to stabilize. When the pressure has stabilized and is at or above 3.5 psi, the air supply shall be disconnected and timing shall begin. Timing shall continue until the air pressure has dropped 1.0 psi. If the time elapsed before the pressure drops 1.0 psi is greater than the specified minimum holding time, the section shall be considered to have passed the test. The minimum holding time is calculated as follows:

$$\text{Holding Time (minutes)} = 0.00037 \times D^2 \times L/Q$$

Where D = Pipe Diameter (inches)

L = Length of Pipe Tested (feet)

Q = Allowable Air Loss (ft³/min.) from the following table:

Nominal Pipe Size, in.	Q Allowable Air Loss (ft ³ /min.)	Minimum Holding Time per 100 ft.
6	2	40 seconds
8	2	1 minute and 12 seconds
10	2.5	1 minute and 29 seconds
12	3	1 minute and 47 seconds
15	4	2 minutes and 6 seconds
18	5	2 minutes and 24 seconds
21	5.5	3 minutes
24	6	3 minutes and 33 seconds

27	6.5	4 minutes and 9 seconds
30	7	4 minutes and 45 seconds
33	7.5	5 minutes and 22 seconds
36	8	6 minutes
42	9	7 minutes and 15 seconds

If the time is less than the specified minimum holding time, the section shall be considered to have failed and must be repaired or replaced by the Contractor.

Isolation of defects by air pressure shall be determined by the Contractor and reinstallation or replacement of pipe shall be at the Contractor's expense. Pipe shall be retested by the Contractor after reinstallation or replacement until a satisfactory result is obtained.

17.5 MEASUREMENT AND PAYMENT

The **measurement** of the final quantity for **Bid Item No. 21** "Furnish and Install eight-inch (8") HDPE cleanout pipe" shall be determined by the County based on field measurements of the axial length (linear feet) of the HDPE pipe within the limits specified in the Contract Documents. Measurement shall be determined after the HDPE has been installed, tested and verified to the satisfaction of the County. **Payment for Bid Item No. 21** "Furnish and Install eight-inch (8") HDPE cleanout pipe" including pipe fittings, connections, protective bollards and bollard footings shall be made, after acceptance, at the unit price per lineal feet stated in the Contractor's Proposal for **Bid Item 21**. All costs associated with the installation of the eight-inch (8") solid HDPE cleanout pipe such as fittings, connections, testing and installation of bollards shall be included in the Contractor's proposal price for **Bid Item 21** and shall constitute full compensation to the Contractor for furnishing all labor, supervision, materials, tools and equipment necessary to extend the eight-inch (8") HDPE cleanout pipe and any other requirements by the Contract Documents. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 17

18. DAILY COVER HAUL

18.1 GENERAL

Throughout the duration of the Project, the Contractor may be required to provide the County with excavated material from the Canyon 6 Stockpile for the County to use as daily cover adjacent to the active disposal area. This work shall include furnishing all labor, supervision, tools, equipment, and materials necessary to: excavate to achieve design grades and elevations within the Canyon 6 borrow area, haul and stockpile of daily cover material to an area adjacent to the active refuse pad. This work shall include, but is not limited to: clearing, grubbing, excavation, hauling and stockpiling of cover material and placement at the locations shown on the Project Drawings and as required by the Contract Documents or as directed by the County. Daily Cover Haul is an optional on-call bid item and as such, shall be utilized at the sole discretion of the County as they are subject to circumstances encountered in the field. Contractor will not be compensated in any way for an optional on-call bid item that is not used on the Project. The County has an estimate of the total quantity for this optional on-call bid item. However, the final quantity is dependent on an as-need basis. The estimated quantity is for bidding purposes only and actual quantities may vary. If this optional on-call bid item is utilized and the final quantity is within 0% to 125% of the estimated quantity, the Contractor shall be paid based upon the unit price stated in the bid item proposal. For any portion of the final quantity that is greater than 125% of the estimated quantity, the contractor shall be paid based upon a contract unit price mutually agreed upon by the County and Contractor. In no event shall the Contractor be entitled to be paid any different amount based upon the Standard Specifications, Greenbook, CalTrans Requirements, or any other source.

18.2 MATERIALS

Source material for hauling of daily cover shall emanate from the Canyon 6 Stockpile or remaining excess material from the liner subgrade area. Excavated material deemed unsuitable for use as engineered fill may be used for daily cover, if approved by the County, and can be hauled directly to the area designated for stockpiling of daily cover.

18.3 EXECUTION

18.3.1 EXCAVATION

- a. County may not require the hauling of daily cover by the Contractor every workday and shall notify the Contractor in writing at least 48 hours prior to requiring the hauling of daily cover. Contractor shall expect to haul between 600 to 2,000 cubic yards per day during each haul period requested by the County.

b. This work may include ripping, breaking, and dozing of materials using standard earthmoving equipment up to and including CAT D-9 with single ripper type equipment. Based on a previous subsurface soil investigation, the material within limits of excavation has been determined to be rippable. In the event non-rippable material is encountered, the Contractor shall immediately notify the County and the QA/QC Consultant. Prior to the removal of non-rippable material, Contractor, County, and the QA/QC Consultant shall mutually decide upon the most acceptable method of removal for this material. If mutually decided, this work shall be considered as extra work and therefore will be paid for in accordance with Section 2.7 of the General Provisions entitled "Extra Work". This item shall also include keeping excavation areas neat and orderly, and completing the excavation to the satisfaction of the County and QA/QC Consultant.

