

# **Bid Package – Issued for Bid**

Pilarcitos Creek Watershed Rural Roads Sediment Reduction Project in Half Moon Bay, CA

Issue Date: May 3, 2016 Bids Due: June 1, 2016 by 5:00pm PST.

To: San Mateo County Resource Conservation District Attn: Jarrad Fisher 625 Miramontes Street, Suite 103 Half Moon Bay, CA 94019 Or jarrad@sanmateorcd.org

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# A. Invitation to Bid

# **1. Bidding Overview**

The San Mateo County Resource Conservation District (RCD), is seeking bids from qualified licensed contractors to implement a series of rural road erosion control measures that will reduce sediment delivered to Pilarcitos Creek which is located in coastal San Mateo County. These erosion control measures will improve overall conditions on three dirt roads within Coastside County Water District (CCWD) property in Half Moon Bay, CA. Planned erosion control treatments are intended to improve drainage, reduce erosion and maintenance needs, and benefit the habitat quality of Pilarcitos creek. Due to permit requirements, the work will be performed between September 16th – October 15<sup>th</sup> 2016, and needs to be started and completed as early as possible within the designated work window to minimize working into the rainy season (work may possibly be extended to October  $31^{st}$  if necessary, if dry weather conditions apply, and if approved by regulatory agencies).

Work will involve road shaping, culvert replacement/installation, and bank stabilization on the following 3 unpaved roads (names are informal): 1) Pilarcitos Creek Road North and South segments (approximately 1.34 miles); 2) Cell Tower Road (approximately 0.94 miles); and 3) Transformer Road (approximately 0.63 miles).

Bids for the Pilarcitos Creek Roads Project will be received by the San Mateo County Resource Conservation District (RCD) until **5:00 p.m. on Wednesday, June 1<sup>st</sup>, 2016. They may be submitted by hard copy or email to:** 

Attn: Jarrad Fisher San Mateo County Resource Conservation District 625 Miramontes Street, Suite 103 Half Moon Bay, CA 94019 OR jarrad@sanmateorcd.org

Proposal forms for bidding on this project are enclosed.

A MANDATORY FIELD MEETING will be held at the project location at 8:30 a.m. on Monday, May 16<sup>th</sup>, 2016 and will include a tour of the project sites. Participants will meet at the gravel pull out by Santa's Christmas Tree Farm located off of Highway 92 approximately 3.25 miles east from the intersection of Hwy 1 and Hwy 92 (see maps on next page). The gravel pull out is in front of the red building located approximately 75 yards after the turn off of Hwy. 92. To receive a map to the meeting location and notice of any weather delays or site visit changes, bidders must **RSVP to Jarrad Fisher** at jarrad@sanmateorcd.org by 5pm on Friday May 13<sup>th</sup>. The only opportunity to ask questions during the bid process will be at this site visit. Only those present will receive answers to questions asked.

The site visit is estimated to last between the hours of 8:30 am and 1:00 pm. Physical copies of the Bid Document will be provided by the RCD. Bidders should wear suitable footwear and dress appropriate for site conditions. 4WD is recommended. Extreme weather conditions or other unforeseen conditions could cause the tour to be cancelled and rescheduled. Contractors will be sent an e-mail the afternoon before the meeting if it is cancelled. Attendees should plan to bring their own food and water.

# **Project Location Directions & Map**

From Half Moon Bay, head east on Hwy 92 towards Skyline Blvd (Hwy 35) approximately 3.25 miles. Santa's Tree farm will be located on the left hand side of the Hwy 92 before the steep incline to Skyline Blvd (Hwy 35).

From Hwy 280 in San Mateo, take the Hwy 92 West exit towards Half Moon Bay. After approximately 6 miles, Santa's Tree Farm will be located on your right hand side after the steep decline from Skyline Blvd (Hwy 35).



# 2. Contracting Entity & Land Users

**Contracting Entity and Project Manager:** San Mateo County Resource Conservation District. **Property Owner:** Coastside County Water District (CCWD).

