

CONSERVING OUR WATERSHEDS PROGRAM

sponsored by the
MARIN RESOURCE CONSERVATION DISTRICT

REQUEST FOR BID

Point Reyes National Sea Shore Dairy Waste System Decommissioning

~~August 18, 2026~~
September 1, 2026 addendum
Sept 10 addendum 2 updated
plans and Q&A sheet



PO Box 1146 – POINT REYES STATION, CA 94956 – TEL: (415) 663-1170

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Point Reyes National Sea Shore Dairy Waste System Decommissioning

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Point Reyes National Sea Shore Dairy Waste System Decommissioning

INSTRUCTIONS TO BIDDERS

Introduction

This project is part of Phase VIII of the Conserving Our Watersheds Program and is being implemented by the Marin Resource Conservation Service (MRCD) with funding from the Environmental Protection Agency (EPA) to the State Water Resources Control Board (SWRCB) to implement California's Nonpoint Source Program pursuant to the federal Clean Water Act (CWA) §319(h) – Nonpoint Source Implementation. The project is located in Point Reyes National Seashore, which is a cooperating partner on objectives, designs and site protections. The contents of this document do not necessarily reflect the views and policies of the SWRCB, nor does mention of trade names or commercial products constitute endorsement or recommendation for use (Gov. Code §7550, 40 CFR §31.20). MRCD is a division of state government and is responsible for conservation of soil, water, and related resources.

For the purposes of the bid documents, "Owner" shall mean the MRCD Board of Directors, "Project Engineer" shall mean Tom Hammond, Abundance Ag Engineering – Contracted Engineer, and "MRCD" shall mean MRCD. "Landowner" shall mean National Parks Service (NPS).

Submission of Bids

Bids shall be submitted on the Bid forms attached hereto, labeled in the footer, along with the other documents listed below. Submit the completed Bid forms. **Bids are due no later than 12pm on Monday September 21, 2026 by email or hand delivered to the following:**

1) Email to: gerhard@marinrcd.org & elise@marinrcd.org

2) Hand deliver to:

Marin Resource Conservation District
80 Fourth Street, Suite 202
Point Reyes Station, CA 94956
Open only Mondays 10-3 pm or by appointment

3) Mail bids to:

Marin RCD c/o Gerhard Epke
PO Box 1146
Point Reyes Station
94956

Bids shall be submitted to Marin RCD on the Bid forms attached hereto.
Submit the:

1. Completed Bid forms

2. Signed, Checklist of Labor Law Requirements
3. Bid security
4. Proposed Construction Work Schedule
5. List of Contract issues and / or review and preliminary acceptance of sample contract terms.

Labor Code Requirements

The requirements of the California Labor Code, in particular prevailing wages and apprentices on public works, shall be applicable. They are summarized in the Exhibit A Checklist and are incorporated herein by reference. Contractor shall maintain certified payroll records on forms approved by MRCD throughout the duration of the project and for a period of three (3) years thereafter. These records shall be made available to MRCD or its authorized representative on request. A signed copy of Exhibit A shall be required as part of this Contract.

Scope of Work

Objective: This project proposes to make changes to 3 dairy manure waste systems to improve safety and lower sediment transport risk for three former dairies. Key scope functions are filling in old manure pits (those vertical-sided below-ground structures), installation of overflow swales through existing manure ponds (those with earthen embankments), installation of level spreaders to spread water flow back into sheet flow as it exits the ponds, and removal of one pond. Optional work is also requested to be bid and will be broken out as separate work to be achieved if funding allows. Working East to West the below details the work.

C Ranch: Work includes one manure pit fill, one overflow swale drain and level spreader, one pipe disconnect and graded area and one pond flattening with swale grading.

B Ranch: Work includes two overflow swale drains to two level spreaders, pipe disconnect and rock apron around existing concrete dissipation system. Optional work includes a third overflow swale drain and level spreader.

A Ranch: Work includes filling two manure pits. **Optional work includes two pond breeches in the form of an overflow swale drains to two level spreaders and a concrete curb cut and swale installation, and a rock rip rap energy dissipator.**

Cut may be distributed across all sites and used to fill pits. The sites are each 1.6 to 2 miles apart along the same road.

Proposals shall supply labor, equipment, materials, and miscellaneous items necessary to complete the Scope of Work as specified in this document and outlined in the plans and specifications attached.

Location

The project sites are the three closed dairies located along Sir Francis Drake Blvd, address 22000 25680, and 26450, before the Point Reyes Lighthouse, in Marin County.

Plans and Work Site(s)

The submission of a bid shall constitute certification by the bidder that they have:

- A) Visited the site to familiarize themselves with all local conditions that in any manner affect cost, progress, or performance of the work.
- B) Familiarized themselves with all federal, state and local laws, ordinances, rules, and regulations that in any manner may affect the cost, progress, or performance of the work.
- C) Have thoroughly examined and understand the bid documents, plans, and specifications.
- D) Plans are “Point Reyes Dairies Dairy Waste Water Decommission” dated 18 May 2026 by Abundance Ag Engineering.

Required Best Management Practices

The contractor shall take all precautions and measures necessary to protect the environmental integrity of the site including, but not limited to, the protection of all plants, animals, and aquatic life. Abiding by Exhibit C: Best Management Practices is an integral aspect of this construction project. These BMPs are summarized as

- Adherence to Plans
- Cultural and Tribal resource protections
- Emergency access and fire safety
- Air and water quality protections
- Erosion control and sediment detention
- No weed dispersal, possible reseeding
- Limiting impacted areas and vegetation management
- Species specific protections
 - Adherence to species work windows
 - Preconstruction training
 - Biological oversight for nests, possible frogs, turtles, butterflies, badgers

Contract Documents

Attached to this Request for Bids package are copies of contract documents, including a Contract and the MRCD Contract Supplementary Terms and Conditions. Bidders are expected to thoroughly examine and understand the contents of each of these documents, which contain pertinent and specific information regarding every aspect of project construction. These contract documents will be included in the final contract made between the successful bidder and the MRCD.

The latest edition of the Standard Specifications of the State of California, Division of Transportation, shall govern operations and materials (but not pricing) for this project except where otherwise indicated in the specifications and on the plans. The Caltrans Standard Specifications are included as part of this contract by reference.

Licenses

This job requires a California State Contractor's License applicable to the scope of work. Class A or C27 expected.

Bid Security and Required Bonds

Bid security in the amount of five percent (5%) of the bid price in the form of a certified check or bid bond is required. The bid bond/certified check will be returned to the unsuccessful bidders no later than 10 days after award of Bid.

If the Contract value is greater than Twenty-five Thousand Dollars (\$25,000), the Contractor shall provide a performance bond in favor of MRCD in the amount of one hundred percent (100%) of the contract price and a labor and materials bond in favor of MRCD and SWRCB in the amount of one hundred percent (100%) of the contract price (Civil Code §3247 et seq.; Public Contract Code §7103).

The successful bidder's security will be retained until he/she has entered into a bona fide contract with MRCD and has supplied the necessary insurance certificates and performance bonds, if required. Failure to enter into a contract or to provide the required bonds and/or certificates of insurance will result in both forfeiture of the bid security and status as the successful bidder. Bids submitted without bid security will not be accepted. The bid/bond/certified check will be returned to the unsuccessful bidders no later than 10 days after the acceptance of another bidder.

Payment Policy

This project will be billed to Marin RCD although checks will be issued through Marin County. The successful bidder will need to register as a vendor for the county of Marin. Payment policy and instructions for vendors are included herein as Exhibit D.

Project Timeline

Tuesday September 8 2026 10:00 am	Bid Tour Meet at C-Ranch headquarters
Monday September 21, 2026 12:00 pm	Bids due In-person or by email. Bid opening immediately after
October 14, 2026	MRCD Board meeting contract award approval
October 14, 2026 – November 30 2026	Estimate of Construction Window, Project should be completed within 30 consecutive working days

Work Schedule

No work shall begin until authorized by the MRCD or its agent. A project construction kick off meeting will be held with the Contractor and Project Engineer prior to start of work. The

construction schedule, inspection points, access routes, and spoils areas will be discussed at the start up meeting.

The Contractor shall complete construction within 30 working days (defined as Monday-Friday, excluding weekends, holidays and rain days) and within the deadline for completion of work defined in the Timeline above. Contractor is to submit a planned construction schedule to the MRCD's agent that conforms to the project timeline, which may be adjusted for delays such as inclement weather or saturated soil conditions at the discretion of the MRCD. Contractors will be responsible for communicating project delays and potential problems to the Project Engineer, Tom Hammond at 707-695-9405 or Thomas.Hamond@AbundanceAgEngineering.com - and the MRCD, Gerhard Epke at 415-787-7451 gerhard@marinrcd.org

Construction Observations

All work performed on this project shall be subject to regular observation and documentation. The Contractor shall not cover up any work prior to these observations. Contractor will be responsible for contacting the Project Engineer (Tom Hammond) to schedule an observation no later than 36 hours prior to the observation. The minimum number of observation and meetings with contractor present include:

1. Participate in preconstruction meeting on site.
2. Notify Marin RCD when project shall start.
3. Notify Marin RCD and Engineer when fill placement is going to happen.
4. Review of the pond flattening.
5. Review of first overflow swale drain and level spreader.
6. As need if assistance is requested.
7. Punch list prior to final. (if needed)
8. Final site observation at job completion.

Permits

The MRCD and NPS will obtain the necessary permits. Copies will be provided to the Contractor and shall be available at the construction site at all times.

CONTRACTOR'S COST PROPOSAL

To: Board of Directors, Marin Resource Conservation District

We, the undersigned, having familiarized ourselves with local conditions affecting the cost of work to be done, along with the cost proposal and contract documents, hereby propose to provide and furnish all labor, materials, utilities, transportation, and equipment of all types and kinds and to complete, ready for use, *Point Reyes National Sea Shore Dairy Waste System Decommissioning*, as specified in the plans and specifications outlined in Exhibit B, and summarized in the Description of the Work section above and the table below.

We, the undersigned, agree to perform all of the above work to its completion and to the satisfaction of MRCD for the rates and prices for said work as indicated below.

We, the undersigned, understand that the Contract is a lump sum Contract. We understand that this project is to be billed to MRCD per instructions to vendors in Exhibit D. The Contractor cannot be paid over the sum not to exceed without a change order from the MRCD. The Contractor must bid on all parts of this project. MRCD shall not be responsible for any loss of anticipated profits due to reductions in the size of the contract. The total bid value includes the optional work for bidding purposes. Pending cost of the project and available funds those optional bid line items may be cut from the project.

Bid Schedule**Bid**

Item	Description	Units	Units	Unit Price	Total Cost
1	A Ranch Overflow swale drain and Level spreader	EA	2	Moved down to option item	
2	A Ranch Manure pit fill, placement, hauling, etc.	EA	2		
3	A Ranch Swale with concrete curb cut	EA	1	Moved down to option item	
4	B Ranch Overflow swale drain and level spreader	EA	2		
5	B Ranch Pipe disconnect and rock apron	EA	1		
6	C Ranch Manure pit fill, placement, hauling, etc.	EA	1		

Sample Contract

7	C Ranch Overflow swale drain and level spreader	EA	1		
8	C Ranch Pond flattening, grading, drainage, erosion prevention.	EA	1		
9	C Ranch pipe disconnect and grading.	EA	1		
	<i>Optional:</i>				
1	A Ranch Overflow swale drain and Level spreader	EA	2		
3	A Ranch Swale with concrete curb cut	EA	1		
10	A Ranch rock rip rap energy dissipator	EA	1		
11	B Ranch overflow swale drain and level spreader	EA	1		

Total Bid: _____ Dollars (in words)

Total Bid: \$ _____ Dollars (in numbers)

Add-on Work:

Proposals for additional work or materials that would increase the cost of the Contract must be submitted and approved before the materials are purchased or the work is done. For add-on work, if requested, the following equipment, labor, and materials rates will be used to determine compensation:

- A) Materials purchased and delivered to the site: Contractor's purchase cost, as documented by sales receipts, plus _____ percent for Contractor handling and profit.
- B) List all equipment you expect to use on the project and a cost per hour, including the operator.
- _____ \$ _____/hour
- _____ \$ _____/hour

Sample Contract

_____/hour

_____/hour

C) For labor costs per hour, list all classifications of labor or individuals and a rate per hour.

_____/hour

_____/hour

_____/hour

_____/hour

List (if any) subcontractors you are planning to use on this project. Provide company name and California license number and classification.

Name of Subcontractor_____

License # _____ Classification_____

Name of Subcontractor_____

License # _____ Classification_____

Name of Subcontractor_____

License # _____ Classification_____

I hereby certify that

1) all of the statements herein made by me are made on behalf of:

A) a corporation organized and existing under the laws of the state of California,
governed by:

President _____

Vice-President _____

Secretary _____

Treasurer _____

Sample Contract

or B) a partnership consisting of: _____ and;
or C) an individual trading as: _____ in
the County of _____ State of _____

- 2) that I have thoroughly examined the plans and specifications, Contract Documents and all other items bound herein;
- 3) I have read, filled out, signed, and included the Checklist of Labor Code Requirements and agree to be bound by these terms on the document that is attached as Exhibits A;
- 4) that I have carefully prepared this Bid form and have checked the same in detail before submitting this bid;
- 5) that I have full authority to make such statements and to submit this bid on the Company's behalf; and
- 6) that the statements herein are true and correct.

Signature _____ Date _____

By _____

Title _____

Calif. Contractor's License No. _____ Classification _____ Expires _____

Name of Qualifier for License _____

Federal Tax Identification No. _____

Company Address _____

Phone _____

Project Representative _____

Representative's Phone No. _____

CONTRACT SUPPLEMENTARY TERMS AND CONDITIONS

A. Definitions and Terms

Owner or MRCD:	Owner or MRCD shall mean the Marin Resource Conservation District, a division of government of the state of California and the sponsor of the Conserving Our Watersheds Program.
Project Engineer/Inspector:	Project Engineer shall mean Tom Hammond, the authorized agent of MRCD, who shall act within the scope of their authority as the representative of MRCD during the term of the Contract.
Landowner:	Landowner shall mean National Park Service, the owner(s) of the property on which the project is being constructed.
Contractor:	Contractor shall mean the Contractor who has signed the Contract and any subcontractors.
Contract:	This Contract signed by MRCD and Contractor.

B. Preliminary Matters

1. Governing Laws
This Contract is formed under the laws of the state of California. The CONTRACTOR agrees to abide by all applicable state of California and United States government laws and to conform to all applicable ordinances of the County of Marin.
2. Plans and Specifications
The latest edition of the Standard Specifications of the State of California, Division of Transportation is made a part of this Contract by reference and shall govern operations and materials for this project, except where otherwise indicated in the project specifications and on the plans.
3. Conflicts in Contract Documents
In cases of ambiguities or conflicts in language, the following order of documents shall prevail in the interpretation of this Contract:
 - a. Project Specifications
 - b. Drawings
 - c. MRCD Contract Supplementary Terms and Conditions
 - d. Standard Specifications of the State of California, Division of Transportation, latest edition
 - e. Standard General Conditions of the Construction Contract dated 1996.

4. Permits

The MRCD is responsible for all permit acquisition for this project.

5. Schedule of Work

CONTRACTOR shall abide by the latest start of work and completion of work dates as set forth in the Project Timeline contained in the Instructions to Bidders section of the Request for Bids or, if applicable, by the dates as adjusted by the MRCD for delays due to inclement weather or saturated soil conditions.

6. Delivery of Documents Prior to Start of Construction

The CONTRACTOR shall submit his/her specific timeline/workplan to the PROJECT INSPECTOR by the latest start work date as set forth in the Project Timeline or, if applicable, by the latest start work date as adjusted by the MRCD.

CONTRACTOR shall submit required performance bonds and certificates of insurance to the MRCD prior to commencing any work on the project.

The CONTRACTOR shall use the following address(es) for delivery of required documents:

MRCD: Marin Resource Conservation District
P.O. Box 1146
Point Reyes Station, CA 94956

Project Engineer: Tom Hammond, 2713 Patio Ct, Santa Rosa, CA 95405
707-695-9405, thomas.hammond@abundanceengineering.com

C. Legal Relations and Responsibilities

1. Payment

The Contract prices paid for the work shall include full compensation for all taxes that the Contractor is required to pay, whether imposed by federal, state, or local government, including, without being limited to, state and federal payroll taxes, withholding taxes and Social Security, federal excise tax, and federal transportation tax. No tax exemption certificate or any document designed to exempt the Contractor from payment of any tax will be furnished to Contractor by MRCD or the Landowner as to any tax on labor, services, materials, transportation, or any other items furnished pursuant to this Contract. Contractor agrees to indemnify and hold MRCD, Project Engineer, and the Landowner harmless from any liability that it may incur to the federal, state, or local governments as a consequence of this Contract.

2. Prevailing Wage Rates

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

No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code §1725.5

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

Contractor is required to familiarize himself/herself with the terms and conditions set by the Checklist of Labor Code Requirements, which is attached hereto as Exhibit A. Copies of the prevailing wage rates are on file at MRCD office and shall be posted by the Contractor while working at the job site.

The rates for authorized overtime in excess of eight (8) hours in any single working day and for authorized work on Saturdays, Sundays and other holidays shall not be less than the overtime rates indicated on the list. For any classification not included on the list, the rate shall not be less than one and one half (1½) times the straight time wage for that classification. Holidays shall be those days listed as such under applicable collective bargaining agreements and any other day established as a general legal holiday by proclamation of the Governor of California or the President of the United States.

In the event it becomes necessary for the Contractor or any subcontractor to employ on the work under this Contract any person in a trade or occupation not covered on the list of prevailing wage rates (except executive, supervisory, administrative, clerical, or other non-manual workers as such), the Contractor shall immediately notify MRCD, who will promptly contact the Director of the Department of Industrial Relations to determine the prevailing rate for such additional trade or occupation. MRCD shall furnish the Contractor with the minimum rate based thereon, which shall be applicable as a minimum for such trade or occupation from the time of the initial employment of the person affected and during the continuance of such employment. MRCD may request at any time, and the Contractor shall provide, certified payroll records indicating all wages paid to all workers on the project for the time period requested. Forms for this purpose shall be approved by MRCD.

D. Pricing

1. The pricing for this Contract shall be as set forth in the Contractor's Cost Proposal as accepted by MRCD.
2. Substantial variations in the Contract size may occur. The authority for making changes to the Contract lies with the MRCD and/or the Project Engineer. MRCD will not be responsible for any loss of anticipated profits due to reductions in the size of the Contract.
3. If the Project Engineer determines that additional work on the project is necessary, a change order to the Contract may be formed. Unit prices for equipment, materials, and labor, as set

forth in the Contractor's Cost Proposal, shall form the basis of pricing for any additional work covered by a change order. The total value of the Contract shall then be adjusted by the value of each change order. Work performed under any change order shall be subject to the same terms and conditions, and Contract Documents, as work performed under the original agreement.

E. Measurement and Payment

1. MRCD may withhold from any estimate due to Contractor a sum sufficient to protect MRCD from loss on account of (a) defective work not remedied, (b) claims filed or reasonable evidence indicating probable filing of claims, (c) failure of Contractor to make payments properly to subcontractors or for equipment, material, or labor, (d) a reasonable doubt that the Contract can be completed for the balance then unpaid, and/or (e) damage to another contractor on the project. Such amounts withheld shall be paid upon removal of grounds for withholding payment.
2. Contractor is expected to correct defective work rejected by the Project Designer in a timely manner. In summer months (June 21 to September 21), ten (10) days will be allowed for Contractor to correct defective work. In the fall (after September 21), when timing is crucial because of the impending rainy season, five (5) days will be allowed. If defective work is not complete within these time frames, the Project Engineer may order a third party to correct the work at the expense of the Contractor.
3. Partial payment shall cover work completed through the 25th calendar day of each month for contracts where the number of working days exceeds twenty (20). No partial payments shall be made for contracts having a time limit of twenty (20) working days or less, unless completion has been significantly delayed by causes that are clearly not the fault of the Contractor.

When partial payments are to be made, the Contractor shall submit an estimate of the total amount of work accomplished, which will show the computed amount due, to the Project Engineer for approval. No partial payments will be made for materials stored on the job but not yet installed.

Upon receipt of the Project Engineer's approval of the estimate, the Contractor shall submit a covering invoice to MRCD. Upon receipt of the invoice, MRCD will schedule approval and payment at the next scheduled meeting of MRCD Board of Directors.