c. Areas of excavation within the Canyon 6 borrow area shall be graded to drain at all times, and necessary precautions shall be taken to control dust and erosion. The Contractor's access roads shall be maintained as necessary for Contractor, County, and QA/QC personnel, including landfill operation access. Unless specifically required by the Contract Documents, excavations shall not be carried below the design lines and grades shown on the Canyon 6 excavation plan provided in the Project Drawings or as otherwise recommended by the QA/QC Consultant and accepted by the County in writing. Unauthorized over-excavation shall be immediately corrected by backfilling to grade with engineered fill in accordance with Section 7.3.4 of the Technical Provisions at the Contractor's sole expense.

d. Final sloped surfaces within the Canyon 6 borrow area shall be finished by track walking and left in a uniformly graded condition. Surfaces of flat areas shall be finish-graded with a motor grader or approved equal. The Contractor shall construct drainage and erosion control facilities in the Canyon 6 borrow area in accordance with the Contractor submitted project-specific SWPPP as required by the Contract Documents, or as directed by the County. All material required for the surface drainage and erosion control facilities shall be supplied and installed by the Contractor.

e. The Contractor shall not be compensated for any unauthorized earthwork activities which deviate from what is required by the Contract Documents. The Contractor shall remove or correct any unauthorized road alterations at the Contractors expense.

f. Side slopes shall be cut to an inclination not steeper than 1.5:1 (H:V) unless otherwise shown on the Project Drawings. The Contractor shall observe temporary and permanent excavations on a regular basis for signs of instability. Should signs of instability be noted, the Contractor shall notify the County and the QA/QC Consultant immediately, and shall undertake remedial measures as soon as practicable, subject to the direction and acceptance of the County and the QA/QC Consultant. It shall be the Contractor's responsibility to remove all loose materials from the excavated slopes, and to maintain the slopes in a safe and stable condition at all times during the progress of the work and during any temporary closure of the work. Permanent cut slopes shall be left in a clean, safe, and stable condition upon completion of the work.

g. Where necessary, trenches, pits, and other excavations shall be properly sheathed and braced to furnish safe and acceptable working conditions. Any damage occurring from excessive earth pressures, slides, cave-ins, or other causes due to failure to provide proper sheathing or bracing, or through other negligence or fault of the Contractor, shall be repaired by the Contractor at its sole expense. The manner of bracing for excavations shall be as set forth in the rules, orders, and regulations of the Division of Industrial Safety of the State of California or OSHA California Code of Regulations Subchapter 4, Article 6, Section 1540 "Excavations"; whichever is more restrictive.

18.4 MEASUREMENT AND PAYMENT

- c. The measurement of the final quantity for **Optional Bid Item No. 22** "Daily Cover Haul" shall be based only on the total excavation quantity as determined by comparing the pre and post construction ground surfaces within the borrow area of the Canyon 6 Stockpile limits in the project. The pre-construction ground surface shall be established by a combination of conventional ground survey and aerial flight survey, and the post-construction ground surface for this work shall be established by a combination of conventional ground surveying and/or aerial flight survey. **Payment** for excavation and transportation of material to an area adjacent to the active landfill pad for daily cover shall be made based on the unit price per cubic yard for excavation, as stated in the Contractor's Proposal, **Optional Bid Item No. 22** and shall constitute full compensation to the Contractor for all work related to the excavation and transportation of daily cover including but not limited to: furnishing all labor, supervision, materials, tools, and equipment; excavating, hauling, loading, stockpiling and any other requirements by the Contract Documents. The County reserves the right to increase or decrease or to entirely eliminate certain items from the work or materials if found desirable or expedient. The Contractor will be allowed no claims for anticipated profits, loss of profits or for any damages of any sort because of any difference between the estimated and the actual amounts of work done, or materials furnished or used in the completed project.

END OF SECTION 18

19. AUTHORIZED TIME & MATERIALS WORK

19.1 GENERAL

Payment for "Authorized Time and Materials" shall be made when prior written authorization and approval has been provided to the Contractor by the County. Authorized Time and Materials may be used by the County for work that has been negotiated between the County and the Contractor. Use of Authorized Time and Material allocation will be at the sole discretion of the County. As an Optional Bid Item, all or any portion of the allocation amount may be deleted from the Contract. The County shall have the right to add work of a different character or function, and have the Contractor perform such added work when such work is considered by the County to be appurtenant to the satisfactory completion of the project.

The Contractor shall provide a rate schedule for all labor and equipment that may reasonably be anticipated for use during the project. Labor rates shall be consistent with those required by the prevailing wage rate requirements of the Contract and shall reflect all benefits and employer costs. Once the labor and equipment rates have been approved by the Project Manager, they will become the basis for compensation for any Time and Material work requested by the County. If Contractor is already onsite for the contracted work, then Contractor shall not charge Authorized Time and Materials for Foreman's work truck.

The signing of the contract by the Contractor will be deemed to be an agreement on their part to perform the added work, as and when ordered by the County. If the required added work results in delay to the project, the Contractor will be given an appropriate extension of time.

Unless otherwise negotiated by the County and Contractor, the cost of all work performed by the Contractor on an "Authorized Time and Material" basis will be computed in the manner described in Section 7.3. of the General Provisions in the Contract Documents, and the compensation thus provided shall be full payment to the Contractor related to the authorized time and material work. When submitting Contractor T&M the contractor shall also submit Subcontractor and Vendor invoices.

END OF SECTION 19