Road Users: CCWD, L-3 Randtron.

**CONTRACTING ENTITY:** The RCD is the contracting entity and project manager on behalf of the property owner CCWD and additional road user, L-3 Randtron. The RCD is a non-regulatory public benefit district whose mission is to help people protect, conserve, and restore natural resources through information, education, and technical assistance programs.

The goal of this project is to reduce sediment delivery to Pilarcitos Creek. The work of the RCD is accomplished through strong voluntary partnerships with land owners and managers, technical advisors, area jurisdictions, government agencies, advocates, and others. RCDs were established by the state of California to be locally-governed special districts that act as focal points for local conservation efforts, using very diverse means to conserve natural resources on public and private lands. Established in 1939, San Mateo County's RCD was the first such district in California. For more information about the RCD, visit www.sanmateorcd.org.

May 3, 2016	Request for Bids Issued
May 13, 2106	RSVP for site visit by 5pm to jarrad@sanmateorcd.org
May 16, 2016	Mandatory Pre-Bid Meeting and Site Visit at @ Pilarcitos Roads (8:30am – 1:00pm)
June 1, 2016	Bids Due to RCD by 5pm PST
June 9, 2016	Contractor Selection by RCD, CCWD, Randtron L-3
Sept. 16 – Oct. 15, 2016	Construction Window

# **3. Project Timeline**

# **B.** Instructions to Bidders

# 1. Proposal

All proposals shall give the prices proposed, shall give all other information requested herein, and shall be signed by the bidder or his/her authorized representatives, with his/her address. If the proposal is made by an individual, his/her name, signature and post office address must be shown. If the proposal is made by firm or partnership, the name and post office address of the firm or partnership and the signature of at least one of the general partners must be shown; if made by a corporation, the proposal shall show the name of the state under the laws of which the corporation is chartered, the name and post office address of the corporation, and the title of the person who signs on behalf of the corporation. If the proposal is made by a corporation, a certified copy of the bylaws or resolution of the board of directors of the corporation showing the authority of the officer signing the proposal to execute contracts on behalf of the corporation shall be made available for inspection by the RCD upon such request.

Each proposal shall be emailed to jarrad@sanmateorcd.org or enclosed in a sealed envelope, labeled with the project name. Proposals that contain omissions, erasures or irregularities of any kind may be rejected. No oral, telegraphic or telephonic proposals or modifications will be considered.

A modification of a proposal already received will be considered only prior to the bid submission deadline. All modifications shall be made in writing, executed and submitted in the same form and manner as the original proposal. The RCD shall be notified in advance that such modification is pending.

The submission of a proposal by the bidder shall constitute the acknowledgment that, if awarded the contract, he/she has relied on his/her own examination of (a) the work site, (b) access to the site, and (c) all other data, matters, and things requisite to the fulfillment of the work. This acknowledgement of examination includes his/her own knowledge of existing services and utilities on and in the vicinity of the site of the work to be constructed under the contract, and not on any representation or warranty of the RCD. No claim for additional compensation will be allowed which is based upon a lack of knowledge of the above items.

# 2. Bid Prices

Bid prices shall include everything necessary for the completion of construction and fulfillment of the contract including, but not limited to, furnishing all materials, equipment, tools, and other facilities and all management, supervision, labor and services, except as may be provided otherwise in the contract documents.

#### 3. Taxes and License

Bid prices shall include allowance for all federal, state and local taxes and contractor shall comply with local business license requirements.

### 4. List of Subcontractors

Each proposal shall list the name and address of each major subcontractor to whom the bidder proposes to sublet portions of the work. For the purpose of this paragraph, a subcontractor is defined as one who contracts with the Contractor to furnish materials and labor, or labor only for the performance of work at the site of the work or who will specially fabricate a portion of the work off the site pursuant to detailed drawings in the contract documents (see section D item #2).