4. Liquidated Damages

MRCD and the Contractor agree that MRCD will suffer financial loss if the work is not completed by the end of the grant funding this work, in August 2027. Therefore, if work is not finished and accepted by the project completion date and if working days were available to complete the work, Contractor agrees to pay MRCD two hundred fifty

dollars (\$50) per day as liquidated damages to cover losses, expenses and damages for each and every day in which the Contractor fails to achieve completion of the project.

5. Risks Associated with Inclement Weather

The Contractor shall assume all risk of damage to works in progress until final acceptance by MRCD. The Contractor accepts risk of all costs associated with delays resulting from inclement weather.

6. Final Payment

Upon completion of the work, the Contractor shall submit a final accounting of all work accomplished, showing the computed amount due, to the Project Designer for approval. Upon approval and acceptance of the work by the Project Designer, the Contractor shall submit his/her final invoice to MRCD and the Landowner. Notice of completion will be filed and retention of moneys will be paid as required by the laws of the state of California relating to mechanics' liens.

All prior partial estimates and payments shall be subject to correction in the final accounting and payment.

Contractor shall provide copies of receipts for materials to MRCD

In the absence of a formal claim filed by the Contractor, the final accounting shall be conclusive and binding against both parties to the Contract on all questions relating to the performance of the Contract, the amount of work done there under, and compensation paid therefore.

Final payment of retention does not free the Contractor from any obligations arising out of the performance of work on this Contract.

7. Funding

This project will be invoiced to two entities: MRCD and the Landowner. MRCD has received funding from the EPA to the SWRCB to implement California's Nonpoint Source Program pursuant to the CWA 319(h). Payment schedules and reimbursement time will vary with the differing funders. Payment instructions for vendors are attached hereto as Exhibit D.

F. Insurance Requirements

1. Contractor agrees to procure and maintain insurance of the kinds and amounts hereinafter described below from insurance companies authorized to do business in the state of California, covering all operations under this Contract, whether performed by him/her or subcontractors. There is no Owner-provided insurance program for this project.

2. Before commencing any work on the project, Contractor shall furnish to the Project Designer and MRCD a certificate(s) signed by an authorized representative of the insurance company(ies) showing the Contractor has satisfactorily complied with the insurance provisions herein.
3. The following paragraphs, which are contained within the Standard General Conditions of the Construction Contract attached hereto and incorporated herein, are superseded by the contents of this section, and shall not apply to this Contract: Paragraphs 5.05, 5.06, 5.07, 5.08, 5.09, 5.10 under Article 5: Bonds and Insurance, and Paragraph 8.06 under Article 8: Owner's Responsibilities.
4. The types and amounts of insurance required are as follows:
 - a. Worker's Compensation Insurance
Contractor shall take out and maintain, during the life of this Contract, Worker's Compensation Insurance, including Employer's Liability Insurance of not less than one million dollars (\$1,000,000) for injury or death per accident, in accordance with the Worker's Compensation laws of the state of California.
 - b. Public Liability and Property Damage Insurance
Contractor shall take out and maintain, during the life of this Contract, such public liability and property damage insurance as shall protect him/her, the state of California, its officers, agents, and employees, the State Water Resources Control Board, the MRCD, the Project Engineer, and the landowner from any and all claims for personal injury, including accidental death, as well as from claims from property damage that may arise from operations under this Contract, whether such operations be by the Contractor, by any subcontractor, or by anyone directly or indirectly employed by either.

The amounts of such insurance shall be as follows:

1. Injury, including accidental death, minimum one million dollars (\$1,000,000) for any one person and one million dollars (\$1,000,000) for any one occurrence.
 2. Property damage, minimum one million dollars (\$1,000,000).
5. The MRCD (its directors, officers, employees, and agents), the state of California, its officers, agents, and employees, the State Water Resources Control Board (SWRCB), the Project Engineer (its directors, officers, employees, and agents), and the Landowner shall be specifically named as additional insureds on each and every public liability and property damage insurance policy provided under the terms of this section.
 - c. Comprehensive Vehicle Liability Insurance
Contractor shall take out and maintain, during the life of this Contract, such Comprehensive Vehicle Liability insurance as shall protect him/her, the MRCD, the Project Engineer, and the Landowner from all claims for personal injury, including accidental death, as well as from claims for property damage that may arise from operations under this Contract, whether such operations be by the

Contractor, by any subcontractor, or by anyone directly or indirectly employed by either.

The amount of such insurance shall be not less than one million dollars (\$1,000,000) combined single limit or equivalent for bodily injury and property damage as a result of any one occurrence, including coverage for Owned, Hired, and Non-Owned vehicles.

The MRCD (its directors, officers, employees and agents), the Project Engineer (its directors, officers, employees and agents), and the Landowner shall be specifically named as additional insureds on each comprehensive vehicle liability insurance policy provided under the terms of this section.

6. Said policies shall remain in effect until final acceptance of the project by MRCD and shall provide that they may not be canceled without first providing MRCD with thirty (30) days written notice of such intended cancellation. If Contractor fails to maintain the insurance provided herein, MRCD may secure such insurance and deduct the cost thereof from any funds owing to Contractor.

G. Indemnification

Contractor will indemnify and hold MRCD, the Project Engineer, and the Landowner harmless from all claims, demands, or liability arising out of or encountered in connection with this Contract or the prosecution of work under it, whether such claims, demands, or liability are caused by Contractor, Contractor's agents or employees, or subcontractors employed on the project, their agents or employees, or products installed on the project by Contractor or subcontractors, excepting only such injury or harm as may be caused solely and exclusively by Owner's fault or negligence. Such indemnification shall extend to claims, demands, or liability for injuries occurring after completion of the project as well as during the work's progress.

H. Bonding Requirements

1. If the Contract value is greater than twenty-five thousand dollars (\$25,000), the Contractor shall provide a performance bond in favor of MRCD and SWRCB in the amount of one hundred percent (100%) of the Contract price and a labor and materials bond in favor of MRCD in the amount of one hundred percent (100%) of the Contract price (Civil Code §3247 et seq.; Public Contract Code, §7103).
2. Contractor shall submit required performance bonds to MRCD prior to commencing any work on the project.

I. Safety and Protection

1. Fire Precautions

Contractor shall have on hand and maintain the following tools and equipment while working on the job site: an approved 5-pound ABC fire extinguisher, one 5-gallon backpack pump or equivalent, and one shovel, McLeod, or other grubbing tool suitable for fire-fighting per person working on the project. All motor-driven equipment shall have approved spark

arrestors in place and functioning properly. Stationary equipment shall have a 10-foot fire break cut around it.

J. Retention of Records

Contractor and his/her subcontractors shall retain all administrative documents pertaining to the project, including payroll records, for a period of at least six (6) years following completion and acceptance of the project by MRCD. MRCD and its duly authorized agents shall have the right to inspect and reproduce any such records or documents.

2. Protection of Property

Contractor shall take care not to damage property on which the project is being constructed.

This includes, but is not limited to, damage to roads and pastures resulting from vehicle use during wet conditions. Contractor will be required to repair damage resulting from Contractor's activities at his/her own expense.

K. Inspections

1. All work performed on this project shall be subject to regular inspections. The Contractor shall not cover up any work prior to inspection by the Project Engineer. Points of inspection are defined in the Inspections section of the Request for Bids.

Additionally, throughout project construction, the Biologist will make frequent visits to the work area to ensure that no fish or other animals are being impacted by construction activities. The Biologist should also monitor to ensure water quality standards are being met and sediment is not entering the watercourse.

2. Final Inspection

When the work covered by the project is substantially completed, the Contractor shall notify the Project Engineer or MRCD in writing that the work will be ready for final inspection on a definite date, which shall be stated in such notice. The notice shall be given at least five (5) days prior to the stated date for final inspection. If the Project Engineer or MRCD determines that the status of the work is as represented, he/she will make the arrangements necessary to have final inspection commence on the date stated in such notice, or as soon thereafter as is practicable.

L. Dispute Resolution

1. Intent

The parties intend to resolve all disputes and other matters in question arising out of or relating to the interpretation, application, performance or breach of any term, covenant or condition of this Contract through reasonable business-like negotiations without resort to litigation. If a dispute should arise regarding the obligations of the MRCD or Contractor towards each other or the Project, the parties shall attempt to resolve the dispute in accordance with this Dispute Resolution section. Unless the MRCD requires otherwise, and regardless of the size or nature of the dispute, the Contractor shall not cease or delay performance of its obligations under the Contract

during the existence of any dispute, and the MRCD shall pay to the Contractor all amounts owing and not subject to dispute or offset.

2. Resolution Procedure

The MRCD and Contractor shall attempt to resolve any disputes in accordance with the following procedures:

a. Special Meeting

The MRCD or the Contractor may call a special meeting for the resolution of disputes. The meeting shall be held within three (3) working days after delivery of written request for such meeting specifying the nature of the dispute to be resolved. If a meeting is called prior to commencement of the construction, the meeting shall be held at the MRCD'S offices; thereafter, the meeting shall be held at the Project site. The meeting shall be attended by representatives of the MRCD and Contractor. Such representatives shall have authority to resolve the dispute and shall not be an attorney(s) actively practicing law.

b. Mandatory Mediation

If the dispute has not been resolved within five (5) working days after the special meeting, both parties shall engage in a mediation proceeding, which shall be attended by all parties to the dispute and which, unless all parties to such proposed mediation proceeding agree otherwise, shall be conducted by an independent mediator, such as Judicial Arbitration and Mediation Service ("JAMS") in San Francisco, California, in accordance with its procedures. The costs of mediation shall be shared equally by all parties to such mediation.

c. Settlement

If, as a result of the mediation, a voluntary settlement is reached and the parties agree that such settlement shall be reduced to writing, the agreement may be enforced as a settlement agreement in the Marin Superior Court. Such agreement shall be and have the same force and effect as an arbitration award in California and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

d. Evidence Code

All proceedings under this Dispute Resolution section shall be subject to California Evidence Code Sections 1152 and 1152.5. The restrictions set forth therein on the use of evidence from the special meeting or mediation shall apply to any arbitration as well as any court proceeding. The parties expressly agree to abide by subdivisions (a) and (b) of Section 1152.5, which provide as follows:

- I. Subject to the conditions and exceptions provided in the section, when persons agree to conduct and participate in mediation for the purpose of compromising, settling, or resolving a dispute:
 - i. Evidence of anything said or of any admission made in the course of the mediation is not admissible in evidence, and disclosure of any such evidence shall not be compelled, in any civil action (or arbitration) in which, pursuant to law, testimony can be compelled to be given.

- ii. Unless the document otherwise provides, no document prepared for the purpose of, or in the course of, or pursuant to the mediation, or copy thereof, is admissible in evidence, and disclosure of any such document shall not be compelled, in any civil action (or arbitration) in which, pursuant to law, testimony can be compelled to be given.
 - II. Subdivision I. does not limit the admissibility of evidence if all persons who conducted or otherwise participated in the mediation consent to its disclosure.
 - III The presentation of evidence from any expert or consultant shall not waive the attorney-client or other privilege or exclusionary rule a party may later seek in another proceeding.
3. The CONTRACTOR shall incorporate the provisions of this Dispute Resolution into contracts with all subcontractors so that such lower tier subcontractors and material suppliers shall also be bound to this dispute resolution procedure.
4. This dispute resolution procedure shall not in any way affect any statutes of limitation relating to any claim, dispute or other matter or question arising out of or relating to this Contract or the breach thereof. This dispute resolution procedure may be conducted before or during the pendency of any other legal proceedings between MRCD and any third party.

M. Non Discrimination/Harassment Clause

During the performance of this Contract, the Contractor and its Subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical or mental disability, medical condition, marital status, age (over 40), sex, or sexual orientation. The Contractor shall ensure that the evaluation and treatment of employees and applicants for employment are free of such discrimination.

During the performance of this Contract, the Contractor and its Subcontractors shall not engage in unlawful harassment, including sexual harassment, with respect to any persons with whom the Contractor or its Subcontractors interact in the performance of this Contract. The Contractor and its Subcontractors shall take all reasonable steps to prevent harassment from occurring.

The Contractor shall comply with applicable provisions of the Fair Employment and Housing Act, California Government Code, Sections 12990 et seq., and the applicable regulations promulgated under California Code of Regulations, title 2, Sections 7285 et seq. The applicable regulations of the Fair Employment and Housing Commission implementing California Government Code, Section 12990, set forth in chapter 5 of division 4 of title 2 of the California Code of Regulations, are incorporated into this Contract by reference and made a part of it as if set forth in full.

Preliminary, review of Sample Contract has been performed, the following issues are of concern, (use section numbers, provide narrative of issue):

Sample Contract

[illegible]

Printed Name _____

Signed _____

Exhibit A - Checklist of California Labor Law Requirements

Submit signed per below, with bid.

Suggested Checklist of Labor Law Requirements to Review at Prejob Conference, Section 16421, with suggested Certification by subcontractor.

The federal and state labor law requirements applicable to the contract are composed of but not limited to the following items:

- (1) The contractor's duty to pay prevailing wages under Labor Code Section 1770 et seq., should the project exceed the exemption amounts;
- (2) The contractor's duty to employ registered apprentices on the public works project under Labor Code Section 1777.5;
- (3) The penalties for failure to pay prevailing wages (for non-exempt projects) and employ apprentices including forfeitures and debarment under Labor Code Sections 1775 and 1777.7;
- (4) The requirement to keep and submit copies upon request of certified payroll records under Labor Code Section 1776, and penalties for failure to do so under Labor Code Section 1776(g);
- (5) The prohibition against employment discrimination under Labor Code Section 1777.6; the Government Code, and Title VII of the Civil Rights Act of 1964;
- (6) The prohibition against accepting or extracting kickback from employee wages under Labor Code Section 1778;
- (7) The prohibition against accepting fees for registering any person for public work under Labor Code Section 1779; or for filling work orders on public works under Labor Code Section 1780;
- (8) The requirement to list all subcontractors under Public Contracts Code Section 4104;
- (9) The requirement to be properly licensed and to require all subcontractors to be properly licensed and the penalty for employing workers while unlicensed under Labor Code Section 1021 and under the California Contractors License Law, found at Business and Professions Code Section 7000 et seq;
- (10) The prohibition against unfair competition under Business and Professions Code Sections 17200-17208;
- (11) The requirement that the contractor be properly insured for Workers Compensation under Labor Code Section 1861;
- (12) The requirement that the contractor abide by the Occupational, Safety and Health laws and regulations that apply to the particular construction project;
- (13) The federal prohibition against hiring undocumented workers, and the requirement to secure proof of eligibility/citizenship from all workers.
- (14) The requirement to provide itemized wage statements to employees under Labor Code Section 226.

Certification:

I acknowledge that I have been informed and am aware of the foregoing requirements and that I am authorized to make this certification on behalf of _____.

Date

Name of person signing and company

Exhibit B

Marin RCD Conserving Our Watersheds program

Project Plans and Specifications

POINT REYES DAIRIES

DAIRY WASTE WATER DECOMMISSION

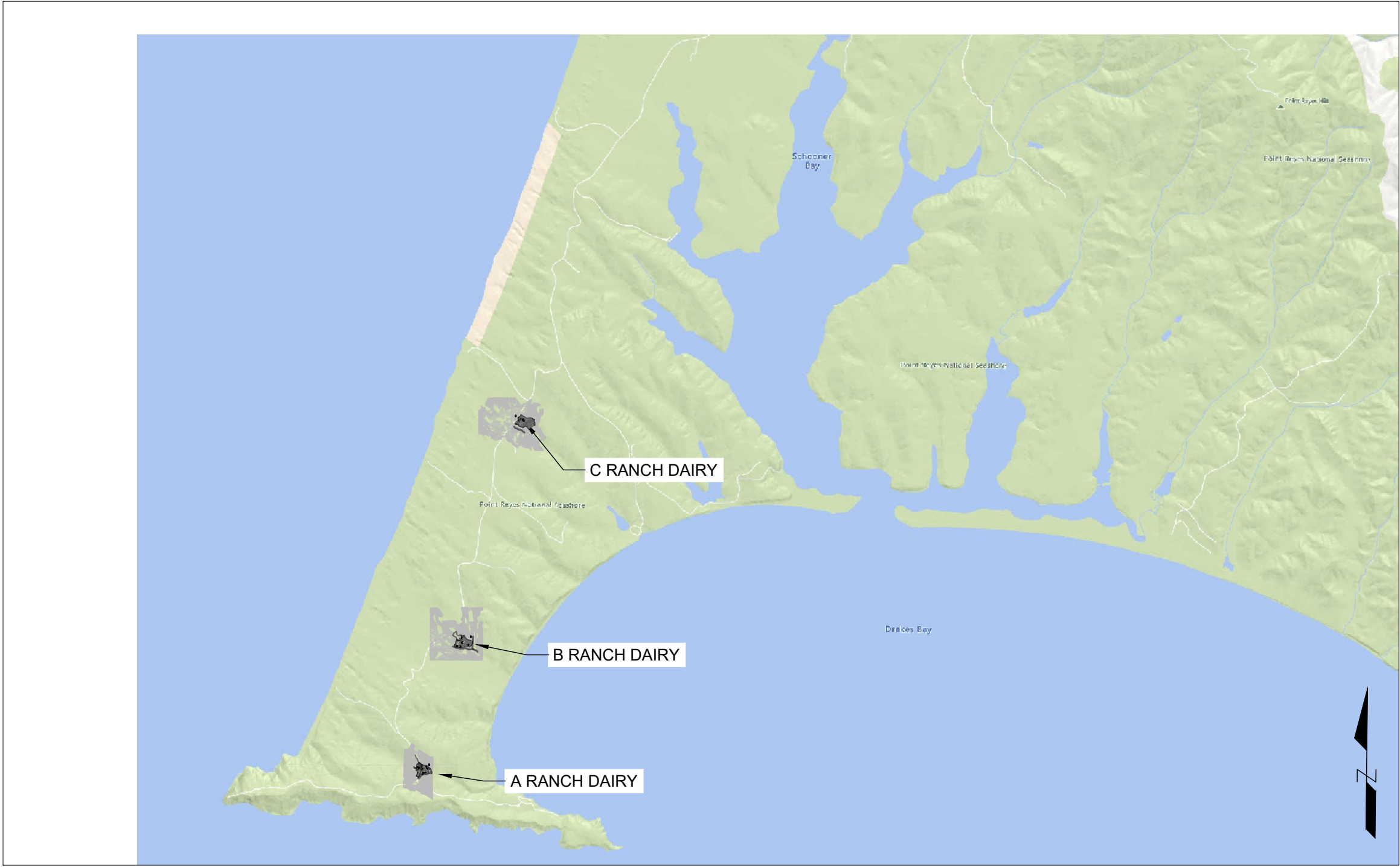
NRCS PRACTICE SPECIFICATIONS
TO THE BEST OF MY PROFESSIONAL KNOWLEDGE,
JUDGEMENT, AND BELIEF, THESE PLANS MEET
APPLICABLE NRCS STANDARDS AND SPECIFICATIONS.

CONSTRUCTION SHALL BE PERFORMED IN
ACCORDANCE WITH THE FOLLOWING NRCS
CONSERVATION PRACTICE STANDARDS AND MARIN
RESOURCE CONSERVATION DISTRICT PERMIT
COORDINATION PROGRAM SPECIFICATIONS:

- 412 GRASSED WATER WAY
- 468 LINED WATER WAY / OUTLET

CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING A
COPY OF THESE SPECIFICATIONS ONSITE DURING
CONSTRUCTION.

INCLUDED AS A REFERENCE, NOT SPECIFIC TO THE
WORK BEING REQUESTED.
A. USDA LOW IMPACT DEVELOPMENT PRACTICES



PROJECT DESCRIPTION

SUMMARY
THIS PROJECT PROPOSES TO MAKE CHANGES TO 3 DAIRY WASTE WATER SYSTEMS TO IMPROVE SAFETY AND
SEDIMENT TRANSPORT FOR THREE DAIRIES THAT HAVE RECENTLY BEEN FORCED TO CLOSE ON THE POINT REYES
NATIONAL SEA SHORE.