#### **5. Examination of Contract Documents**

Each bidder shall thoroughly examine and be familiar with legal and procedural documents, permits, general conditions, specifications, road logs and addenda (if any). The submission of a proposal shall constitute an acknowledgment upon which the RCD may rely that the bidder has thoroughly examined and is familiar with the contract documents. The failure or neglect of a bidder to receive or examine any of the contract documents shall in no way relieve him/her from any obligations with respect to his/her proposal or to the contract. No claim for additional compensation will be allowed which is based upon a lack of knowledge of any contract document.

#### 6. Qualification of Bidders

Each bidder shall be skilled and regularly engaged in the general class or type of work called for under the contract. Each bidder shall possess a valid Contractor's License issued by the Contractor's State License Board at the time his/her bid is submitted. The class of license shall be applicable to the work specified in the contract. Each bidder shall also have no less than five (5) years experience in the magnitude and character of the work bid.

#### 7. Non-Collusion Affidavit

If there is a reason to believe that collusion exists among the bidders, none of the bids of the participants in such collusion will be considered. Bidders are required to execute the non-collusion affidavit contained herein.

#### 8. Rejection of Proposals

The RCD reserves the right to reject any proposals which: are incomplete, obscure or irregular, omit a bid on any one or more items on which the bids are required, omit unit prices, if unit prices are required, contain unit prices that are unbalanced in the opinion of the RCD, accompanied by insufficient or irregular bid security, or are from bidders who have previously failed to perform properly or to complete on time contracts of any nature.

#### 9. Award of Contract

The RCD will accept the proposal which is of the greatest advantage to the project and the RCD. RCD has the right to reject any and all proposals. **RCD is not required to accept the low bid**.

The RCD will either choose to accept a proposal or reject all proposals. The acceptance of a proposal will be evidenced by a notice of award of contract in writing, delivered by email to the bidder whose proposal is accepted. No other act of the RCD shall constitute acceptance of a proposal. The award of contract shall obligate the bidder whose proposal is accepted to furnish a performance bond, and a material and labor bond, and evidences of insurance and execute the contract set forth herein.

Immediately following the award of contract, the Bidder may be required to meet with the RCD to review the contract documents to ensure that the documents will be properly executed and returned by the Bidder in a form acceptable to the RCD.

# **10. Execution of Contract**

The contract agreement shall be executed in duplicate by the successful bidder and returned, together with the contract bonds and evidences of insurance after the Notice of Award in Section 9 above. After execution by the RCD, one original contract shall be returned to the Contractor.

# **11. Prevailing Wage**

This project will require California prevailing wage and all bids must include the cost of prevailing wage in the submitted bid document or may be disqualified from the bidding process. Information on California prevailing wage can be found at the following link <a href="http://www.dir.ca.gov/oprl/pwd/">http://www.dir.ca.gov/oprl/pwd/</a>

# **C. Project and Construction Details**

# 1. Project overview

The *Pilarcitos Creek Watershed Rural Roads Improvement Project on CCWD Property* will improve 2.91 miles on three unpaved roads in order to address sediment loading from these roads into Pilarcitos Creek. Planned erosion control treatments are intended to improve drainage, reduce erosion and maintenance needs, and benefit the habitat quality of the creek. The RCD's Rural Roads Program aims to reduce road-related sediment runoff to help protect and recover steelhead trout, coho salmon, and other native aquatic and riparian species in riparian corridors. The project will be conducted by the RCD, in collaboration with CCWD and L-3 Randtron.

Designs, specifications, road logs and permits are located in Section **F.Attachments**. Note the physical copies of permit documents are not included on this bid package. Permit documents are located at the hyperlink provided in section **F.Attachments**.

# 2. Work to be performed

All work must conform to the enclosed road designs and specification and will be supervised by the project engineers, Pacific Watershed Associates (PWA), and the San Mateo County Resource Conservation District. Prior to implementation, all permit pre-construction conditions to protect species will need to be met.