LACK OF FUNDING LEADS TO A VERY MINIMALIST APPROACH THAT WILL LEAVE THESE SYSTEMS SAFE BUT LIKELY IN
NEED OF ANNUAL MAINTENANCE TO ENSURE CONTINUED LOW EROSION FUNCTION. THE WORK PROPOSED IS NOT AN
END ALL BE ALL SOLUTION BUT A WAY FORWARD THAT SHOULD LAST A LONG TIME IF MAINTAINED JUST LIKE ALL OTHER
PONDS AND WATER SYSTEMS.

- KEY FEATURES ARE:**
- FILLING IN MANURE SUMPS. THESE SUMPS COULD POSE LIFE SAFETY RISKS TO UNAWARE HUMANS IF LEFT
NON-OPERATED.
 - OVERFLOW SWALES TO ALLOW SAFER LESS EROSION DRAINAGE FROM PONDS.
 - LEVEL SPREADERS TO ENABLE CONCENTRATED WATER FLOW TO DISPERSE ACROSS THE LANDSCAPE IN A LOW
ENERGY, LOW EROSION MANNER.
 - POND FLATTENING, AS THE EASIEST ALTERNATIVE.

SHEET INDEX

SHEET C1.0 TITLE
SHEET C2.0-2.4 NOTES
SHEET C3.0-C PLAN
SHEET C4.0 -C DETAILS

PROJECT TEAM

CIVIL ENGINEER
THOMAS HAMMOND, P.E.
ABUNDANCE AG ENGINEERING
707-569-1448

PROJECT MANAGER
GERHAD EPKE
MARIN RESOURCE CONSERVATION DISTRICT
415-663-1170

OWNER REPRESENTATIVE
DYLAN VOELLER
NATIONAL PARKS SERVICE
RANGE PROGRAM MANAGER

ABBREVIATIONS

ADA	AMERICAN WITH DISABILITIES ACT
APROX.	APPROXIMATE
AGG	AGGREGATE BASE ROCK
BESS	BATTERY ENERGY STORAGE SYSTEM
BFV	BUTTERFLY VALVE
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICES
C	CIVIL SHEET SET
CBC	CALIFORNIA BUILDING CODE
CO	CLEANOUT
CONC	CONCRETE
D	DETAIL
DC	DIRECT CURRENT
DI	DRAIN INLET
DIA	DIAMETER
EX	EXISTING
ELEC	ELECTRICAL
EG	EXISTING GRADE
EOP	EDGE OF PAVEMENT
EV	ELECTRIC VEHICLE
FG	FINISHED GRADE
FL	FLOW LINE
FT	FOOT, FEET
G	GAS
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
IN	INCH
IRR	IRRIGATION
GPM	GALLONS PER MINUTE
CMP	CORRUGATED METAL PIPE
LF	LINEAR FEET
OC	ON CENTER
OH/OHE	OVERHEAD ELECTRICAL
OSHA	OCCUPATIONAL SAFETY & HEALTH ASSOCIATION
MAX	MAXIMUM
MIN	MINIMUM
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NRCS	NATURAL RESOURCES CONSERVATION SERVICE
OFR	ON FARM RECHARGE
PGE	PACIFIC GAS AND ELECTRIC
PIP	PROTECT IN PLACE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYLCHLORIDE
RW	RAINWATER
RWQCB	REGIONAL WATER QUALITY CONTROL BOARD
SCC	SONOMA COUNTY CODE
SH	SHEET
SQFT	SQUARE FEET
TB	THRUST BLOCK
TC	TOP OF CONCRETE
TG	TOP OF GRATE
TP	TOP OF PIPE
TYP	TYPICAL
W	WATER
WSL	WATER SURFACE LEVEL

CIVIL LEGEND

LINES	
---	FLOWLINE/SWALE/DRAINAGE DITCH
—OH—OH—	OVERHEAD POWER LINE (OHE)
---	DRAIN PIPE
---	WATER PIPE
70	CONTOUR
x15.25	SPOT ELEVATION OR GRADE
.....	VINE ROW / VINEYARD EDGE
—□—□—□—	FENCE
---	PROPERTY / PARCEL LINE
---	EASEMENT
—	CULVERT
—	BUILDING FOOTPRINT
---	GRADE BREAK
2:1	TOP OF CUT/BANK EMBANKMENT SLOPE, AS INDICATED
---	TOE OF FILL
~~~~~	FIBER ROLL
—○—○—○—○—	SILT FENCE

#### HATCHING

CONCRETE
AGGREGATE BASE ROCK
SAND OR TRENCH BASE

#### SYMBOLS

⊙	CONNECT TO (E) UTILITY
⌋	CAP OR PLUG UTILITY
⊙	THRUSTBLOCK
⊙	FIRE HYDRANT
⌋	CHECK VALVE
⌋	GATE VALVE
⊙	BALL VALVE
⌋	BUTTERFLY VALVE
⊕	HOSE BIBB
▷	REDUCER/ENLARGER
○ CO	CLEANOUT (CO)
□	DI (DROP INLET) OR AD (AREA DRAIN)
○ W	WELL AND PLATFORM
⊙	RIPRAP/COBBLES
⊙	UTILITY POLE GUY POLE
⊙	AIR VENT
⊙	WELL— WATER WELL
⊙	BURIED VALVE
⊙	TEST PIT/ POT HOLE
⊙	MANHOLE— DRAIN
⊙	PRESSURE REDUCING VALVE
⊙	PRESSURE RELIEF VALVE
3 1	SLOPE (3 HORIZ TO 1 VERT)
→	FLOW ARROW
FG	SPOT ELEV OR FINISHED GRADE

#### VICINITY MAP

1" = 5,000'

#### CUT, FILL AND SURFACE AREA DISTURBANCE ESTIMATE

**A RANCH**  
CUT = 60 YARDS  
FILL = 340 YARDS  
SURFACE AREA = 2,170 SQFT

**B RANCH**  
CUT = 240 YARDS  
FILL = 0 YARDS  
SURFACE AREA = 2,950 SQFT

**C RANCH**  
CUT = 365 YARDS  
FILL = 210 YARDS  
SURFACE AREA = 20,200 SQFT

TOTAL CUT = 660 CUBIC YARDS  
TOTAL FILL = 570 CUBIC YARDS

TOTAL AREA = 0.58 ACRES

Address  
NATIONAL PARKS SERVICE  
POINT REYES NATIONAL SEASHORE  
1 BEAR VALLEY RD, POINT REYES STATION, CA 94956

Project  
**POINT REYES DAIRIES**  
**DAIRY WASTE WATER DECOMMISSION**  
Sheet Name  
**TITLE**

**ABUNDANCE AG**  
**ENGINEERING**

SANTA ROSA, CA  
707-695-9405  
AbundanceAgEngineering.com



Signature Date: 18MAY2026

Planset Date  
18MAY2026

UPDATED PER  
BID WALK  
9SEPT26

REV by No. REVISION DATE

Sheet ANSI D

# C1.0

SHEET 1 OF 6

### GENERAL NOTES

1. WORK DESCRIBED IN THESE NOTES INCLUDES AND IS NOT LIMITED TO METHODS AND MATERIALS REQUIRED TO CONSTRUCT THE PROJECT. THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PLANS AND THE STAKEHOLDERS, LAND OWNER REPRESENTATIVE, PROJECT OWNER, PROJECT MANAGER AND ENGINEER.
2. REGIONAL, STATE, AND FEDERAL CODES, LAWS, APPLICABLE PERMITS, ORDINANCES, RULES, AND REGULATIONS RELATING TO THE WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE NOTES, AND THEIR PROVISIONS SHALL BE CARRIED OUT IN CONFORMANCE WITH THE PLANS AND NOTES. SHALL NOT BE CONSTRUED TO CONFLICT WITH THE ABOVE RULES AND REGULATIONS.
3. THE WORK SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE AND/OR APPLICABLE COUNTY OF MARIN CODES, ORDINANCES, ZONING AND PLANNING LAWS, NATURAL RESOURCES CONSERVATION SERVICE (NRCS), NATIONAL PARKS SERVICE (NPS) AND CALTRANS STANDARDS.
4. THE WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS AS SET FORTH BY THE FEDERAL DEPARTMENT OF LABOR AND/OR THE STATE OF CALIFORNIA. THE CONTRACTOR SHALL SECURE A TRENCH PERMIT FROM THE CALIFORNIA DEPARTMENT OF INDUSTRIAL SAFETY PRIOR TO EXCAVATION OF ANY TRENCH OVER FIVE FEET DEEP.
5. THE WORK SHALL BE GOVERNED BY THE DIMENSIONS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS SHOWN AND BRING DISCREPANCIES TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK, ORDERING OR FABRICATING MATERIALS.
6. THIS PLAN SET DOES NOT REPRESENT A PROPERTY SURVEY. PROPERTY LINES HAVE BEEN PLOTTED FOR INFORMATIONAL PURPOSES ONLY AND ARE APPROXIMATE.
7. DETAILS OF CONSTRUCTION NOT INDICATED OR NOTED SHALL BE CONSIDERED OF THE SAME CHARACTER SHOWN FOR SIMILAR OR EXISTING CONSTRUCTION.
8. UNLESS OTHERWISE STATED IN PERMITTING, THE LOCAL JURISDICTION HAVING AUTHORITY SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE JURISDICTION HAVING AUTHORITY INFORMED OF THE CONSTRUCTION SCHEDULE.
9. CONTRACTOR SHALL PROVIDE 72 HOURS ADVANCE NOTICE TO THE ENGINEER FOR REQUESTED INSPECTIONS.
10. MATERIALS AND WORKMANSHIP SHALL CONFORM TO ADOPTED MARIN COUNTY STANDARDS, CALTRANS, NRCS AND NATIONAL PARKS SERVICE STANDARDS.
11. UNDERGROUND SERVICE ALERT (U.S.A.) - CALL TOLL FREE (800) 642-2444 AT LEAST 48 HOURS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL UNCOVER RELEVANT UTILITIES TO VERIFY THEIR LOCATION AND DEPTH. IF UNEXPECTED OR CONFLICTING UTILITIES ARE ENCOUNTERED DURING EXCAVATION, NOTIFY U.S.A., THE UTILITY OWNER, AND/OR THE ENGINEER OF RECORD IMMEDIATELY. UTILITIES INCLUDE BUT ARE NOT LIMITED TO WATER, SEWER, ELECTRICITY, GAS, TELEPHONE, AND CABLETV. IF PRACTICAL, THE EXCAVATOR SHALL DELINEATE WITH PAINT OR OTHER SUITABLE MARKINGS THE AREA TO BE EXCAVATED.
12. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE PLAN ARE BASED ON THE BEST INFORMATION AVAILABLE. THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES MAY NOT HAVE BEEN INDICATED ON THESE DRAWINGS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION SHOWN, OR THE INADVERTENT OMISSION OF ANY SUCH INFORMATION. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING UTILITIES, CONFLICTS AND/OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. UNLESS OTHERWISE NOTED, EXISTING UTILITIES SHALL BE PROTECTED AND MAINTAINED IN SERVICE BY THE CONTRACTOR. UTILITIES THAT INTERFERE WITH WORK TO BE PERFORMED UNDER THIS PROJECT SHALL BE PROTECTED IN ACCORDANCE WITH THE UTILITY OWNERS REQUIREMENTS.
13. MRCD, LANDOWNER AND PROJECT OWNER WILL SECURE PERMITS AND CONTRACTOR SHALL COMPLY WITH PERMITTING INCLUDING SCHEDULING. PERMITS FROM MARIN COUNTY. THE PROJECT OWNER WILL MAKE APPLICATIONS AND SHALL PAY PERMIT FEES.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING FACILITIES AND IMPROVEMENTS FROM DAMAGE RESULTING FROM CONSTRUCTION WORK. DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
15. CONTRACTOR SHALL COORDINATE THE WORK WITH EXISTING FACILITIES REQUIREMENTS & OPERATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR PHASES, PORTIONS OF THE WORK SO THAT IT DOES NOT INTERFERE WITH OR INHIBIT EXISTING FACILITY OPERATIONS.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ACCESS TO THE SITE AND ADJOINING OPERATIONS OPEN TO THE OWNERS AT ALL TIMES.
17. EXISTING DRAINAGE COURSES RECEIVING WATERS FROM THIS SITE AND LOCATED THROUGHOUT THE SITE SHALL REMAIN OPEN AND CLEAR OF DEBRIS TO PROPERLY CONVEY STORMWATER.
18. THE SCREENED CONTOURS AND TOPOGRAPHIC INFORMATION ON THESE DRAWINGS REPRESENT THE APPROXIMATE SURFACE BASED ON 1-FOOT TOPO COLLECTED BY DIMENSIONS 4 ENGINEERING. HORIZONTAL DATUM: 1983 NAD83 AND VERTICAL DATUM: NAVD83. EXISTING SITE CONDITIONS SHOULD BE VERIFIED BY THE CONTRACTOR.
19. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR SITE CONDITIONS IN THE AREA OF CONSTRUCTION OPERATIONS.
20. CONTRACTOR SHALL PROVIDE LABOR, MATERIALS, EQUIPMENT, TOOLS AND OTHER SERVICES TO COMPLETE THE PROJECT.
21. CONTRACTOR SHALL LAYOUT LOCATION OF GRADING IN THE FIELD BEFORE CONSTRUCTION TO ALLOW FOR MINOR ADJUSTMENTS BY THE STAKEHOLDERS.
22. SUBSTITUTION OF MATERIALS OR EQUIPMENT INDICATED ON THE CONSTRUCTION DRAWINGS SHALL BE REVIEWED BY THE ENGINEER. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR WORK AFFECTED BY SUCH CHANGES ALLOWED WITHOUT ENGINEER'S REVIEW.
23. THE CONTRACTOR SHALL PROVIDE THE PROJECT OWNER, AS A CONDITION OF COMPLETION AND CLOSURE OF FINAL AGREEMENT, A WRITTEN GUARANTEE CERTIFYING ALL MATERIALS AND WORKMANSHIP FURNISHED AND PERFORMED FOR THIS WORK AGAIN

- DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF FILING THE NOTICE OF COMPLETION.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A RECORD OF "AS BUILT" CONDITIONS THAT DIFFER FROM THE ORIGINAL DRAWINGS. THE CONTRACTOR WILL BE PROVIDED WITH A SET OF REVISIONS TO THE DRAWINGS ON WHICH THE "AS BUILT" CONDITIONS SHALL BE RECORDED. THE "AS BUILT" DRAWING (SIGNED AND DATED) SHALL BE FURNISHED TO THE ENGINEER UPON COMPLETION OF THE WORK AND PRIOR TO FINAL PAYMENT.
25. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL HOLD A PRE-CONSTRUCTION MEETING WITH THE STAKEHOLDERS, TO DISCUSS THE SCOPE OF THE PROJECT, PERMIT CONDITIONS, REQUIRED INSPECTIONS, APPROPRIATE APPLICATION OF BEST MANAGEMENT PRACTICES (BMPs) AND ANY OTHER CONSTRUCTION ISSUE.
26. SOLID WASTE, SUCH AS TRASH, DISCARDED BUILDING MATERIALS AND DEBRIS SHALL BE PLACED IN DESIGNATED COLLECTION AREAS OR CONTAINERS. THE CONSTRUCTION SITE SHALL BE CLEARED OF SOLID WASTE DAILY OR AS NECESSARY. REGULAR REMOVAL AND DISPOSAL SHALL BE COORDINATED BY THE CONTRACTOR.
27. IF NEEDED A CONCRETE WASHOUT AREA SHALL BE DESIGNATED TO CLEAN CONCRETE TRUCKS AND TOOLS. AT NO TIME SHALL CONCRETE PRODUCTS AND WASTE BE ALLOWED TO ENTER COUNTY WATERWAYS SUCH AS CREEKS OR STORM DRAINS. NO WASHOUT OF CONCRETE PRODUCTS, EXCESSIVE OILS OR TRUCKS SHALL BE ALLOWED ON SOIL. CONCRETE WASTE SHALL BE PROPERLY DISPOSED.
28. IF NEEDED, PROPER APPLICATION, CLEANING, AND STORAGE OF POTENTIALLY HAZARDOUS MATERIALS, SUCH AS PAINTS AND CHEMICALS, SHALL BE CONDUCTED TO PREVENT THE DISCHARGE OF POLLUTANTS.
29. TEMPORARY RESTROOMS AND SANITARY FACILITIES SHALL BE LOCATED AND MAINTAINED DURING CONSTRUCTION ACTIVITIES TO PREVENT THE DISCHARGE OF POLLUTANTS.
30. APPROPRIATE VEHICLE STORAGE, FUELING, MAINTENANCE AND STORAGE AREAS SHALL BE DESIGNATED AND MAINTAINED TO PREVENT DISCHARGE OF POLLUTANTS.

## GRADING AND DRAINAGE NOTES

- PERFORM GRADING AND DRAINAGE IMPROVEMENTS IN ACCORDANCE WITH APPLICABLE MARIN COUNTY REGULATIONS OR NPS WHICHEVER HAS PRECEDENT.
2. IN THE EVENT PALEONTOLOGICAL RESOURCES OR PREHISTORIC, HISTORIC OR TRIBAL CULTURAL RESOURCES ARE DISCOVERED DURING GRADING OR OTHER CONSTRUCTION ACTIVITIES, ALL WORK SHALL IMMEDIATELY BE HALTED WITHIN THE IMMEDIATE VICINITY OF THE FIND SHALL BE HALTED. CONTRACTOR SHALL IMMEDIATELY CALL MRCD TO ASSESS THE SIGNIFICANCE OF THE FIND. IF THE FIND IS DETERMINED THE RESOURCES ARE AVOIDED, MRCD WILL IMMEDIATELY NOTIFY PERMIT MARIN PROJECT REVIEW STAFF OF THE FIND. MRCD SHALL BE RESPONSIBLE FOR THE COST TO CONDUCT CONFIDENTIAL FIELD SURVEY AND ARCHEOLOGIST OR TRIBAL CULTURAL RESOURCE SPECIALIST UNDER CONTRACT TO EVALUATE THE FIND AND MAKE RECOMMENDATIONS TO PROTECT THE RESOURCE IN A MANNER THAT PERMITS THE PROJECT TO PROCEED. THE INFORMATION CENTER SHALL BE NOTIFIED AT (707) 588-4455. A QUALIFIED ARCHEOLOGIST SHALL BE CONSULTED FOR AN ON-SITE EVALUATION. ADDITIONAL FIELDWORK MAY BE REQUIRED TO OBTAIN A WRITTEN ARCHEOLOGIST'S RECOMMENDATIONS.
- PALEONTOLOGICAL RESOURCES INCLUDE FOSSILS OF ANIMALS, PLANTS OR OTHER ORGANISMS. PREHISTORIC RESOURCES INCLUDE HUMANLY MODIFIED STONE, SHELL, OR BONES, HEARTHS, FIREPIRES, OBSIDIAN AND CHERT FLAKED-STONE TOOLS SUCH AS FLINTED OR FLINTED POINTS, AND OTHER MIDDEN (CULTURALLY DARKENED SOIL CONTAINING HEAT-AFFECTED ROCK, ARTIFACTS, ANIMAL BONE, OR SHELL-FISH REMAINS), STONE MILLING EQUIPMENT, AND OTHER MATERIALS. CULTURAL RESOURCES INCLUDE FEATURES, PLACES, CULTURAL LANDSCAPES, SITED PLACES AND OBJECTS WITH CULTURAL VALUE TO A CALIFORNIA NATIVE AMERICAN TRIBE. HISTORIC RESOURCES INCLUDE THE NATIVE AMERICAN OR OF HUMAN USE GREATER THAN FIFTY (50) YEARS OF AGE INCLUDING, BACKFILLED PRIVIES, WELLS, AND REFUSE PITS, CONCRETE, STONE, OR WOOD STRUCTURAL ELEMENTS, AND OTHER ARTIFACTS AND CONCENTRATIONS OF METAL, GLASS, AND CERAMIC REFUSE.
- IF HUMAN REMAINS ARE ENCOUNTERED, WORK IN THE IMMEDIATE VICINITY SHALL BE HALTED AND THE OPERATOR SHALL NOTIFY MRCD, PERMIT MARIN AND THE MARIN COUNTY CORNER AT (707) 565-5070 IMMEDIATELY. AT THE SAME TIME, MRCD SHALL BE RESPONSIBLE FOR THE COST TO EMPLOY A QUALIFIED ARCHEOLOGIST UNDER CONTRACT TO EVALUATE THE DISCOVERY. IF THE HUMAN REMAINS ARE DETERMINED TO BE OF NATIVE AMERICAN ORIGIN, THE CORNER MUST BE NOTIFIED BY THE NATIVE AMERICAN HERITAGE COMMISSION WITHIN 24 HOURS OF THIS IDENTIFICATION SO THAT A MOST LIKELY DESCENDANT CAN BE DESIGNATED AND THE APPROPRIATE MEASURES REQUIRED BY THE NATIVE AMERICAN HERITAGE COMMISSION GOVERNMENT CODE AND PUBLIC RESOURCES CODE.
3. SHOULD GRADING OPERATIONS ENCOUNTER HAZARDOUS MATERIAL, OR WHAT APPEAR TO BE HAZARDOUS MATERIALS, STOP WORK IMMEDIATELY IN THE AFFECTED AREA AND CONTACT 911 OR THE APPROPRIATE AGENCY FOR FURTHER INSTRUCTION.
4. GRADING AND DRAINAGE IMPROVEMENTS SHALL BE SET BACK FROM STREAMS, LAKES, PONDS AND WETLANDS IN COMPLIANCE WITH THE REQUIREMENTS OF THE MARIN COUNTY CODE (MCC) AND PER NPS. EXISTING VEGETATION SHALL BE RETAINED IN STREAM SETBACK AREAS TO FILTER SOIL AND OTHER POLLUTANTS CARRIED IN STORMWATER.
5. THIS WORK INCLUDES GRADING, CLEARING AND GRUBBING, STOCKPILING OF TOPSOIL, CUT AND FILL TO SUBGRADE, SWALE INSTALLATION AND REPLACEMENT OF TOPSOIL.
6. MATERIALS:
- 6.1. NATIVE BACKFILL: NATIVE ASPHALT THAT IS APPROVED BY THE ENGINEER MAY BE USED AS BACKFILL.
- 6.2. IMPORTED BACKFILL: CLEAN SOIL THAT CAN MEET COMPACTION REQUIREMENTS AS APPROVED BY THE ENGINEER.
- 6.3. IMPORTED FILL: CLEAN NATIVE BACKFILL OR IMPORTED BACKFILL, AS APPROVED BY THE ENGINEER, COMPACTED TO THE SPECIFICATIONS NOTED BELOW.
- 6.4. TOP LAYER OF SOIL WITHIN GRADING LIMITS SHALL BE SALVAGED, STOCKPILED, AND USED ONSITE AS APPROVED BY ENGINEER. IMPORTED TOPSOIL SHALL BE APPROVED BY ENGINEER.
7. STRUCTURAL FILL MATERIAL SHALL NOT INCLUDE ORGANIC, FROZEN, OR OTHER DELETERIOUS MATERIAL. NO RENEWABLE OR NONRENEWABLE MATERIAL GREATER THAN 6 INCHES IN ANY DIMENSION

- SHALL BE INCLUDED IN FILLS EXCEPT WHERE APPROVED BY THE ENGINEER. FILLS SHALL BE CONSTRUCTED TO CUTS NOT EXCEEDING 8 INCHES IN DEPTH. COMPLETED CUTS SHALL BE STABLE, WELL-INTEGATED, AND BONDED TO ADJACENT MATERIALS ON WHICH THEY REST. FILLS SHALL BE COMPETENT TO SUPPORT ANTICIPATED LOADS AND BE ABLE TO RESIST THE EFFECTS OF EROSION. THE APPROVED PLANS AND SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
- ALL EARTHWORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE PLANS AND DETAILS PREPARED BY THE ENGINEER AND THE GEOTECHNICAL REPORT, IF APPLICABLE.
- GROUND SURFACES SHALL BE PREPARED TO RECEIVE FILL BY REMOVING VEGETATION, TOP SOIL, AND OTHER UNSUITABLE MATERIALS, AND SCARIFYING THE SURFACE. THE LIFT SHALL BE PLACED TO PROVIDE A BOND WITH THE FILL MATERIAL.
- REMOVE TOP 6 INCHES OF TOPSOIL IN ALL AREAS TO BE GRADED. SAVE FOR LATER PLACEMENT. DO NOT OFF-HAUL UNLESS NOTED OTHERWISE.
- EXCAVATIONS SHALL BE CONDUCTED TO THE EXTENT AND DEPTHS SHOWN ON THE PLANS AND DETAILS OR AS DETERMINED BY THE ENGINEER.
- COMPACT FILL ON SLOPES, TRENCHES OR WHERE A PREPARED SURFACE IS REQUIRED, IN 8 INCH LIFTS TO A RELATIVE HUMIDITY OF 95% AND OPTIMUM MOISTURE OR AS DIRECTED BY THE ENGINEER.
- FILL MANURE PITS IN REASONABLE LIFTS BASED ON MATERIAL, TO AVOID BRIDGING OF MATERIAL, WORK MANAGED WITH AN EXCAVATOR BUCKET OR ROLLER ATTACHMENT. OVER FILL BY 6 TO 10 INCHES. THIS FILL MATERIAL CAN BE ANY CLEAN MATERIAL FREE FROM HAZARDOUS SUBSTANCES.
- THE ENGINEER WILL BE ALLOWED TO INSPECT FILLS AND EXCAVATIONS AS NEEDED. THE ENGINEER WILL BE NOTIFIED AND CONSULTED IF SUBSURFACE CONDITIONS VARY FROM EXPECTED (COMPACTED FILL MATERIAL).
- NO UNCONFINED CUT OR FILL SHALL BE STEEPER THAN 2:1 HORIZONTAL TO VERTICAL. NO CABLE TO CONFINED CUTS OR FILLS WHERE A CONCRETE OR ROCK SIDE IS ENCOUNTERED.
- SPOILS MAY BE SPREAD ON-SITE. LOCATION TO BE DETERMINED IN COORDINATION WITH THE LAND OWNER AND ENGINEER. APPLY EROSION PREVENTION MEASURES TO ALL SPOILS AREAS.
- CUT OR FILL TO SUB-GRADE ELEVATIONS. REMOVE ROOTS AND OTHER DELETERIOUS MATERIALS. REMOVE SOIL UNSUITABLE FOR COMPACTION.
- CONTOURS, ELEVATIONS, AND SHAPES OF FINISHED SURFACES SHALL BE BLENDED WITH ADJACENT NATURAL TERRAIN TO ACHIEVE A CONSISTENT GRADE AND NATURAL APPEARANCE. THE TOP OF CUT SLOPES SHALL BE BLENDED TO BLEND WITH THE NATURAL TERRAIN. BORDERS OF CUT SLOPES AND FILLS SHALL BE ROUNDED OFF TO A MINIMUM RADIUS OF 5 FEET TO BLEND WITH THE NATURAL TERRAIN.
- THE LIMITS OF GRADING SHALL BE DEFINED AND MARKED ON SITE TO PREVENT DAMAGE TO SURROUNDING TREES AND OTHER VEGETATION. PRESERVATION OF EXISTING VEGETATION SHALL OCCUR TO THE MAXIMUM EXTENT PRACTICABLE. EXISTING VEGETATION WITHIN THE LIMITS OF GRADING THAT IS TO REMAIN UNDISTURBED BY THE WORK SHALL BE IDENTIFIED AND PROTECTED FROM DAMAGE BY MARKING, FENCING, OR OTHER MEASURES.
- INSTALL TREE PROTECTION FENCING AROUND ALL TREE TRIPLELINES IN THE PROJECT AREA. DO NOT REMOVE OR DAMAGE ANY TREES OR OTHER VEGETATION EQUIPMENT OR VEHICLES. APPLY THIS PRACTICE TO VINEYARD IF NEEDED OR REQUESTED BY LANDOWNER.

## EROSION PREVENTION AND SEDIMENT CONTROL NOTES

1. PERFORM EROSION PREVENTION AND SEDIMENT CONTROL IN ACCORDANCE WITH THE MARIN COUNTY STORM WATER POLLUTION PREVENTION PROGRAM, (MCSTOPPPP) AND NRCS BEST PRACTICES.
2. THE WORK SHALL CONFORM TO NRCS, CALTRANS, MRCD AND MARIN COUNTY EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) (CMPS) GUIDE AS POSTED ON THE MARIN COUNTY MCSTOPPPP WEBSITE.
3. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING STORM WATER POLLUTION DURING CONSTRUCTION. THE LAND OWNER IS RESPONSIBLE FOR PREVENTING STORM WATER POLLUTION GENERATED FROM THE CONSTRUCTION SITE AFTER CONSTRUCTION HAS BEEN COMPLETED. ANY UNCLEEDED WORK AREAS WITH INADEQUATE EROSION PREVENTION AND SEDIMENT CONTROL MAY BE SUBJECT TO A STOP WORK ORDER.
4. THE PROJECT OWNER IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH THE STATE OF CALIFORNIA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT WASTE DISCHARGE LIMITATIONS FOR DISCHARGES TO THE OCEAN. ANY RUNOFF ASSOCIATED WITH CONSTRUCTION ACTIVITY, CONSTRUCTION ACTIVITIES INCLUDE BUT ARE NOT LIMITED TO CLEARING, GRADING, EXCAVATION, STOCKPILING, AND RECONSTRUCTION OF EXISTING FACILITIES INVOLVING REMOVAL AND REPLACEMENT.
5. THE CONTRACTOR MUST IMPLEMENT AN EFFECTIVE COMBINATION OF EROSION PREVENTION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE DURING THE RAINY SEASON (OCTOBER 1 - APRIL 30). CONSTRUCTION GRADING AND DRAINAGE IMPROVEMENTS SHALL BE PERMITTED DURING THE RAINY SEASON PROVIDED THAT THE CONDITIONS PERMIT THE WORK TO BE PERFORMED IN COMPLIANCE WITH MARIN COUNTY AND MRCD REQUIREMENTS. STORMWATER BMPs SHALL BE IMPLEMENTED AND FUNCTIONAL ON THE SITE AT ALL TIMES DURING THE RAINY SEASON.
6. DURING THE RAINY SEASON, STORM WATER BMP'S REFERENCED OR DETAILED IN MARIN'S BMP GUIDE SHALL BE IMPLEMENTED AND FUNCTIONAL ON THE SITE AND THE AREA OF ERODIBLE LAND EXPOSED DURING THE WORK SHALL NOT EXCEED ONE ACRE OR 20 PERCENT OF THE PERMITTED WORK AREA, WHICHEVER IS GREATER. ERODIBLE SOIL AND OTHER POLLUTANT DISCHARGES, BMPs SHOULD BE STORED ONSITE IN PREPARATION FOR INSTALLATION PRIOR TO RAIN EVENTS.
7. DURING THE NON-RAINY SEASON, ON A DAY WHEN THE NATIONAL WEATHER SERVICE FORECAST IS A CHANGE OF RAIN 30% OR GREATER WITHIN THE NEXT 24 HOURS STORMWATER BMPs REFERENCED OR DETAILED BEST MANAGEMENT PRACTICES GUIDE SHALL BE IMPLEMENTED, INSTALLED, AND FUNCTIONAL ON THE SITE. ERODIBLE SOIL AND OTHER POLLUTANT DISCHARGES, BMPs SHOULD BE STORED ONSITE IN PREPARATION FOR INSTALLATION PRIOR TO RAIN EVENTS.
8. POST CONSTRUCTION COMPLETION EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BY THE PROPERTY OWNER

- STORM EVENTS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE NO LONGER EFFECTIVE SHALL BE PROMPTLY REPLACED BY THE LAND OWNER. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED.
- THIS PROJECT IS SMALL ENOUGH TO NOT REQUIRE AN EROSION PROTECTION FORMAL PLAN. THESE NOTES WILL SERVE AS THE PLAN. CHANGES TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED DURING CONSTRUCTION. THE ALTERNATIVE BMP'S ARE EQUIVALENT OR MORE PROTECTIVE THAN THE BMP'S REFERENCED HERE. ALTERNATIVE BMP'S ARE SUBJECT TO REVIEW AND APPROVAL BY MDCD STAFF OR ENGINEER.
- DISCHARGES OF POTENTIAL POLLUTANTS FROM CONSTRUCTION SHALL BE PREVENTED USING SOURCE CONTROLS TO THE MAXIMUM EXTENT PRACTICABLE. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SEDIMENT, TRASH, NUTRIENTS, PAH'S, OILS, GREASE, METALS, PETROLEUM, ASPHALT, CONCRETE, CEMENT, ASPHALT, LIME, PAINT, STAINS, GLUES, WOOD PRODUCTS, PESTICIDES, HERBICIDES, CHLORINATED, CHLORINE, HYDROUS WASTE, SANITARY WASTE, EFFLUENT OR EQUIPMENT WASH WATER, AND CHLORINATED WATER.

- ENTRANCE(S) TO THE CONSTRUCTION SITE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF POTENTIAL POLLUTANTS FROM THE CONSTRUCTION SITE. POLLUTANTS DEPOSITED ON PAVED AREAS WITHIN THE COUNTY RIGHT-OF-WAY, SUCH AS ROADWAYS AND SIDEWALKS, SHALL BE PROPERLY DISPOSED OF AT THE END OF EACH WORKING DAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING CONSTRUCTION VEHICLES LEAVING THE SITE ON A DAILY BASIS TO PREVENT DUST, SILT, AND OTHER POLLUTANTS FROM BEING DEPOSITED ON THE SEDIMENT DEPOSITED ON PAVED ROADWAYS. SHALL BE REMOVED AT THE END OF EACH WORKING DAY OR MORE OFTEN AS NECESSARY.