All proposed road work would be completed in accordance with the techniques described in Part X of the *California Salmonid Stream Habitat Restoration Manual*, 4th edition (CDFW 2010). Culvert replacement work will be consistent with current California Department of Fish and Wildlife (CDFW) and National Marine Fisheries Service (NMFS) guidelines concerning fish passage, including Part X of the Habitat Restoration Manual.

Contractors will be expected to complete work according to all permit conditions.

# **3. Site Specific Considerations**

# See road logs (Appendix A) and general bid details (Table 1 Pg. 12) for additional project specific considerations.

# Water

Water will be available on site from CCWD. Transportation, loading and unloading of water will be the responsibility of the contractor and should be included in cost estimates.

# High Voltage Powerline & Water Pipeline

There is a high voltage powerline running underneath a portion of Pilarcitos Creek road that includes streambank stabilization sites 147 and 148. The powerline is buried between 24"-30" below the middle of the road and is not anticipated to constitute an issue for the proposed work.

Likewise there is a water pipeline under sites 141.1 and 142 that is buried between 3 and 3.5 feet deep and is not anticipated to constitute an issue for the proposed work.

The powerline and water pipeline will be clearly marked prior to the start of construction and caution should be used at these sites. All sub-surface utilities will be marked with whiskers prior to construction.

# **D. Bid Forms**

# **1. BID PROPOSAL FORM**

The undersigned submits this Bid Proposal and has read and agrees to all of the terms in this Bid Proposal and has carefully examined the plans and specifications and conditions at the site. The undersigned proposes to furnish all labor, materials, and equipment required to complete the work as follows:

#### BASE BID

All bids will use **California prevailing wage** and include all taxes and delivery fees for each category. The design estimate for this project is \$99,000. Bids are broken out into parts, 1) Pilarcitos Creek Road North 2) Pilarcitos Creek Road South, Cell Tower Road, and Transformer Road. Reference road logs for number and type of sediment treatments. **Note that the RCD/PWA will supply ON SITE all culverts. The selected contractor will purchase and ensure delivery of all rock, seed/straw materials, erosion control materials, and miscellaneous items.** 

The contractor will be expected to stockpile on-site duff material from areas disturbed by construction and then to re-apply this material as part of the revegetation/erosion control process. Water will be available onsite. Contractors are expected to install exclusionary fencing per permit conditions.

**Table 1.** General bid details, Pilarcitos Creek Watershed Road Improvement Project, San Mateo

 County, California

#### General bid details

- Mobilization and demobilization shall be included as a lump sum with bid items for the equipment/labor specified in the Bid Summary Sheet (Table 3).
- The estimated construction costs to complete the project as detailed in this table, the road logs (Appendix A) and following the typical construction drawings (Appendix B) is \$99,000.
- All culverts will be purchased by the RCD and ordered by PWA. The culverts will be delivered to project area at location presented at bid tour. Contractor will work with PWA to determine best delivery date and is responsible to unload and mobilize all culverts to individual sites, as per the road logs (Appendix A). At a minimum, all culverts must be mobilized to staging area on CCWD property on the same day of culvert delivery.
- Remaining materials will be purchased and delivered by successful contractor. See Appendix A, Tables A5, A6, A7, and Appendix B for dewatering material needs.
- Vegetation/brush removed during road opening and site grubbing will be distributed in-place along hillslopes and/or used at stream crossing and bank erosion upgrade sites in lieu of seed/straw where possible.
- Water for project will be available nearby on Pilarcitos Creek Road within the Santa Tree Farm property (contractor not responsible for cost of water).
- The successful contractor will work under the direct supervision of PWA and all tasks listed in the road logs (Appendix A) must be completed to their satisfaction.
- Additional equipment and/or materials not specified by bid items (Table 2) shall be negotiated with the successful contractor.
- The successful contractor must abide by all permit requirements as directed by PWA, RCD, and/or regulatory staff to ensure the project remains in environmental compliance.
- All work will take place September 16 to October 15, 2016 and is not negotiable.
- Contractor shall possess either a Class "A", "C12" or "C61" license or California Licensed Timber Operator (LTO) at the time of bidding on this contract. A combination of classes is ok as long as any C-61 Limited Specialty Classification is applicable to the scope of work.

**Table 2.** Recommended equipment breakdown. Pilarcitos Creek Watershed Road Improvement

 Project, San Mateo County, California

Item	Type of recommended heavy equipment <sup>1</sup>	Heavy equipment rental detail
1	Hydraulic Excavator	A hydraulic excavator, or similar piece of equipment, (35,000lb+/- or equal) with bucket and thumb and all necessary attachments for lifting or digging with operator.
2	Bulldozer	A bulldozer tractor, or similar piece of equipment, with 6-way blade, minimum 18" multi-shank ripper attachment (Caterpillar D-4 or D-5, or equivalent).
3	10 yd <sup>3</sup> Dump Truck	A ten-cubic yard dump truck, or similar piece of equipment and all incidentals required for truck operation.
4	Water Truck	A water truck (2,000 gallon capacity or greater) and all necessary attachments for drafting water for project utilization and dispensing water onto project roads, fills, and spoil materials for the purpose of dust abatement and moisture conditioning of soil materials.
5	Vibratory Drum Compactor	An 84" vibratory drum compactor, or similar piece of equipment, with a single or double drum, or equivalent. This includes roller/compactor, and all incidentals required for roller operation.
6	Loader	A rubber tire, 4-wheel-drive tractor loader or equivalent for delivering rock to sites and grading. This includes tractor grader, and all incidentals required for operation.
7	Labor	Workers used in the actual and direct performance of the project independent of that work associated with equipment operations.
8	Move in/out	A lump sum rate to provide move in/move out costs.

<sup>1</sup>The CONTRACTOR will be allowed to substitute similar equipment for those specified but only if that equipment can efficiently perform the project at the Project site.

**Table 3.** Equipment/labor, mobilization, & materials bid summary sheet. Pilarcitos Creek WatershedRoad Improvement Project, San Mateo County, California.

Item	Pilarcitos Creek Road North		Fotal Cost <sup>3</sup> (\$)	
1		Equipment/Labor		
	Pila	rcitos Creek Road South, Cell		
	Tower & Transformer Road		Total Cost <sup>3</sup> (\$)	
2		Equipment/Labor		
		Sum of Equipmer	nt/Labor (all roads)	
	Materials		Total Cost <sup>3</sup> (\$)	
		Rip	prap (2.0'-3.0'): 70 $yd^3$	
	Rock <sup>1</sup>	Riprap (0.5'-2'): 45 yd <sup>3</sup>		
tals		Road ro	ck (1.5" clean): $60 \text{ yd}^3$	
Subto		Drain	rock (3" clean): $20 \text{ yd}^3$	
S	Seed/straw materials (purchase and delivery of 12 lbs. of native erosion control seed and 17 bales of rice straw)			
	Miscellaneous items (water pumps, hoses, riparian fencing, geotextile fabric etc.)			
	Move in/out (mobilization)			
		То	tal Estimated Bid <sup>2</sup> :	\$
<sup>1</sup> Incluc	le price of p	urchase and delivery to project area for each r	ock size (cost to mobilize roo	ck from the staging area to each site is

assumed with equipment hours) <sup>2</sup> Tally your total cost for equipment and labor, materials, miscellaneous items, and provide the total estimated bid. References. List three references with contract amount, names and telephone numbers.

In addition to bid price, the RCD will consider the bidder's qualifications and similar experience working in environmentally sensitive and wetland environments. Bidders should provide information about and references for relevant projects.

Job	Amount	Name	Phone Number
	\$		
	\$		
	\$		

I agree that this Bid shall be irrevocable. However, such Bid shall be automatically relieved upon execution of a contract for the project with another bidder. I make the above Bid and declare under penalty of perjury that the statements made in this Bid Proposal, including attachments, are true and correct. I acknowledge that I have read, understand,, and accept the terms and conditions contained in this bid packet in its entirety.