- EQUIPMENT BROUGHT TO THE SITE SHALL BE CLEAN, FREE OF WOOD SPOOLS OR OTHER TRANSFERABLE UNWANTED MATERIAL.
- DISTURBED AREAS SHALL BE PROTECTED BY USING EROSION PREVENTION MEASURES TO THE MAXIMUM EXTENT PRACTICABLE, SUCH AS ESTABLISHING VEGETATION COVERAGE, HYDROSEEDING, STRAW MULCH, EROSION CONTROL MATS, EROSION BLANKETS OR MATS, TEMPORARY OR PERMANENT REVEGETATION SHALL BE INSTALLED AS SOON AS PRACTICAL AFTER VEGETATION REMOVAL BUT IN ALL CASES PRIOR TO OCTOBER 15.
- WHENEVER IT IS NOT POSSIBLE TO USE EROSION PREVENTION BMP'S ON EXPOSED SLOPES, SEDIMENT BARRIERS SHALL BE INSTALLED TO PREVENT EROSION. FENCES SHALL BE INSTALLED TO PREVENT SEDIMENT MIGRATION. FIBER ROLLS AND SILT FENCES SHALL BE TRENCHED AND KEYED INTO THE SOIL AND INSTALLED SUCH THAT SILT FENCES COVER THE TOE OF SLOPE. APPROXIMATELY 210 FEET FROM THE TOE OF SLOPE.
- WHEN NEEDED HYDROSEEDING SHALL BE CONDUCTED IN A THREE STEP PROCESS. FIRST, EVENLY APPLY HYDROSEEDING MIXTURE TO EXPOSED SLOPE. SECOND, EVENLY APPLY MULCH OVER THE SEED AND FERTILIZER. THIRD, STABILIZE THE MULCH IN PLACE. AN EQUIVALENT SINGLE STEP PROCESS, WITH SEED, FERTILIZER, WATER, AND BONDED FIBERS IS ACCEPTABLE.

MATERIALS	APPLICATION RATE (POUNDS PER ACRE)
EED MIX	150
HOLDFAST NATIVE BLEND OR APPROVED EQUAL	
30% CALIFORNIA BROME (ANNUAL)	
20% CALIFORNIA BROME (PERENNIAL)	
15% BLUE WILDRYE	
15% THREE WEEKS FESCUE	
17% CALIFORNIA POPPY	
3% CALIFORNIA NATIVE LUPINES INCLUDING ONE OR MORE - LUPINUS SUCCULENTUS, LUPINUS NANUS, AND/OR LUPINUS BICOLOR.	
DD 1 LB PURPLE NEEDLE GRASS	
DD 5 LBS CALIFORNIA FESCUE	
DD 5 LBS CALIFORNIA OAT GRASS	
FERTILIZER	
16-20-0 & 15% SULPHUR	100
MULCH	
STRAW OR SIMILAR	4000
HYDRAULIC STABILIZING*	
M-BINDER OR SENTINEL	75-100
EQUIVALENT MATERIAL	PER MANUFACTURER

- STRAW WATTLE SHALL BE CERTIFIED WEED-FREE AND 100% BIODEGRADABLE.
- FOR SMALLER AREAS, BROADCAST NATIVE PERENNIAL SEED MIXES ON ALL DISTURBED AREAS TO THE SPECIFIED RATES AND MIXES. RAKE OR ROLL GROUND SURFACE AFTER BROADCASTING. APPLY AT A RATE OF 100 LBS/AC OR 1000 OZ/AC. SPREAD STRAW EVENLY OVER ALL DISTURBED AREAS AFTER SEEDING AT A RATE OF 2 TONS PER ACRE OR ABOUT ONE 74 LB BALE OF STRAW PER 800 SF. TRACK WALK OR CRIMP IN STRAW TO AVOID BLOWING AWAY.
- FOR LARGER AREAS, SPREAD STRAW 3000 LBS/AC, DRILL SEED AND FERTILIZER THROUGH STRAW AT THE SPECIFIED RATES. DRILL SEEDS AT 1" OR LESS IF STRAW IS NOT PRESSED INTO THE SOIL ADEQUATELY. PASS OVER WITH DISC CRIMPER. EQUIVALENT METHODS AND MATERIALS MAY BE USED ONLY IF THEY ADEQUATELY PROMOTE VEGETATION GROWTH AND PROTECT EXPOSED SLOPES.
- SEED AND IRRIGATION: AN ALTERNATE TO STRAW COVER IS COVERING COVER: BROADCAST AND RAKE IN AT A RATE OF 100 LBS/AC OR 1000 OZ/AC. SPREAD STRAW AT 150LBS/AC OR 2LBS/1,000SFT. IRRIGATE TO ESTABLISH STAND OF VEGETATION THAT SHADES 90% OF SOIL WHEN VIEWED PERPENDICULAR TO SURFACE AT BARREST SPOT.
- DUST CONTROL SHALL BE PROVIDED BY CONTRACTOR

## MATERIAL SPECIFICATIONS

1. SUBMITTALS. SUBMIT THE FOLLOWING CONSTRUCTION PLANS.
  - 1.1. FILL SUPPLY PLANS. PROVIDE PLAN FOR OBTAINING ADDITIONAL FILL TO MEET FILL REQUIREMENTS.
  - 1.2. LEVEL SPREADER CONSTRUCTION DETAIL.

## PLANTING SPECIFICATIONS

1. PLANTING SPECIFICATION FOR SWALES PLANTED IN GRASSES AND RUSHES.
  - 1.1. SCARIFY THE SURFACE 2 TO 4 INCHES.
  - 1.2. RAKE IN SEED MIX AT 0.11 TO 0.15 OUNCE PER SQUARE FOOT OR 300 LBS PER ACRE.

- 1.3. PLANT CLEAN, WEED FREE, THIN STRAW OR VOLUME GRASS MAY OVER THE DISTURBED AREA 1 TO 2 PER ACRE. SOIL SHALL STILL BE VISIBLE BUT 70% OF SOIL SHALL BE COVERED.
- 1.4. IRRIGATE TO SATURATION AT 6 INCHES.
- 1.5. SEED MIX SHALL BE A COMBINATION OF AT LEAST 5 SPECIES.
- 1.6. LEBALLIST'S SEED MIXES SPECIFIED, OTHER MIXES OK UPON APPROVAL.
- 1.7. SEED MIX 1:
  - 1.7.1. 3% GRANDVIEW NATIVE WILDFLOWER MIX
  - 1.7.2. 40% HOLD FAST NATIVE BLEND
  - 1.7.3. 40% GRASSLANDS NATIVE BLEND
  - 1.7.4. 1% CALIFORNIA OAT GRASS
  - 1.7.5. 2% CALIFORNIA RED OTS
  - 1.7.6. 3% BEE FRIENDLY CLOVER MIX
- 1.8. SEED MIX 2:
  - 1.8.1. 30% CALIFORNIA BROME- PERINIAL
  - 1.8.2. 28% CALIFORNIA BROME- ANNUAL
  - 1.8.3. 30% CALIFORNIA GRASS
  - 1.8.4. 2% CALIFORNIA PURPLE NEEDLE
  - 1.8.5. 1% CALIFORNIA OAT GRASS
  - 1.8.6. 1% CALIFORNIA POPPY
  - 1.8.7. 2% CALIFORNIA LUPINE
  - 1.8.8. 3% CALIFORNIA RED OTS
  - 1.8.9. 3% BARLEY
- 1.9. PLANT RUSHES INTO THE STRAW, TWO AT THE ENTRANCE AND TWO AT THE EXIT.
- 1.10. DIG HOLES FOR THE RUSHES.
  - 1.10.0. PREFERRED JUNCUS:
    - 1.10.0.1. J. TEXTILIS
    - 1.10.0.2. J. BREVERI
    - 1.10.0.3. J. PHAEOCOEPHALUS
    - 1.10.0.4. J. FALCATUS
    - 1.10.0.5. OR APPROXIMATE EQUIVALENT.
  - 1.10.0. IRRIGATE THE JUNCUS PLANTS TO SATURATION.
- 1.11. TWO WEEKS AFTER FIRST IRRIGATION, IRRIGATE WHOLE SITE AT SATURATION A SECOND TIME.
- 1.12. PERFORM PLANTING WORK TO ALIGN WITH PLANTS GROWING SEASON.

### UTILITY NOTES

1. ALL EXISTING UTILITIES TO REMAIN IN THE WORK AREA SHALL BE PROTECTED DURING CONSTRUCTION ACTIVITIES UNLESS NOTED OTHERWISE.
2. ALL WORK SHALL CONFORM TO THE LATEST APPLICABLE MARIN COUNTY CODES, ORDINANCES, ZONING AND BUILDING LAWS INCLUDING THE LATEST ADOPTED EDITION OF THE CALIFORNIA BUILDING CODE.
3. CONTRACTOR SHALL EXPOSE, BY POT-HOLING, AND VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES INCLUDING GAS LINES, SANITARY SEWERS AND WATER LINES BEFORE ORDERING MATERIALS AND/OR CONSTRUCTING NEW FACILITIES.
4. ALL TRENCHES AND EXCAVATIONS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THE APPLICABLE SECTIONS OF CALIFORNIA AND FEDERAL O.S.H.A. REQUIREMENTS AND OTHER APPLICABLE SAFETY AND MAINTENANCE STANDARDS. CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH SHORING DESIGN AND INSTALLATION. SEE GENERAL NOTES.
5. CONTRACTOR TO PROVIDE SHOP DRAWINGS, IF NECESSARY, FOR APPROVAL OF SYSTEM COMPONENT NOT SHOWN ON THE PLANS.
6. ALL UNDERGROUND PIPES IN AREAS RECEIVING VEHICULAR TRAFFIC SHALL HAVE A MINIMUM 24 INCHES OF SOIL OVER TOP OF PIPE AND SHALL HAVE A MINIMUM 18 INCHES OF SOIL COVER OVER TOP OF PIPE IN ALL OTHER AREAS EXCEPT WHERE NOTED ON "SLOPE, BACKFILL AND COVER" SHEET. IN ALL TRENCHES TO FINISH GRADE.

- INSTALL CONCRETE TRENCH DAMS ON PIPES WITH SLOPES GREATER THAN 15% EVERY 50 FT LINEAR. DAMS SHALL SPAN THE WIDTH OF THE TRENCH.

Address

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# POINT REYES DAIRIES DAIRY WASTE WATER DECOMMISSION

Sheet Name

## NOTES

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AbundanceAgEngineering.com



Signature Date: 18MAY2026

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 BID WALK  
 9SEPT26

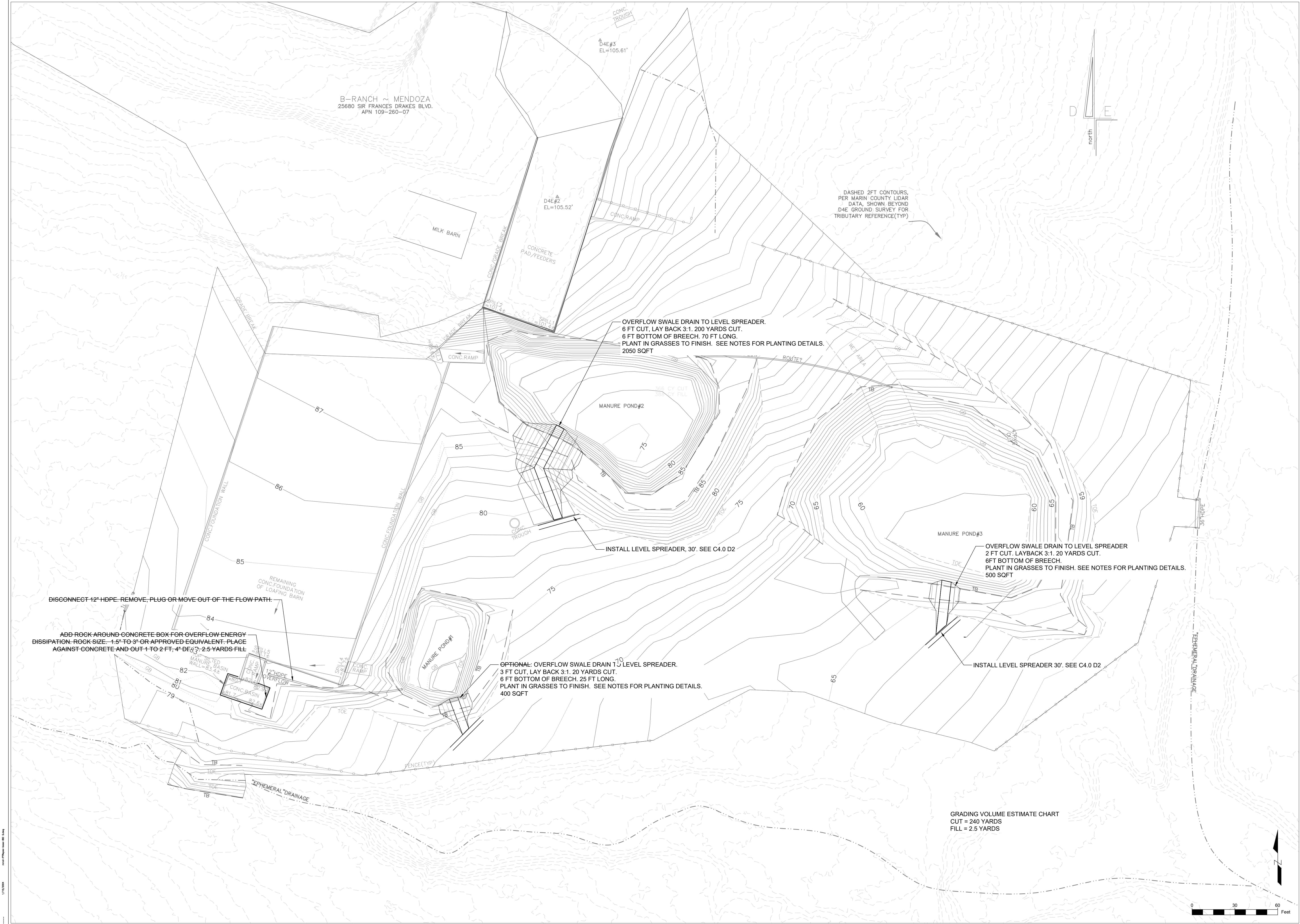
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Address  
NATIONAL PARKS SERVICE / POINT REYES NATIONAL SEASHORE  
25680 SIR FRANCIS DRAKE BLVD. POINT REYES CA  
MARIN APN: 109-260-07

Project  
**POINT REYES DAIRIES  
DAIRY WASTE WATER DECOMMISSION**

Sheet Name  
**B-RANCH DAIRY SITE MAP**

ABUNDANCE AG  
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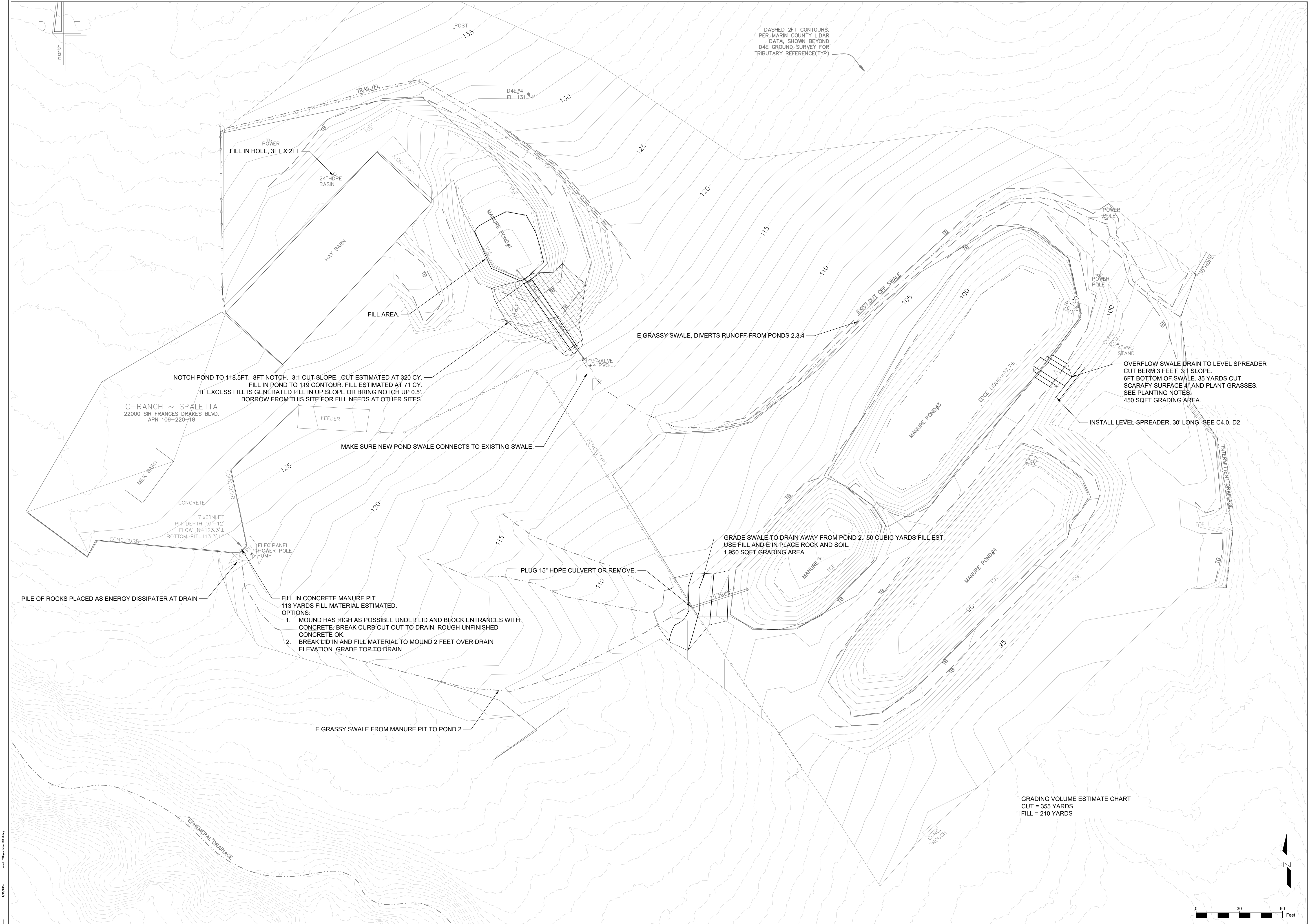
SANTA ROSA, CA  
707-695-9405  
AbundanceAgEngineering.com

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SHEET4 OF 6



Address  
NATIONAL PARKS SERVICE / POINT REYES NATIONAL SEASHORE  
22000 SIR FRANCIS DRAKE BLVD. POINT REYES, CA  
MARIN APN: 109-220-18

Project  
**POINT REYES DAIRIES  
DAIRY WASTE WATER DECOMMISSION**  
Sheet Name  
**C RANCH DAIRY SITE MAP**

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AG  
STATE OF CALIFORNIA

Signature

Date: 18MAY2026

Planset Date  
18MAY2026

Updated Per  
Bid Walk  
9SEPT26

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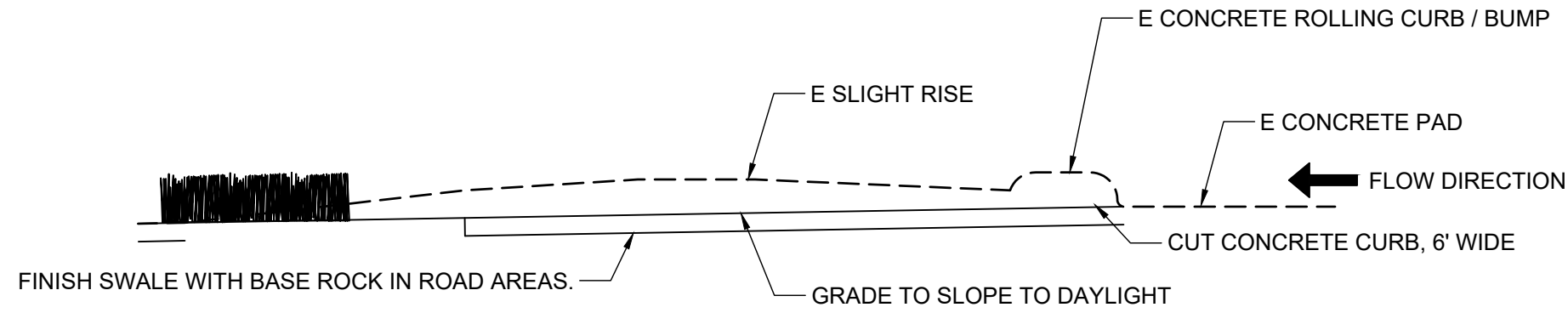
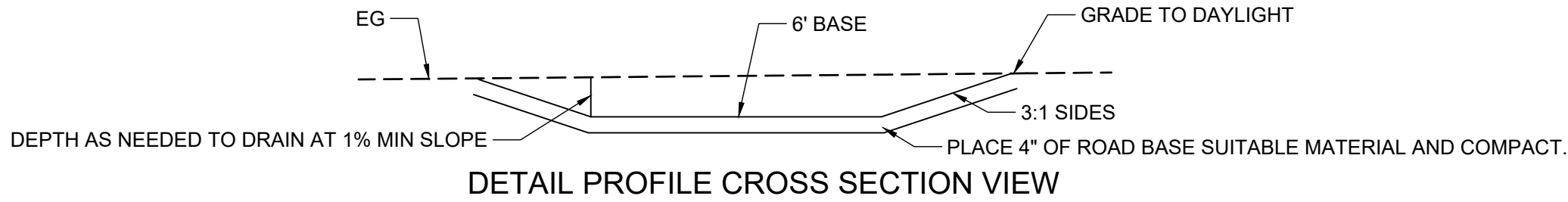
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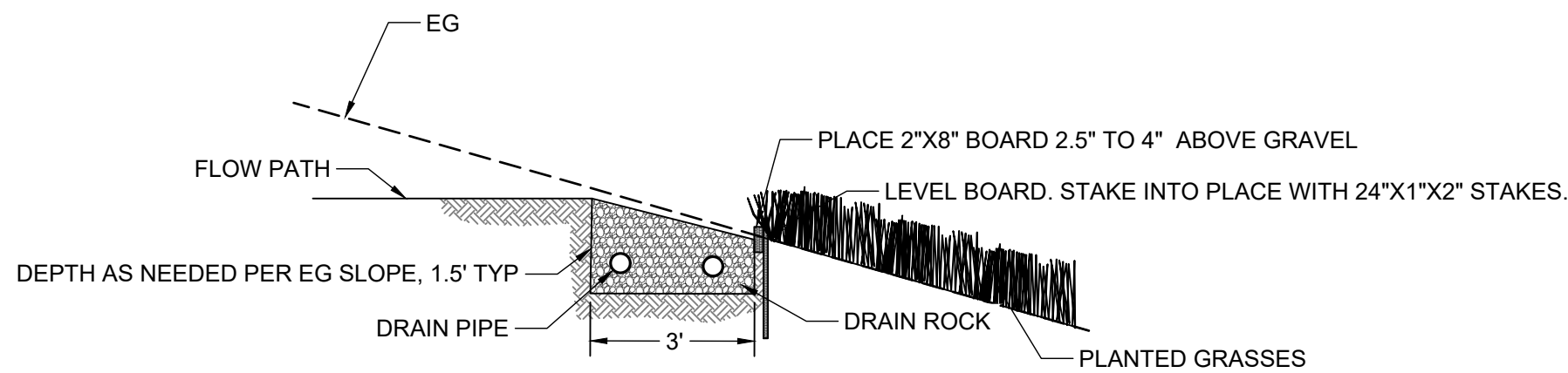


DETAIL PROFILE LONGITUDINAL VIEW

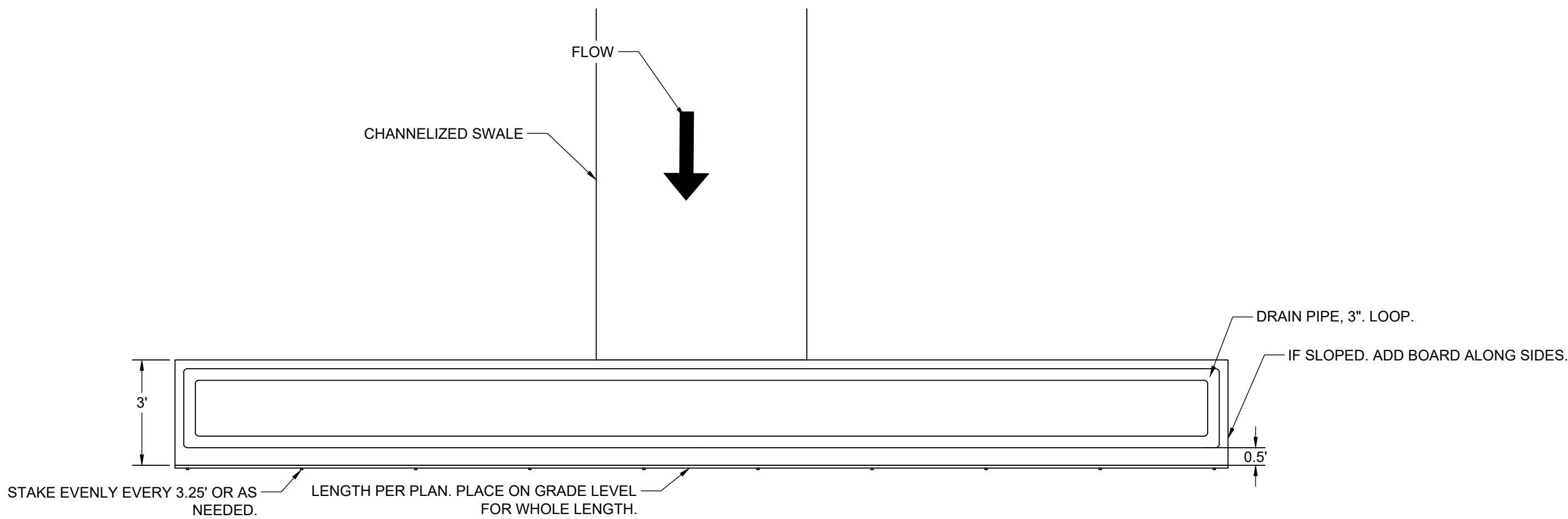
- NOTES:
1. GRADE FROM E CONCRETE PAD TO LOWER ELEVATION NEAR CULVERT NEAR ROAD. SEE PLAN.
  2. FINISH SWALE WITH BASE ROCK WHERE IN ROAD. BASE ROCK SHALL BE ON SITE MATERIAL WHERE AVAILABLE. REUSE CUT ROAD BASE MATERIAL.
  3. PLANT END OF SWALE WITH GRASSES. SEE NOTES FOR GRASS PLANTING REQUIREMENTS.
  4. WHERE CONCRETE CURB IS CUT, ROUND OFF CUT END TO AVOID SHARP TRANSITION. ROUGH CHAMFER 0.25' TO 0.5'.

SWALE DETAIL

1"=3'



DETAIL PROFILE VIEW



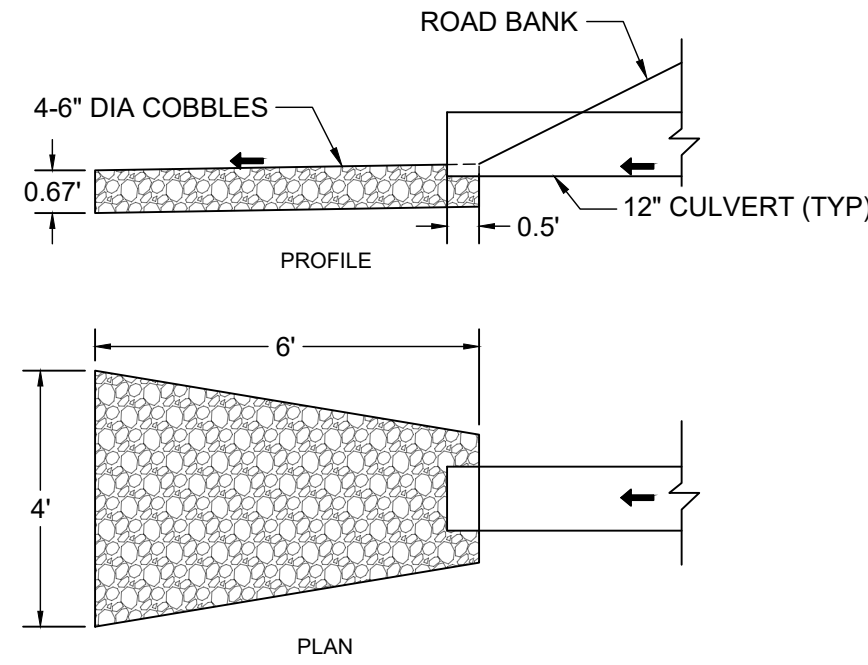
DETAIL PLAN VIEW

LEVEL SPREADER

1"=3'

2

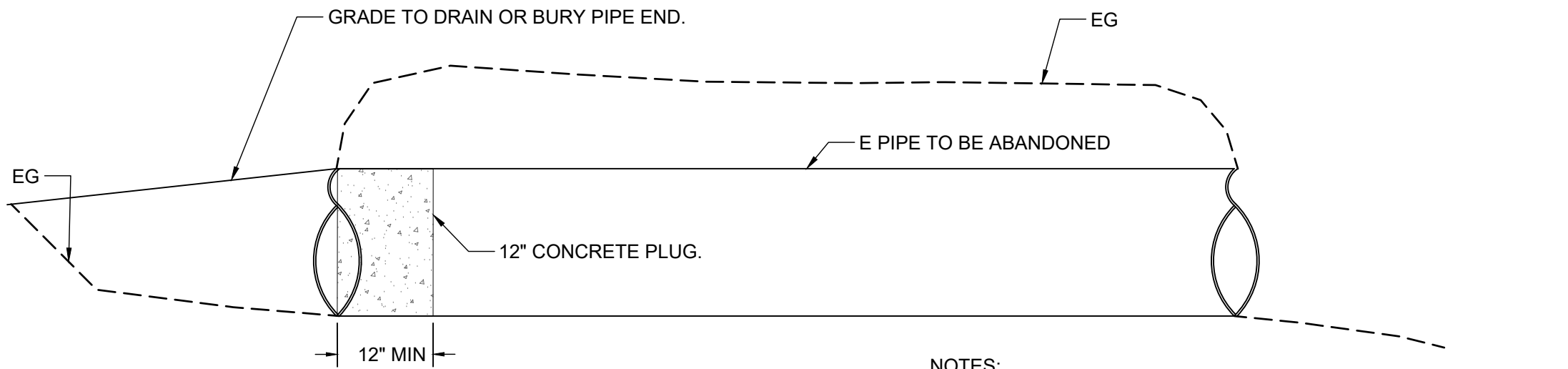
- NOTES:
1. USE CLEAN 3/4" DRAIN ROCK..
  2. FOR BOARD, USE A REDWOOD OR PT WOOD BOARD.
  3. PIPE IS 3" PERFORATED DRAIN PIPE, HDPE OR TRIPLE LAYER.
  4. LENGTH AS SHOWN ON PLAN. TYPICAL LEVEL SPREADER LENGTH IS 30'. CUT IS APPROX 5 YARDS. ROCK NEEDED IS APPROX 5 YARDS.
  5. PLANT DOWNSTREAM AREA. SEE NOTES FOR PLANTING SPECIFICATION.



ENERGY DISSIPATER / ROCK RIP RAP

1"=3'

3



PIPE PLUG, STANDARD DETAIL

1"=3'

4

- NOTES:
1. FORMING FRAMING OPTIONAL. NO REBAR NEEDED.
  2. LOW STRENGTH CONCRETE ACCEPTABLE, 1,500 TO 2,900 PSI.
  3. PLUG OR REMOVE PIPE.

Address

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POINT REYES DAIRIES  
DAIRY WASTE WATER DECOMMISSION

Sheet Name

DETAILS

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## Natural Resources Conservation Service

### CONSERVATION PRACTICE STANDARD

### LINED WATERWAY OR OUTLET

#### CODE 468

(ft)

#### DEFINITION

A waterway or conveyance channel having an erosion-resistant lining of concrete, stone, synthetic turf reinforcement fabrics, or other flexible permanent material.

#### PURPOSE

This practice is used to accomplish one or more of the following purposes:

- Provide safe conveyance of runoff from conservation practices or other flow concentrations without causing erosion or flooding.
- Prevent or stabilize gully erosion or scour.
- Protect and improve water quality.

#### CONDITIONS WHERE PRACTICE APPLIES

This practice applies if conditions similar to one or more of the following exist:

- Concentrated runoff, pipe flow, steep grades, wetness, prolonged base flow, seepage, or piping is such that a lining is needed to prevent erosion.
- Use by people or animals precludes vegetation as suitable cover.
- Site restrictions necessitate limited waterway or outlet widths with design velocities that require lining protection.
- Soils are highly erosive or other soil or climatic conditions preclude using vegetation only.

#### CRITERIA

##### General Criteria Applicable to All Purposes

Plan, design, and construct the terrace to meet all Federal, State, Tribal, and local regulations.

##### **Capacity**

The minimum capacity must be adequate to carry the peak rate of runoff from a 10-year frequency, 24-hour duration storm with the following exception:

- When the lined waterway or outlet slope is less than 1 percent, minimum design capacity may be reduced to the capacity of the waterway leading to it.

##### **Velocity**

Compute velocity using Manning's equation with a coefficient of roughness appropriate for the selected lining material.

Design maximum velocity and rock gradation limits for rock riprap-lined channel sections and outlets from concentrated flow area using the National Engineering Handbook (NEH) (Title 210), Part 654, Technical Supplement (TS) 14C, “Stone Sizing Criteria,” unless a detailed design analysis appropriate to the specific slope, flow depth, and hydraulic conditions indicate that a higher velocity is acceptable.

Do not exceed manufacturer’s recommendations for maximum design velocity for synthetic turf reinforcement fabrics and grid pavers.

For concrete lined channels, refer to NEH Part 650, Chapter 3 — Hydraulics to determine the maximum design velocity.

Avoid channel slopes between 0.7 and 1.3 of the critical slope except for short transition sections. Restrict supercritical flow to straight reaches. Waterways or conveyance channels with supercritical flow must discharge into an energy dissipator to reduce discharge velocity to less than critical.

Evaluate the effects of velocity on aquatic organism passage including depth, slope, air entrainment, screening, swimming and leaping performance for target species, etc.) to minimize negative impacts.

### **Tractive stress**

Tractive stress may be used as an alternative to velocity criteria for design of the selected lining material.

Compute maximum shear stress using U.S. Army Corp of Engineers Engineer Research and Development Center (ERDC)-TN-EMRRP-SR-29, “Stability Thresholds for Stream Restoration Materials.”

Do not exceed manufacturer’s recommendations for maximum shear stress for the lining material.

### **Cross section**

Design the lined waterway or conveyance with a defined cross section that is triangular, parabolic, or trapezoidal. If monolithic concrete is used as a lining the cross may be rectangular.

### **Freeboard**

The minimum freeboard for lined waterways or outlets must be 0.25 feet above design high water in areas where erosion-resistant vegetation cannot be grown adjacent to the paved or reinforced side slopes. No freeboard is required if vegetation can be grown and maintained.

### **Side slope**

The steepest permissible side slopes must not exceed the values given in table 1.

**Table 1. Steepest permissible side slopes for each material type.**

Material	Slope (horizontal to vertical)
<b>Nonreinforced concrete</b>	
Height of lining, 1.5 ft or less	Vertical
<b>Hand-placed screeded concrete or mortared-in-place flagstone</b>	
Height of lining, less than 2 ft	1 to 1
Height of lining, more than 2 ft	2 to 1
<b>Slip form concrete</b>	
Height of lining, less than 3 ft	1 to 1
<b>Rock riprap</b>	2 to 1
<b>Synthetic turf reinforcement fabrics</b>	2 to 1
<b>Grid pavers</b>	2 to 1

### **Lining thickness**

Minimum lining thickness must not be less than indicated in table 2.

**Table 2. Minimum lining thickness for various materials.**

Material	Lining Thickness
Concrete	4 in. (minimum thickness is 5 in. if the liner is reinforced)
Rock riprap	1.5 times maximum stone size
Flagstone	4 in., including mortar bed
Synthetic turf reinforcement fabrics and grid pavers	Manufacturer's recommendations

**Lining durability**

Only use nonreinforced concrete or mortared flagstone linings in areas of low shrink-swell soils that are well drained or where subgrade drainage facilities are installed.

**Related structures**

Assure that side inlets, drop structures, and energy dissipators meet the hydraulic and structural requirements for the site. Assure that grade stabilization structures meet the criteria of NRCS Conservation Practice Standard (CPS) Grade Stabilization Structure (Code 410).

**Outlets**

Provide a stable outlet with adequate capacity to prevent erosion and flooding damages for all lined waterways and conveyance channels.

**Geotextiles**

Use geotextiles where appropriate as a separator between rock, flagstone, or concrete linings and soil to prevent migration of soil particles from the subgrade, through the lining material. Specify geotextile requirements in accordance with the American Association of State Highway and Transportation Officials (AASHTO) M288, Section 7.3; NRCS 210-NEH, Part 654, Technical Supplement 14D, "Geosynthetics in Stream Restoration."

Install and anchor turf reinforcement mats in accordance with manufacturer's recommendations and ensure intimate contact between mesh and base soil.

**Filters or bedding**

Use filters or bedding to prevent piping and to serve as a leveling base, where appropriate. Use drains to reduce hydraulic uplift pressure and to collect water, as required. Design filters, bedding, and drains in accordance with 210-NEH, Part 633, Chapter 26, "Gradation Design of Sand and Gravel Filters." Use weep holes with drains if needed.

**Concrete**

Proportion concrete so that it is plastic enough for thorough consolidation and stiff enough to stay in place on side slopes. Design a dense, durable product. Specify a mix that can be certified as suitable to produce a minimum strength (28 day) of 3,000 pounds per square inch. Specify requirements per 210-NEH Part 642 Construction Specification 31 or Construction Specification 32 as appropriate.

**Thermal movement in concrete linings**

Contraction joints and expansion joints are used to address thermal movement in concrete linings. If joints are required in concrete linings, form or sawcut transversely to a depth of approximately one-third the thickness of the lining, at a uniform spacing to produce panels that are as square as possible and not to exceed a length to width ratio of 1 1/2 to 1. For joint spacing that is greater than 15 feet, provide load transfer devices or other uniform support to the joint to prevent unequal settlement.

### **Site selection and subgrade preparation**

Avoid or protect important fish and wildlife habitat, such as woody cover or wetlands, if possible, when siting the lined waterway or conveyance channel. Retain trees and shrubs or plant them in the periphery of the grassed portion of the lined waterways when they are incorporated in the design, so they do not interfere with hydraulic functions and roots do not damage the lined portion of the waterway.

Provide a stable, uniform foundation for the waterway lining by properly preparing the site. Grade the site to remove any rutting or uneven surfaces and to provide good surface drainage throughout the construction period and the design life of the lined waterway or conveyance channel. If desired, use proof rolling as a method to identify soft pockets of soil, additional rutting, or other soil conditions that require removal and replacement by compacted soil to provide a uniform surface for base, subbase, or concrete liner.

### **Articulating concrete block revetment**

Design articulating concrete block revetment using 210-NEH-654-TS 14L, "Use of Articulating Concrete Block Revetment Systems for Systems for Stream Restoration and Stabilization Projects."

## **CONSIDERATIONS**

Consider climate change impact on determining channel's capacity.

Consider impacts on downstream source water due to erosion and sediment load and impacts on important fish and wildlife habitats such as streams, creeks, riparian areas, groundwater, and wetlands. Consider providing an increased level of designed treatment for sites with high priority areas for source water protection or are upstream of community drinking water withdrawal sites.

Incorporate trees, shrubs, forbs, and grasses adjacent to the lined portions of the channel. This may improve aesthetics and habitat benefits as well as reduce erosion potential. Plantings are especially beneficial where the channel transitions to natural ground. However, such plantings are not appropriate in all circumstances. Maintain the flow channel free from obstruction. Guidance on the use of plantings is available in 210-NEH-654-TS 14I, "Streambank Soil Bioengineering" and 14K, "Streambank Armor Protection with Stone Structures," and in NRCS CPS Streambank and Shoreline Protection (Code 580).

Filter strips established on each side of the waterway may improve water quality.

Consider livestock and vehicular crossings, as necessary, to prevent damage to the waterway. Design crossing design minimize interference with design-flow capacity. Guidance can be found in NRCS CPS Stream Crossing (Code 578).

Consider reinforcement of concrete liners where high pore-water pressures exist in the subgrade, movement of the subgrade may occur, or in reaches where failure would endanger public safety or property.

Evaluate aquatic organism passage concerns (e.g., velocity, depth, slope, air entrainment, screening, etc.) to minimize negative impacts. Consider swimming and leaping performance for target species.

Consider mesh size of 0.2 inches or smaller where turf reinforcement mats are used to reduce impacts on fish and wildlife.