In conformance with the Business and Profession Code, Section 7028.15, the Contractor must state clearly his/her license number and expiration date.

Signature		Date
Printed Name of Contractor		
Address:		
Telephone:	License Number(s):	
Type of License(s):		
Expiration Date(s):		
Federal Tax Identification No.:		

# 2. LIST OF SUBCONTRACTORS

Contractor must set forth the name, address, phone number, type and cost of work, and license for each subcontractor who will perform work on or render services in any amount exceeding one-half of one percent (1/2%) of the total bid according to provisions of the California Public Contract Code §4100 through §4113.

Company Name:
Contact:
Address:
Phone Number:
Type of Work:
Cost of Work:
Required License:
Company Name:
Contact:
Address:
Phone Number:
Type of Work:
Cost of Work:
Required License:
Company Name:
Contact:
Address:
Phone Number:
Type of Work:
Cost of Work:
Required License:

### 2. NONCOLLUSION AFFIDAVIT

(Name of party bidding) , under penalty of perjury, deposes and says that he or she is the party making the foregoing bid and that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the San Mateo County Resource Conservation District of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive sham or bid.

Signature

Date

# **E.** Contract Documents

# **1. CONTRACT**

#### SAN MATEO COUNTY RESOURCE CONSERVATION DISTRICT PROFESSIONAL SERVICES AGREEMENT WITH [NAME OF CONTRACTOR]

THIS AGREEMENT ("Agreement"), made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2016 is by and between the SAN MATEO COUNTY RESOURCE CONSERVATIONDISTRICT, a subdivision of the State of California, hereinafter referred to as "RCD," and [CONTRACTOR NAME], hereinafter referred to as "CONTRACTOR."

#### WITNESSETH:

WHEREAS, [text here introducing need for project and background]; and

WHEREAS, RCD desires to use the professional services of CONTRACTOR; and

WHEREAS, CONTRACTOR has the professional and administrative ability to implement such services; and

**WHEREAS**, RCD and CONTRACTOR desire to set forth in writing the obligations and responsibilities of each party relating to the services;

**NOW, THEREFORE,** in consideration of the promises and mutual benefits which will accrue to the parties hereto in carrying out the terms of this Agreement, the parties agree as follows:

#### 1. Scope of Services

- a. CONTRACTOR will, in accordance with the terms of this Agreement, perform the services set forth in Exhibit A, **Pilarcitos Creek Watershed Rural Roads Sediment Reduction Project,** hereinafter referred to as "**PROJECT**", which is attached hereto and incorporated herein by reference.
- b. This Agreement is limited both in scope and duration, as herein specified.
- **2. Term of Agreement**. The term of this Agreement shall commence on [Date] and terminate on [Date], but shall not become effective until executed by the parties.
- **3. Performance Responsibilities.** Contractor shall complete the herein described services by no later than [Date] unless a later date is agreed upon by the parties in writing. Time is and shall be of the essence in the performance of the specified services by CONTRACTOR.

#### 4. Compensation.

a. RCD agrees to pay CONTRACTOR an amount not to exceed [Amount as text], (\$xxxxx.xx) for the successful and timely completion of the specified services.

- b. In the event that the funding on which the above described contract services relies is materially reduced or made unavailable, despite the parties understandings and expectations that no such disruptions will occur, this Agreement will terminate immediately upon notice of such funding disruption by RCD to CONTRACTOR.
- **5. Billing and Payment Procedure.** CONTRACTOR will submit requests for payment along with documentation acceptable to the RCD no more frequently than monthly and no less frequently than quarterly. RCD will issue payment to CONTRACTOR within 30 days of payment to the RCD by the project funder.
- 6. Payment and Performance Bonds. Contractor will provide the following surety bonds before commencement of the work:
  - **a.** Contractor will furnish a faithful performance bond in an amount equal to one hundred percent (100%) of the Contract Price specified in Section 4, above.
  - **b.** Contractor will furnish a separate payment bond in an amount equal to at least one hundred percent (100%) of the Contract Price specified in Section 4, above, as security for the payment of all persons for furnishing materials, provisions, or other supplies or items, used in, upon, for, or about the performance of the work contracted to be done, or for performing any work or labor thereon of any kind, and for the payment of amounts due under the Unemployment Insurance Code with respect to such work or labor in connection with this Contract.
  - **c.** Payment and Performance Bonds must be in the forms required by the RCD and must be issued by California-admitted sureties.
  - **d.** Contractor will promptly provide additional security required to protect the RCD and persons supplying labor or material under this Contract if any of the following occurs:
    - i. any surety upon any bond furnished with this Contract becomes unacceptable to the RCD for any material reason;
    - ii. any surety fails to furnish reports on its financial condition as required by the RCD; or
    - iii. the Contract Price is increased so that the penal sum of any bond becomes inadequate in the opinion of the RCD.
- **7. Cooperation.** RCD and CONTRACTOR agree to cooperate in any way and every way or manner on the PROJECT. RCD will immediately transmit to CONTRACTOR any new information which becomes available or any change in plans. CONTRACTOR will likewise bring any new information, issues or concerns to the RCD's attention as soon as practicable.
- **8.** Assignment. Without the written consent of RCD, this Agreement is not assignable by CONTRACTOR in whole or in part.

- **9.** Conflict of Interest. The CONTRACTOR shall comply with all applicable State laws and rules pertaining to conflicts of interest, including but not limited to, Government Code Section 1090 and Public Contract Code 10410 and 10411.
- **10. Applicable Laws.** All work performed on behalf of the RCD, as set forth in this Agreement shall be performed in accordance with all applicable state and federal laws, regulations, policies, procedures, and standards.
- 11. Wages. All work implemented by the RCD, a public agency, is considered a public work or public improvement project. As public projects, they are subject to prevailing wage and other requirements included in California Labor Code §1720 -1861. Contractors, and any subcontractor under them, shall pay not less than the specified prevailing rates of wages to all workers employed in the execution of the Contract. Prevailing wage determinations can be found at Department of Industrial Relations website.
- **12.** No Benefit To Arise For Local Employees. Except as provided by State law, no member, officer, or employee of RCD or its designees or agents, and no public official who exercises authority over or has responsibilities with respect to the Project during their tenure or for one (1) year thereafter, shall have any interest, direct or indirect, in any agreement or sub-agreement or the proceeds thereof, for work to be performed in connection with the services performed under this Agreement.
- **13. Independent Contractor Status.** The CONTRACTOR, and the officers, the agents and employees of the CONTRACTOR, in the performance of the Agreement, shall act in an independent capacity and not as officers, employees or agents of the RCD. Nothing in this Agreement is intended nor shall be construed to create an employer-employee relationship, a joint venture relationship.
- **14. Standard of Professionalism.** CONTRACTOR shall conduct all work consistent with professional standards for the industry and type of work being performed under this Agreement.
- **15. Ownership of Materials.** Except as otherwise expressly stated in Exhibit A, all materials and work products, including data collected for the Work produced as a result of this Agreement are the property of the RCD. Any final products distributed or produced will acknowledge the CONTRACTOR, RCD, and other Funding Agencies as reasonably requested by the RCD. The RCD shall be entitled to use and publish the work product and deliverables under this Agreement.
- **16. Indemnification.** To the fullest extent permitted by applicable law, Contractor agrees to defend, at Contractor's expense and with counsel acceptable to District, indemnify, and save and hold harmless District and all of its officers, directors, employees and agents, from and against any and all claims, suits, losses, causes of action, damages, liabilities, and expenses of any kind whatsoever arising out of the performance or nonperformance of the Contractor's Work, including without limitation, all expenses of litigation and/or arbitration, court costs, and attorneys' fees, arising on account of or in connection with injuries to or the death of any

person whomsoever, or any and all damages to property, regardless of possession or ownership, which injuries, death or damages arise from, or are in any manner connected with, the Work performed by or for the Contractor under this Agreement, or are caused in whole or part by reason of the acts or omissions or presence of the person or property of the Contractor or any of its employees, agents, representatives and or suppliers.