Consider incorporating plant selections that benefit pollinators into the design. Waterways with these wildlife features are more beneficial when connecting other habitat types (e.g., riparian areas, wooded tracts, and wetlands).

## PLANS AND SPECIFICATIONS

Prepare plans and specifications for lined waterways or outlets that describe the requirements for applying the practice to achieve its intended purpose(s).

As a minimum the plans and specifications must include—

- A plan view of the layout of the lined waterway or conveyance channel.
- Typical cross section of the lined waterway or conveyance channel.
- Profile of the lined waterway or conveyance channel.
- Specifications for the lining material.
- Disposal requirements for excess soil material.
- Site-specific construction specifications that describe the installation of the lined waterway or outlet. Include a specification for control of concentrated flow during construction if required.

## OPERATION AND MAINTENANCE

Prepare an operation and maintenance plan for use by the client. As a minimum, the plan shall address the following items:

- Regular inspection of the lined waterway, especially following heavy rains or large flow events. Promptly repair damages and remove sediment deposits to maintain capacity of the lined waterway.
- Control noxious weeds in the lined waterway or conveyance channel.
- Avoid areas where forbs have been established in the adjacent planted areas when applying herbicides.
- Avoid using the lined waterway as turn-rows during tillage and cultivation operations.
- Do not use the lined waterway as a field road.
- Avoid crossing the lined waterway or conveyance channel with heavy equipment.

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## Natural Resources Conservation Service

### CONSERVATION PRACTICE STANDARD

### GRASSED WATERWAY

#### CODE 412

(ac)

#### DEFINITION

A shaped or graded channel that is established with suitable vegetation to convey surface water at a nonerosive velocity using a broad and shallow cross section to a stable outlet.

#### PURPOSE

This practice is used to accomplish one or more of the following purposes:

- Convey runoff from terraces, diversions, or other water concentrations without causing erosion or flooding
- Prevent gully formation
- Protect/improve water quality

#### CONDITIONS WHERE PRACTICE APPLIES

This practice is applied in areas where added water conveyance capacity and vegetative protection are needed to prevent erosion and improve runoff water quality resulting from concentrated surface flow.

#### CRITERIA

##### General Criteria Applicable to All Purposes

Plan, design, and construct grassed waterways to comply with all Federal, State, and local laws and regulations.

##### **Capacity**

Design the waterway to convey the peak runoff expected from the 10-year frequency, 24-hour duration storm. Increase capacity as needed to account for potential volume of sediment expected to accumulate in the waterway between planned maintenance activities. When the waterway slope is less than 1 percent, out-of-bank flow may be permitted if such flow will not cause excessive erosion. Ensure that the design capacity, at a minimum, will remove the water before crops are damaged.

##### **Stability**

Determine the minimum depth and width requirements for stability of the grassed waterway using the procedures in the NRCS National Engineering Handbook (Title 210), Part 650, Chapter 7, "Grassed Waterways," or Agricultural Research Service Agriculture Handbook 667, "Stability Design of Grass-Lined Open Channels." Base stability computations on the peak runoff expected from a 10-year, 24-hour duration storm.

Ensure that the vegetative species selected are suited to the site conditions and intended uses. Select species that have the capacity to achieve adequate density, height, and vigor within an appropriate time frame to stabilize the waterway.

**Width**

Keep the bottom width of a trapezoidal waterway less than 100 feet unless multiple or divided waterways or other means are provided to prevent meandering of low flows.

**Side slopes**

Keep the side slopes flatter than a ratio of 2 horizontal to 1 vertical (2:1). Flatten the side slopes as needed to accommodate the equipment used for maintenance, tillage, and harvesting so that damage to the waterway is minimized.

**Depth**

The capacity of the waterway must be large enough so that the water surface of the waterway is below the water surface of the tributary channel, terrace, or diversion that flows into the waterway at design flow.

Provide 0.5 feet of freeboard above the designed depth when flow must be contained to prevent damage. Provide freeboard above the designed depth based on capacity conditions when the vegetation has the maximum expected retardance. To achieve the freeboard, extend side slopes at a slope equal to or flatter than the side slope of the design cross section.

**Drainage**

When needed to establish or maintain vegetation on sites having prolonged flows, high water tables, or seepage problems, use NRCS Conservation Practice Standards (CPSs) Subsurface Drain (Code 606), Underground Outlet (Code 620), or other suitable measures in waterway designs.

Where drainage practices are not practicable or adequate to solve these seepage problems, use NRCS CPS Lined Waterway or Outlet (Code 468) in place of NRCS CPS Grassed Waterway (Code 412).

**Outlets**

Provide a stable outlet with adequate capacity. The outlet can be another vegetated channel, an earthen ditch, a grade stabilization structure, filter strip, lined waterway, or other suitable outlet.

**Vegetative establishment**

Establish vegetation as soon as possible using the criteria listed under "Establishment of Vegetation" in NRCS CPS Critical Area Planting (Code 342) and/or the State planting guide. Use mulch; nurse crop; rock, straw, or hay bale dikes; fabric or rock checks; filter fences; or runoff diversion to protect the vegetation until it is established. Planting a close-growing crop (e.g., small grains or grasses) on the contributing watershed prior to construction of the grassed waterway can also significantly reduce the flow through the waterway during establishment. Provide livestock and vehicular crossings as necessary to prevent damage to the waterway and its vegetation.

**CONSIDERATIONS**

Where environmentally sensitive areas need to be protected from dissolved contaminants, pathogens, or sediment in runoff, consider establishment of an increased width of vegetation on the waterway above the flow area. Increasing the width of the established vegetation above the flow area will increase filtering of sediment and pathogens, and it will increase infiltration of runoff and nutrient removal.

Where sediment control is the primary concern, consider using vegetation in the waterway that can withstand partial burial and adding sediment control measures above the waterway, such as residue management. Consider increasing the channel depth and/or designing areas of increased width or decreased slope to trap and store sediment to reduce the amount of sediment that leaves a field. Provide for regular cleaning out of the waterway when trapping sediment in this manner.

Implement best management practices and use a system of additional conservation practices or a soil health management system in conjunction with the grassed waterway to minimize upstream runoff and concentrated flow.

Tillage and crop planting often takes place parallel to the waterway, resulting in preferential flow paths and erosion along the edges of the waterway. Consider installation of measures that ensure the runoff from adjacent areas will enter the waterway. Measures such as directing spoil placement or small swales can direct this preferential flow into the grassed waterway.

Livestock and vehicle crossings should occur perpendicular to the waterway. Consider locating crossings to minimize potential damage to the waterway. Crossing design must not interfere with design-flow capacity.

Avoid areas where unsuitable plant growth-limiting subsoil and/or substratum material, such as salts, acidity, root restrictions, etc., may be exposed during implementation of the practice. Where areas cannot be avoided, seek recommendations from a soil scientist for improving the condition; or, if not feasible, consider over-cutting the waterway and add topsoil over the cut area to facilitate vegetative establishment.

Avoid or protect, if possible, important wildlife habitat, such as woody cover or wetlands, when determining the location of the grassed waterway. Avoid placing trees and shrubs in or near the grassed waterway so they do not interfere with hydraulic functions or send roots into associated subsurface drainage. Medium or tall bunch grasses and perennial forbs may also be planted along waterway margins to improve wildlife habitat. Waterways with these wildlife features are more beneficial when connecting other habitat types (e.g., riparian areas, wooded tracts, and wetlands). When possible, select plant species that can serve multiple purposes, such as benefiting wildlife, while still meeting the basic criteria needed for providing a stable conveyance for runoff.

Water-tolerant vegetation may be an alternative to subsurface drains or stone center waterways on some wet sites.

Use irrigation in dry regions or supplemental irrigation as necessary to promote germination and vegetation establishment.

Wildlife habitat benefits can be provided by adding width of appropriate vegetation to the sides of the waterway. Care should be taken to avoid creating small isolated planting zones for wildlife. These can become population sinks where wildlife attracted to an area experience reproductive loss due to predation. Mowing may be appropriate to enhance wildlife values, but should be conducted to avoid peak nesting seasons and reduced winter cover whenever possible.

Consider planting diverse legumes, forbs, and flowering plants, such as milkweeds, that provide pollen and nectar for native bees and other pollinators adjacent to the waterway. In dry regions, these sites may be able to support flowering forbs with higher water requirements and thus provide bloom later in the summer.

For all organic or transitioning-to-organic operations, follow all National Organic Program rules.

## **PLANS AND SPECIFICATIONS**

Prepare plans and specifications for a grassed waterway that describe the requirements for applying the practice according to this standard. As a minimum, include—

- A plan view of the layout of the grassed waterway.
- Dimensions of the waterway, including length, grade, top width, bottom width, depth, and side slopes as applicable.
- Disposal requirements for excess soil material.
- Site-specific construction specifications that describe in writing the installation of the grassed waterway. Include specification for control of concentrated flow during construction and vegetative establishment.
- Vegetative establishment requirements.

## OPERATION AND MAINTENANCE

Provide an operation and maintenance plan to review with the landowner. Include the following items and others as appropriate in the plan:

- Establish a maintenance program to maintain waterway capacity, vegetative cover, and outlet stability. Vegetation damaged by machinery, herbicides, or erosion must be repaired promptly.
- Protect the waterway from concentrated flow by using diversion of runoff or mechanical means of stabilization, such as silt fences, mulching, hay bale barriers, etc., to stabilize grade during vegetation establishment as necessary.
- After vegetation is established, remove any temporary measures, such as diversions or silt fences, that were installed so as to not interfere with design flow.
- Minimize damage to vegetation by excluding livestock whenever possible, especially during wet periods. Permit grazing in the waterway only when a controlled grazing system is being implemented.
- Inspect grassed waterways regularly, especially following heavy rains. Fill, compact, and reseed damaged areas immediately. Remove sediment deposits to maintain capacity of the grassed waterway.
- Avoid use of herbicides or pesticides that would be harmful to the vegetation or pollinating insects in and adjacent to the waterway area.
- Avoid using waterways as turn rows during tillage and cultivation operations.
- Mow or periodically graze vegetation to maintain capacity, reduce sediment deposition, and maintain suitable plant composition and vigor.
- Apply supplemental nutrients as needed to maintain the desired species composition and stand density of the waterway.
- Control noxious weeds.
- Do not use waterways as a field road. Avoid crossing with heavy equipment when wet.
- Lift tillage equipment and turn off chemical application equipment when crossing the waterway.

## REFERENCES

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# Exhibit C

## Marin RCD CONSERVING OUR WATERSHEDS PROGRAM

### Required Best Management Practices, Impact Avoidance Measures, and Mitigations per 2018 PCP and biology consulting reports

#### Summary

- Adherence to Plans
- Cultural and Tribal protections
- Emergency access and fire safety
- Air and water quality protections
- Erosion control and sediment detention
- No weed dispersal, possible reseeding
- Limiting impacted areas and vegetation management
- Species specific protections
  - Adherence to species work windows
  - Preconstruction training
  - Biological oversight for nests, possible frogs, turtles, butterflies, badgers

#### ***BMP DC-1 Requirements to Minimize Area of Disturbance***

Marin Resource Conservation District (MRCD) shall ensure that special attention is given to minimizing the area of disturbance during project planning and design by requiring the following:

1. Ground and vegetation disturbance shall not exceed the minimum area necessary to complete the project and shall be limited to the Work Area, which is defined as anywhere subject to disturbance from access, staging, vegetation management, grading, and other human activities. Removal of trees and other vegetation that provide shade and other habitat elements for fish and wildlife, reduce erosion and runoff, or add to the visual quality of the area shall be avoided to the extent feasible while achieving the project objectives; selective pruning is allowed for safety purposes. See **BMP VM-1** below for areal limitations on vegetation removal.
2. Site-specific design plans shall show the maximum extent of grading and shall include requirements to protect sensitive environmental resources during construction and on-going maintenance activities.
3. Erosion and sediment control measures shall be incorporated into project design and implemented upon completion of grading.
4. Project plans shall include measures to restore all disturbed areas to pre-construction or better conditions unless project regulators determine that other measures should be implemented.

#### ***BMP DC-2 Requirements to Protects and Avoid Disturbance of Aquatic Environments***

MRCD shall ensure that special attention is given during project planning and design to protect aquatic habitat by requiring the following:

1. Avoid impacts in aquatic environments where feasible; if avoidance is not possible, minimize disturbance to areas necessary to achieve individual project objectives.

2. Aquatic habitat improvement project designs shall employ current engineering and scientific standards (e.g., the California Salmonid Stream Habitat Restoration Manual [CDFW 2010]).
3. Aquatic organism passage concerns (e.g., velocity, depth, slope, air entrainment, screening, swimming and leaping performance for target species) shall be addressed during design to avoid creation of potential passage issues.
4. Stabilization structures utilized to improve habitat shall not impede or prevent passage of fish and other aquatic organisms or impair wildlife connectivity or movement.
5. Important fish and wildlife habitat elements, such as woody cover or wetlands, shall be avoided or protected if possible when siting practices.

***BMP DC-3 Required Design Considerations for Roads, Culverts, and Stream Crossings to Protect Sensitive Biological Resources and Water Quality***

During project design, MRCD shall ensure that:

1. Road improvements shall be modeled on the *Handbook for Forest, Ranch, and Rural Roads: A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining and Closing Wildland Roads* by Weaver, Weppner, & Hagens (PWA 2015) and Publication 8262 *Rural Roads: A Construction and Maintenance Guide for California Landowners* (University of California ANR 2007) or the most current industry standard at the time of project planning.
2. Culverts installed in anadromous fish streams shall be consistent with the California Department of Fish and Wildlife's (CDFW's) *Culvert Criteria for Fish Passage Revised May 2002* and the National Oceanic and Atmospheric Administration – National Marine Fisheries Service's (NOAA Fisheries') Southwest Region's *Guidelines for Salmonid Passage at Stream Crossings* (2001a) or the most current industry standard at the time of project planning.
3. Culverts shall be designed to minimize habitat fragmentation and barriers to aquatic movement. Channel-spanning bridges, bottomless arch culverts with natural streambed substrates, or other fish-friendly solutions shall be required in salmonid streams to allow passage for fish and other aquatic organisms.
4. All crossings shall be designed to pass low and high flows. The design and location of crossings shall provide passage for as many different aquatic species and age classes as possible.
5. In-stream crossings shall not be designed for placement within 300 feet of known spawning or breeding areas of listed species.
6. Access roads shall be relocated only to provide a setback from a stream corridor or wetland area or in order to plant riparian vegetation as part of a stream corridor restoration project or other natural resource protection or enhancement purposes. A biologist shall determine the appropriate setback distance to protect riparian and stream resources. Relocated roadway segments shall be constructed to follow natural contours and shall be sited on low slopes to minimize disturbance of drainage patterns.
7. Roads and trails shall be designed to avoid runoff directly into a stream or waterbody. An energy dissipater shall be installed at the outlet of any water bar, cross drain, or culvert in areas where roadway drainage may cause erosion and sedimentation; otherwise, outlets shall be directed to well-vegetated locations.
8. Site-specific land-use operations shall be assessed to consolidate and minimize the number of crossings needed.
9. Crossings shall be designed with sufficient capacity to convey the design flow and transported materials without altering the stream flow characteristics. They shall be protected so that flood flows safely bypass without damaging the crossing or eroding the streambanks.
10. Crossings shall be sized to accommodate the intended traffic without damage to livestock, people, or vehicles.

***BMP BR-3 Temporal Limitations and Requirements to Protect Special-status Species during Construction, Vegetation Management and other Maintenance Activities***

MRCD shall ensure that the following limitations are placed on project implementation timing to avoid or minimize adverse impacts on sensitive biological resources:       2. Work in and around areas that may support bird nesting shall be performed before March 15 or after August 15. See <b>Mitigation BIO-j</b> for requirements if activities are performed during bird nesting season (March 15 to August 15).
<b><i>BMP WQ-1 Measures to Ensure Compliance with Water Quality Standards</i></b>   To avoid adverse impacts on water quality, MRCD shall ensure that:       1. Discharge of storm water from a facility or activity that causes or contributes to the violation of water quality standards or water quality objectives is prohibited.     2. Creation of a condition of pollution, contamination, or nuisance, as these terms are defined in California Water Code Section 13050(d), is prohibited.     3. Discharge of soil, bark, slash, sawdust, or other organic and earthen material from any construction or associated activity of whatever nature into any stream or watercourse in quantities deleterious to fish, wildlife, or other beneficial use is prohibited.     4. Placing or disposal of soil, silt, bark, slash, sawdust, or other organic material from any construction or associated activity of whatever nature at locations where such material could pass into any stream or watercourse in quantities that could be deleterious to fish, wildlife, or other beneficial uses is prohibited.     5. Discharge of decant water from any on-site temporary sediment stockpile or storage areas or any other discharge of construction dewatering flows to surface waters is prohibited, except as authorized by regulatory agencies.     6. Maintenance activities that result in the direct or indirect discharge of waste, to surface waters or surface water drainage courses are prohibited unless authorized by separate permit action.     7. Sediment removal may not occur in a flowing stream or standing water.     8. If used, concrete shall be allowed to cure for a minimum of 30 days before being allowed to interface with a waterway, or it shall be coated with an agency-approved sealant. If sealant is used, water shall be excluded from the site until the sealant is dry.
<b><i>BMP VM-2 Requirements for Invasive and Noxious Plant Species Control</i></b>   MRCD shall ensure that the spread or introduction of invasive plant species and other noxious weeds is avoided to the maximum extent possible by protecting areas with established native vegetation; implementing preventative measures appropriate for the individual project, including the use of certified weed-free materials and inspection and cleaning of all equipment before entering or exiting sites during construction; restoring disturbed areas with native species where appropriate; and performing post-project monitoring and control of exotic species.
<b><i>BMP CP-1 Require Adherence to Design Plans and Construction BMPs</i></b>   MRCD shall ensure that the projects are implemented according to the design plans and that BMPs are properly installed and maintained during construction activities.
<b><i>BMP CP-2 Requirements to Protect Air and Water Quality during Construction, Staging, and Stockpiling of Materials</i></b>   MRCD shall require the following to protect water quality during construction, staging, and stockpiling of materials:       1. Ensure that all debris, sediment, rubbish, vegetation, or other construction-related materials shall be placed as shown on the project plans where they cannot enter jurisdictional waters or wetlands. No materials, including petroleum products, chemicals, silt, fine soils, or substances to the function of a watercourse and water quality, shall be allowed to pass into, or be placed where it can pass into, stream channels. Upon completion of work, the construction contractor shall be responsible to

remove and dispose of all construction-related materials, debris, and sediments in an appropriate landfill or as shown on project plans.

2. Ensure the use or storage of petroleum-powered equipment is accomplished in a manner to prevent the potential release of petroleum materials into sensitive areas. The following precautionary measures shall be followed:
  - All vehicles and equipment on the site must not leak any type of hazardous materials such as oil, hydraulic fluid, or fuel. Vehicles and equipment must be inspected and approved by the inspector before use. Fueling shall take place outside of the riparian corridor.
  - If needed, a contained area located at least 50 feet from a watercourse shall be designated for equipment storage, short-term maintenance, and refueling. If possible, these activities shall not take place on the project site.
  - Vehicles shall be inspected for leaks daily and repaired immediately.
  - Leaks, drips, and other spills shall be cleaned up immediately to avoid soil or groundwater contamination.
  - Major vehicle maintenance and washing shall be done off site.
  - All spent fluids, including motor oil, radiator coolant, or other fluids, and used vehicle batteries shall be collected, stored, and recycled as hazardous waste off site.
  - Dry cleanup methods (i.e., absorbent materials, cat litter, and/or rags) shall be available on site.
  - Spilled dry materials shall be cleaned up immediately.
  - When possible, work shall be performed from the top of bank of a watercourse or pond.
  - Use of heavy equipment shall be avoided in a channel bottom with rocky or cobbled substrate. If access to the work site requires heavy equipment to travel on a rocky or cobbled substrate, a rubber tire-loader/backhoe is the preferred vehicle; only after this option has been determined infeasible or less environmentally protective shall use of tracked vehicles be considered.
  - Heavy equipment shall not be used in a flowing stream, creek, or ponded area, except to cross a stream or pond to access the work site. Heavy equipment shall not enter a flowing stream, creek, or ponded area without authorization from environmental regulators.
  - The amount of time heavy equipment is stationed, working, or traveling within the creek bed shall be minimized.
  - When heavy equipment is used, woody debris and vegetation on the banks and in the channel shall not be disturbed, wherever feasible.
3. Site preparation techniques shall be employed to minimize generation and transport of airborne particulate matter, such as wetting disturbed areas or covering storage piles adequately.
4. Limit construction emissions by reducing idling of diesel construction vehicles to no more than 5 minutes per California Code of Regulations §2449(d)(3) and using lower-emission vehicles to the maximum extent feasible.

***BMP CP-3 Requirements for Erosion Control and Sediment Detention during Construction and Maintenance Activities***

MRCD shall require the following erosion and sediment control measures to avoid or minimize erosion and impacts on water quality during project construction and maintenance activities:

1. All disturbed areas shall be restored to pre-construction or better conditions unless other requirements are prescribed by project regulators. Erosion and sediment control measures shall be installed upon completion of grading and shall be in place prior to the onset of rain at all locations where the likelihood of erosion or sediment input exists as determined by MRCD. Measures shall include a combination of permanent native vegetation (e.g., live planting, native seed casting, or hydroseeding), weed-free mulch, rock, and biotechnical treatments (e.g., filter strip, water and sediment control basins, weed-free straw bales). If required to reduce erosion or to control sedimentation, temporary filter-fabric fencing, biodegradable fiber rolls, weed-free straw bales, or other runoff diversions shall be utilized to keep sediment from flowing into an adjacent waterbody. After vegetation is sufficiently mature to provide erosion control, these measures shall be removed.

MRCD shall determine if the additional erosion control requirements are needed and when they can be removed.      - Any collected sediment shall be disposed of away from the collection site and stabilized to ensure that no sediment-laden runoff enters jurisdictional waters or wetlands.    - Post-construction erosion control, sediment control, and water quality protection measures shall be inspected regularly by MRCD staff or a designee to ensure they are functioning properly.
<b><i>BMP CP-4 Measures to Protect Aesthetic Values and Sensitive Biological Resources during Implementation</i></b>   To avoid adverse impacts on aesthetic values and sensitive biological resources, MRCD shall:      - Limit construction activities to daylight hours.    - Avoid creation of a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Any new light sources shall meet Marin County requirements. External light fixtures shall be mounted at low elevations to preserve the nightscape and natural surroundings of the area, and to prevent glare that may be visible from off-site locations and adjacent residences. Site lighting that is visible from adjacent properties, public roadways, and from other neighborhoods shall be indirect or incorporate full shield cut-offs.
<b><i>BMP CP-5 Ensure Emergency Access is Adequate</i></b>   MRCD shall ensure that adequate access for emergency vehicles is maintained at all work sites.
<b><i>BMP VM-1 Project Areal Limitations on Vegetation Management</i></b>  <b><i>MRCD shall ensure that the following areal limits on vegetation management are implemented during project planning and design:</i></b>      - Disturbance of native trees, shrubs, and woody perennials or removal of trees from riparian areas, including streambanks or stream channels, shall be avoided where possible and minimized where avoidance is not feasible.    - Ground-disturbing work shall occur above summer low-flow water levels unless a regulator-approved dewatering system is in place. Dewatering requirements are addressed in Mitigation BIO-1d.    - Removal of native trees and shrubs will be minimized and will only occur when necessary to meet project objectives.    - No more than 0.10 acre of native riparian trees, shrubs, or woody perennials shall be removed from a stream area for a single project.    - Where the area contains a mix of native and invasive species, no more than 0.25 acre of vegetation shall be removed from a streambank or stream channel.    - Outside of riparian areas and other sensitive habitats, native vegetation may be removed only if replanting with native vegetation is completed at or near the site.    - If the area is exclusively non-native species, up to five (5) acres of riparian vegetation may be removed.
<b><i>Mitigation Measure BIO-1a, Avoid Loss of Listed or CNPS Rank 1B, 2, or 3 Plants and their Habitats</i></b>   MRCD shall avoid loss of State and federally listed or special-status plants. MRCD shall avoid loss of State and federally listed or proposed plant species; State candidates for listing; California Native Plant Society (CNPS) List 1B species; CNPS List 2 and 3 species; and occupied or critical habitat for these species to the extent feasible. Where avoidance of individuals or habitat is infeasible, MRCD shall compensate for loss of State and federally listed or proposed plant species, candidates for listing, and CNPS Rank 1, 2, and 3 plants as required by the U.S. Fish and Wildlife Service (USFWS) or CDFW.

All protocol-level surveys shall be coordinated with the appropriate responsible agencies (i.e., USFWS and/or CDFW).

- Where indicated by the MRCD's initial site review, reconnaissance-level surveys shall be performed by a qualified biologist to determine whether suitable habitat for special-status plants is present within the project area. If habitat for listed or CNPS Ranks 1-3 plants is not identified during surveys, no further mitigation for impacts on target species is necessary under this measure.
- If suitable habitat is identified, focused surveys shall be performed to determine presence or absence of target species wherever habitats for these species will be impacted. Any special-status species found will be documented. The suitable habitat shall be avoided through project design, where feasible, and a buffer zone of 50 feet shall be established around State and federally listed or proposed plant species, candidates for listing, and CNPS Rank 1 and 2 plants to prevent entry and disturbance during work activities. A qualified biologist shall designate the buffer zone if the zone shall be less than 50 feet, and the buffer zone distance shall be based on the target species and proposed work. The buffer zone shall be clearly demarcated with construction fencing and avoided by all construction personnel and equipment. If suitable habitat cannot be avoided, project-specific protection measures shall be developed with concurrence by USFWS or CDFW. The following are examples of measures that may be required: Listed or List 1B and Rank 2 plants within the project footprint may need to be transplanted to a mitigation site approved by CDFW or USFWS. Seed from plants unavoidably impacted may need to be collected and preserved for planting on an approved mitigation site.

Where construction activities unavoidably affect listed or Rank 1B plant species, pipeline corridor widths may need to be limited to a maximum 5 feet through plant habitat to minimize habitat impacts.

Acquisition and preservation of at least an equal area and quality of habitat that is lost.

Any herbicide application to treat noxious non-native weeds shall ensure that special status plants are not affected and native plants are protected to the maximum extent feasible.

***Mitigation Measure BIO-1b, Protect Water Quality for Aquatic Habitats***

MRCD shall protect water quality in aquatic habitats through implementation of the following measures during operations and manure management activities:

- The collection, treatment, storage, or application of manure or process water shall not:
  - Degrade surface water or groundwater,
  - Contaminate or pollute surface water or groundwater, or
  - Create a condition of nuisance (as defined by the California Water Code section 13050).

This requirement applies to any degradation products or any constituents of soil mobilized by the interactions between applied materials and soil or soil biota.

***Mitigation Measure BIO-1c, Avoid Listed Special-status Wildlife Species***

MRCD shall avoid loss of habitat or individuals of federally and State-listed species, to the extent feasible. Where avoidance of individuals or habitat is infeasible given the location of the PCP practice, MRCD shall ensure that a qualified biologist oversees implementation of the following measures. The qualified biologist shall obtain approval from CDFW, USFWS, and NOAA Fisheries, as needed, to capture, handle, and release all species described in this mitigation measure. The qualified biologist shall have all the necessary permits and experience

as determined by the regulatory agencies to work with the target fish and wildlife species. This shall include a current CDFW Scientific Collecting Permit and USFWS Recovery Permits, as needed, and field experience identifying the target species and their habitats and capturing and relocating species.

***Preconstruction Surveys for Biological Resources and Species Relocations***

The project biologist shall assess the likelihood for sensitive biological resources to be present in the project area and perform a preconstruction survey(s) immediately prior to the onset of construction activities (on the day preceding work, ahead of the construction crew, or during the appropriate window for the target species), depending on the nature of the work and the target species. The focus of the preconstruction surveys shall include identifying the presence of target species and suitable relocation sites. With approval from the regulatory agencies, all fish and wildlife species shall be relocated outside of the area of impact in habitats suitable for the target species. A complete record of all fish and wildlife species observed during the preconstruction survey(s) and relocation process shall be kept by the project biologist and provided to CDFW, USFWS, NOAA Fisheries, and other regulatory agencies as required.

***Preconstruction Training and Biological Oversight Measures during Construction,***

***Preconstruction Crew Training Program***

The project biologist shall provide a preconstruction training session for construction personnel about the potential presence of sensitive biological resources within the Work Area. Topics will include how to identify life history characteristics and habitat requirements for target special-status species, measures to avoid impacts, project boundaries, penalties for non-compliance, and biological conditions outlined in the project's permits and CEQA-required BMPs. All attendees shall be given handouts to assist with the identification of target species and with protection measures summarized. Personnel who miss the first training session or are hired later in the season shall attend a make-up session before participating in on-the-ground activities. All attendees shall be required to sign an attendance sign-up sheet that will be maintained for the duration of the project.

***Wildlife Exclusion***

For project areas located within habitats with known presence of special-status species or critical wildlife corridors, temporary wildlife exclusion shall be installed around the project perimeter. Exclusion fencing shall be highly visible, and installation shall be overseen by the project biologist. Openings shall be restricted to areas of construction site access. The purpose of the temporary fencing is to preclude animals from entering the Work Area and prevent debris and workers from entering adjacent habitats.

***Biological Monitoring during Construction Activities***

On-going biological oversight shall occur as needed during construction to ensure that biological resources are not being adversely impacted by construction activities. Projects that require relocation of special-status fish and wildlife species shall be visited at least weekly by the project biologist following completion of the relocation activities and exclusion fencing installation. The project biologist shall also train a biological monitor from the construction crew to check the site daily for special-status species and report back to the project biologist on adherence to the biological resource protection measures. If a special-status species enters the Work Area, the construction crew supervisor or biological monitor shall contact the project biologist or designee for further guidance. Special-status species shall not be captured or handled by the supervisor or field crew unless directed by the project biologist or regulatory agency personnel.

***Mitigation Measure BIO-1g, Protect California Red-legged Frog***

MRCD shall ensure that the following protection measures for California red-legged frog (CRLF) are implemented for PCP practices in or near CRLF habitat:

- Projects within potential CRLF habitat shall be designed to minimize disturbance to vegetation near or in permanent and seasonal pools of streams, marshes, ponds, or shorelines with extensive emergent or weedy vegetation.

- If a project site occurs in potential CRLF habitat, the project biologist shall conduct a preconstruction survey of all aquatic areas and immediately adjacent uplands with suitable vegetation cover that is potential habitat for CRLF no more than 48 hours before the start of construction activities. The biologist shall look for individual frogs, evaluate the likelihood of usage, and determine if additional biological monitoring is needed during construction to ensure that individuals present shall be removed or avoided.
- The project biologist shall monitor initial ground-disturbing activities within 300 feet of CRLF habitat and shall have the authority to halt work activities that may adversely affect CRLF until they no longer occupy the project area. Relocation of CRLF shall be performed only by individuals approved in advance by CDFW and USFWS.
- If suitable CRLF breeding habitat is present, project activities shall occur between July 1 and October 15 to avoid impacts on breeding CRLF or egg masses.

***Mitigation Measure BIO-1j, Protect Nesting Birds during Construction***

MRCD shall ensure that the following protection measures for nesting birds are implemented for PCP activities:

- Preconstruction breeding bird surveys shall be completed for projects with construction activities occurring from March 15 through August 15 for special-status birds, migratory birds, and raptors. Preconstruction surveys shall occur in all locations identified by a qualified biologist. The surveys shall be conducted within two weeks prior to initiation of vegetation clearing, tree removal and trimming, or other construction activities. If the biologist finds no active nesting or breeding activity, work can proceed without restrictions, except in areas with suitable habitat for bank swallows.
- If active raptor or owl nests are identified within 100 feet of the construction area or active nests of other special-status birds (e.g., passerines, woodpeckers, hummingbirds, etc.) are identified within 50 feet of the construction area, a qualified biologist shall determine whether or not construction activities may impact the active nest or disrupt reproductive behavior. If a qualified biologist determines that construction would not affect an active nest or disrupt breeding behavior, construction can proceed without restrictions. The determination of disruption shall be based on the species' sensitivity to disturbance, which can vary among species; the level of noise or construction disturbance; and the line of sight between the nest and the disturbance.
- If the project biologist determines that construction activities would likely disrupt breeding or nesting activities, a no-disturbance buffer shall be placed around the nesting location. The buffer shall include the active nest or breeding areas plus a 50-foot buffer for small songbirds and a 100-foot buffer for larger birds (e.g., owls, raptors). Construction activities in the no-disturbance buffers shall be avoided until the nests have been vacated.
- If the site is left unattended for more than one week following the initial surveys, additional surveys shall be completed. Ongoing construction monitoring shall occur to ensure no nesting activity is disturbed. If State and/or federally listed birds are found breeding within the area, activities shall be halted, and consultation with the CDFW and USFWS shall occur and agency recommendations shall be implemented.

***Mitigation Measure BIO-1m, Protect Special-status Butterflies***

MRCD shall ensure that the following protection measures for butterflies are implemented for PCP practices that occur in or near suitable grassland habitat:

- Reconnaissance-level surveys shall be performed by the project biologist to determine whether suitable habitat for Myrtle's silverspot or San Bruno elfin butterflies is present in the project site. If larval host or nectar plants for listed butterflies are present, and the target species is documented within the project vicinity, the project biologist shall perform a survey to determine presence or absence utilizing widely accepted scientific protocols.
- If suitable habitat for listed butterflies is present, project work shall be carried out with minimum soil compaction and disturbance. Wherever possible, work shall be performed with hand tools. No herbicides or fertilizers shall be used in habitat that supports special-status butterflies.

Host plants for listed butterflies, including broadleaf stonecrop and *Viola adunca*, shall be protected with a clearly demarcated 20-foot buffer zone.

***Mitigation Measure BIO-1n, Protect American Badger***

MRCD shall ensure that the following protection measures for American badgers are implemented for PCP activities:

For all projects requiring disturbance to open grasslands or low-growing vegetation habitats, a preconstruction survey for American badger shall occur prior to beginning work. If any badgers are documented within the project site or within 500 feet of it, buffer zones shall be established and maintained until the badgers have vacated the area. No work shall occur within the buffer zone until the area is cleared by the project biologist. Additional protection measures may be required and shall be developed in consultation with CDFW; they may include larger buffer zones or relocations, as appropriate.

***Mitigation Measure CUL-1, Identify and Avoid or Minimize Impacts on Historic Resources***

When a literature and archival records search identifies potential historic resources within or near the project area during pre-project review or when historic materials are encountered during work activities, MRCD shall require the following:

- If potentially historic resources or buildings older than 45 years are located within 100 feet of the project area, a qualified historian or archaeologist shall be retained to perform an evaluation of the potential historic resource and determine whether the project would impact the resource. If the resource is determined to qualify as historic under CEQA Guidelines §15064.5(a), and the PCP practice would impair the resource, such impacts on the resource shall be avoided. The PCP practice shall be designed and constructed to avoid impairment of the historic resources. Measures to protect historic resources may include, for example, temporary protective barriers, construction worker training, movement of the facility or practice site, and landscape screening.
- Should the historic resource survey identify significant resources that cannot be avoided, The Secretary of the Interior's Standards for the Treatment of Historic Properties shall be followed. A qualified historic preservation professional shall be retained to develop a treatment plan. Such professionals may include architects, architectural historians, historians, historic engineers, archaeologists, and others who have experience in working with historic structures. Mitigation measures recommended by the qualified historic preservation professional shall be implemented. These measures could include, but not necessarily be limited to:
  - Avoidance of significant historic resources;
  - Graphic documentation (photographs, drawings, etc.); and
  - Restoration, stabilization, repair, and reconstruction.
- MRCD and its partners shall hold a pre-construction meeting to acquaint construction personnel with the possibility of encountering sensitive cultural resources. Historic-era materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic materials.

If subsurface historic materials are encountered during construction activities, the piece of equipment or crew member that encountered the materials shall stop, and the find shall be inspected by a qualified historian/archaeologist. Project personnel shall not collect historic materials. If the historian/archaeologist determines that the find qualifies as a unique historic resource for the purposes of CEQA (Guidelines §15064.5[c]), all work shall be stopped in the immediate vicinity to allow the archaeologist to evaluate the find and recommend appropriate treatment. Such

treatment and resolution shall include either modifying the project to allow the materials to be left in place or undertaking data recovery of the materials in accordance with standard archaeological methods. The preferred treatment is protection and preservation.

***Mitigation Measure CUL-2, Identify and Avoid or Minimize Impacts on Archaeological Resources***

When a literature and archival records search identifies potential archaeological resources within or near the project area during pre-project review or when archaeological materials are encountered during work activities, MRCD shall require the following:

- A pre-construction meeting shall be held to acquaint construction personnel with the possibility of encountering sensitive cultural resources. Prehistoric resources may include chert or obsidian flakes, projectile points, mortars, and pestles; dark friable soil containing shell and bone dietary debris; heat-affected rock; or human burials.
- If previously unknown archaeological materials are encountered during construction, the piece of equipment or crew member that encountered the materials shall stop, and the find shall be inspected by a qualified archaeologist. Project personnel shall not collect cultural materials. If the archaeologist determines that the find potentially qualifies as a unique archaeological resource for the purposes of CEQA (Guidelines §15064.5[c]), all work shall be stopped in the immediate vicinity to allow the archaeologist to evaluate the find and recommend appropriate treatment. Such treatment and resolution shall include either project modification to allow the materials to be left in place or undertaking data recovery of the materials in accordance with standard archaeological methods. The preferred treatment is protection and preservation.

***Mitigation Measure CUL-3, Avoid or Document Paleontological Resources***

If a paleontological resource is discovered during construction, MRCD shall require the following:

All ground-disturbing activities within 50 feet of the find shall be temporarily halted but may be diverted to areas beyond 50 feet from the discovery and continue working. MRCD shall notify a qualified paleontologist who will document the discovery, evaluate the potential resource, and assess the nature and significance of the find. Based on scientific value or uniqueness, the paleontologist may record the find and allow work to continue or recommend salvage and recovery of the material. The paleontologist shall make recommendations for any necessary treatment that is consistent with currently accepted scientific practices.

***Mitigation Measure CUL-4, Procedures for Inadvertent Discovery of Human Remains***

Should human remains be encountered during PCP activities, MRCD shall require the following:

The treatment of any human remains and associated or unassociated funerary objects discovered during soil-disturbing activities shall comply with applicable State laws. If human graves are encountered, MRCD shall ensure that all work stops in the vicinity and the Marin County Coroner is notified. A qualified archaeologist shall evaluate the remains. If human remains are of Native American origin, the Coroner shall notify Native American Heritage Commission (NAHC) within 24 hours of identification, pursuant to Public Resources Code (PRC) §5097.98. NAHC would appoint a Most Likely Descendant. A qualified archaeologist, MRCD, and the Most Likely Descendant shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects (CEQA Guidelines §15064.5[d]). The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, and final disposition of the human remains and associated or unassociated funerary objects. The PRC allows 48 hours to reach agreement on these matters. If the Most Likely Descendant and the other parties cannot not agree on the reburial method, MRCD shall follow PRC §5097.98(b), which states that “the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.”

***Mitigation Measure HAZ-4, Reduce Wildland Fire Hazards during PCP Activities***

MRCD shall ensure that the following measures are used to reduce wildland fire hazards during construction and maintenance activities:

- Vehicles shall not park in areas where exhaust systems can contact combustible materials.
- Fire extinguishers and fire suppression tools shall be available on the site when working in high fire hazard areas.

***Mitigation Measure HYD-1, Protect Water Quality – Planting and Revegetation after Soil Disturbance***

MRCD shall require the following to protect water quality through planting and revegetation after soil disturbance:

- Revegetation shall occur as soon as possible after disturbance using live native plantings, native seed casting, or hydroseeding, preferably prior to the onset of rain. When timing does not coincide with suitable planting windows for permanent vegetation, a temporary cover (e.g., weed-free mulch or weed-free straw) shall be used to protect soil until permanent vegetation can be established. Non-invasive, non-persistent grass species (e.g., barley grass, sterile wheat) may be used in limited instances in conjunction with native species to provide fast-establishing, temporary cover for erosion control.
- Soil exposed during construction and soil above rock riprap shall be revegetated using native seed casting or by hydroseeding.
- To the extent feasible, all plants disturbed by project activities shall be replaced with a species palette similar to that of the removed vegetation or with species that are appropriate to the site conditions and are native to the project watershed. Otherwise, plants shall be sourced from Marin County or southern Sonoma County; plants from more distant sources shall require pre-approval by the project biologist. Native plant species with high wildlife and/or pollinator values shall be used to the extent feasible.
- Soil amendments are typically not needed for establishment of native vegetation in intact native soils. If soils have been disturbed and require additional organic matter or nutrients to support native

plants, limited organic, weed-free amendments may be used to help establish restoration vegetation. Organic fertilizers may be used only above the normal high water mark of any adjacent waterways. If fertilizers are to be used around a listed plant, MRCD shall consult with a qualified biologist or range scientists to establish a buffer zone. No chemical fertilizers are allowed under the PCP.

***Mitigation Measure HYD-2, Protect Water Quality – Erosion Control and Stormwater Detention during Grading and Other Disturbance in a Stream, Waterway, or Other Sensitive Habitat***

When a project involves grading or work within or adjacent to a stream, waterway, or other sensitive habitat, MRCD shall require the following measures to avoid or minimize erosion and impacts on water quality:

- Prepare and implement a spill prevention and clean-up plan, Stormwater Pollution Prevention Plan, or similar document. The plan shall address polluted runoff and spill prevention policies, erosion control materials required to be available on site in case of rain or a spill (e.g., straw bales, silt fencing), clean-up and reporting procedures, and locations of refueling and minor maintenance areas.
- Schedule grading and other earth-disturbing activities during the dry season, generally June 1 through October 31. Exceptions may be made in cases such as catastrophic failure due to a large storm or other event that causes water quality or public safety concerns.
- Ensure erosion control and sediment detention measures are available on site at all times and are in place at all locations where the likelihood of sediment input exists prior to the onset of rain in order to detain sediment-laden water on site and minimize fine sediment and sediment/water slurry input to flowing water. Sediment collected in the structures shall be disposed of away from the collection site in an upland area where it cannot enter a waterway. When requested by project regulators, MRCD staff or a qualified designee shall inspect in-stream habitat and performance of erosion and sediment control devices at least once each day during construction to ensure the devices are functioning properly.
- If rain occurs while materials are temporarily stockpiled, cover with plastic that is secured in place to ensure the piles are protected from rain and wind. Silt fencing or wattles shall be installed on contour around all stockpile locations.
- Prohibit discharge of water from any on-site temporary sediment stockpile or storage areas or any other discharge of construction dewatering flows to surface waters.

## EXHIBIT D

# Point Reyes National Sea Shore Dairy Waste System Decommissioning

## Payment Instructions

These instructions are intended to speed up payment of invoices and reimbursement requests.

Marin RCD pays majority of accounts payable through the County of Marin. In order for the County of Marin to process payment, you will need a vendor number in their system. Obtaining a vendor number can take up to 10 business days. Sign up to a vendor here:

<https://www.marincounty.gov/departments/finance/accounts-payable/register-vendor>

All invoices shall include company name, address, phone, date, a breakdown of labor and materials for the construction practices described Description of the Work above, and tax ID number. Bills are paid based on availability of funds from the Grantor for the project and in the order received. Invoices that arrive by the last day of the month will be included in the funding requests to be reviewed by the MRCD Board at their regularly scheduled meeting the following month. If your invoice arrives on time and if funds are available, it can be paid as early as the third week of the following month. No invoice can be paid if it isn't within the grant budget.

Invoices will be issued to the following:

Marin RCD

P.O. Box 1146

Point Reyes Station CA 94956

The Marin RCD shall be invoiced for an amount not to exceed \$ _____

In order to be paid promptly, your billing needs to include these elements:

**Name:** Legal name as well as business name; name for the check must be on the invoice.

**Address:**

**Phone:** Number where we can contact you in case of questions.

**Tax ID #:** If you or your company are providing services (rather than being reimbursed for expenses), you must provide a Form W-9 with your first invoice.

**Date:** Use the date on which your invoice is written.

**Job No.:** If you were assigned a Job Number at the time your Contract was signed, this number must appear on all your invoices for work done on this Job.

**Task:** If your Contract has more than one task specified in the budget, please break out the charges on your invoice by task. *This does not apply to lump sum contracts.*

Example: Contract for Fencing

Task: Materials	\$2,511.75
Task: Labor	<u>\$5,000.00</u>
Total Invoice Amount:	\$7,511.75



## Bid Walk Questions

### **Project: Point Reyes National Sea Shore Dairy Waste System Decommissioning**

**Sept 8, 2026**

1. Does material in pits need to be compacted.
  - a. I said no at the bid walk per conversation with Geotech.
    - i. Update to what I said.
      1. Please compact the soil in the pits or mound over the top 2 feet and grade to drain.
2. Question on volumes being accurate.
  - a. Updates and double checks are shown on plans.
3. Testing on fill.
  - a. There is enough fill on sites to not need to import. That being said if import makes more sense, environmental and chemical tests maybe needed to ensure soils are free of oils, heavy metals, and other contaminants.
  - b. Gerhard: per the NPS staff probably no testing needed if seems reasonable, but local soil should be on top. Do not cap with imported fill.
4. Fencing
  - a. Roll the fencing out of the way and dispose of material.
5. At A ranch-
  - a. I have updated the plan here to generate more fill. Please see revised plans.
6. Volumes on sheet 5.
  - a. Yes these were off. I have revised see updated plans.
7. Biologist
  - a. A biologist will provide training prior to start of work.
  - b. If wet work is approved, a biologist may need to be on site to do work.
  - c. Biologist is paid for by others.
8. Archeologist
  - a. Archeology monitor and tribal monitor will be required, paid by others.
9. If you hit rock in an excavation.
  - a. Contact the Engineer with elevation numbers to determine if hydrology works out.

- 
- b. This project is not intended to break bed rock, another solution will be mutually agreed upon.
10. B ranch-
- a. Work around the box at the end of the concrete pads is removed. See plans.
  - b. Work at lower pond has been moved out of optional.
11. A ranch-
- a. Cut a diversion swale at the upper end of the project area, per updated plans.
  - b. The work here is divided into two parts –
    - i. All work regarding cutting soil has been postponed to a second mobilization and is proposed as optional on the bid documents.
    - ii. All fill work is set to move forward.
12. What do we do with the water in the pits?
- a. I had said at the bid walk, this could be displaced by soil being placed. I was incorrect, this will not yield desired results.
  - b. This water shall be pumped out, it is considered clean water, it can go anywhere.