In addition, the Contractor shall indemnify and save harmless those public and private agencies ("grantors") which provided funds to RCD to complete this project, Coastside County Water District (CCWD) and L-3 Randtron, , and grantors' officers, agents and employees from any and all liabilities, claims, demands, damage or costs resulting from, growing out or, or in any way connected with or incident to this agreement, except for active negligence of such agency, it's officers, agents or employees. The duty of the Contractor to indemnify and save harmless includes the duty to defend as set forth in Civil Code Section 2778.

- **17. Insurance.** CONTRACTOR shall obtain and maintain for the duration of this Agreement, comprehensive general liability insurance and/or other insurance necessary to protect the parties hereto, and shall provide RCD with evidence thereof. CONTRACTOR shall have RCD and its project funders, Coastside County Water District (CCWD) and L-3 Randtron, named as an additional insured on its insurance policy, which shall have minimum coverage limits as specified in Section E of the Bid Package, as is incorporated herein by reference. CONTRACTOR's above described insurance shall serve as the primary insurance coverage for any claim arising from or relating to the services to be performed hereunder. The RCD nor the funder are responsible for any premiums or assessments on these policies.
- **18. Non-discrimination.** CONTRACTOR will not discriminate in employment practices or in the delivery of services on the basis of race, color, creed, national origin, sex, age, marital status or physical or mental handicap.
- **19.** Notices. Any notice required to be given pursuant to the terms and provisions of this Agreement shall be in writing and shall be sent first-class mail. Notice shall be deemed to be effective two (2) days after mailing to the following addresses:

To RCD:	Kellyx Nelson, Executive Director San Mateo County Resource Conservation District 625 Miramontes Street, Suite 103 Half Moon Bay, CA 94019
To CONTRACTOR:	[Name, title Organization/Agency Address 1 Address 2]

**20. Amendments and Integration.** This Agreement supersedes all previous agreements or understandings, and constitutes the entire understanding between the parties with respect to the

above referenced services, terms of compensation, and otherwise. This Agreement shall not be amended, except in a writing that is executed by authorized representatives of both parties.

**21. Termination.** This Agreement may be terminated for any of the following reasons:

- a. If CONTRACTOR fails to perform the services hereunder agreed to the satisfaction of RCD, or otherwise fails to fulfill its obligations under this Agreement, immediately upon written notice from RCD; and
- b. Upon notice from RCD to CONTRACTOR that the funding on which this Agreement is based has been materially disrupted or discontinued.

**IN WITNESS WHEREFORE,** the parties agree to the foregoing terms and conditions and hereby enter into this Agreement.

Date:	 By:	
	-	[Signatory Name, Title
		Contractor Name]
Date:	By:	
	 5	Kellyx Nelson, Executive Director
		San Mateo County Resource Conservation District

### **3. MATERIAL AND LABOR BOND**

#### **PROJECT: Pilarcitos Creek Watershed Rural Roads Sediment Reduction Project**

This Material and Labor Bond is tendered to RCD, (herein "RCD" or "Owner") in conjunction with the **Pilarcitos Creek Watershed Rural Roads Sediment Reduction Project** and Contract for the RCD.

We, the Principal:

a Surety Corporation, organized and existing under and by virtues of the laws of the State of and duly authorized to transact business within the State of California a surety, are held and firmly bound unto the RCD, for the use and benefit of itself and any and all persons, companies, or corporations who perform work or labor or furnish materials, provisions, or other supplies used in, upon, for or about the performance of the above-described work, or who rent or lease persons or machinery for said work to be done, in the sum of \_\_\_\_\_\_

(\$\_\_\_\_\_) in lawful money of the United States of America, to be paid to such persons, companies or corporations, for which payment, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The RCD has awarded Principal a contract for the above-described project and the Principal is required by the terms of the contract to furnish a bond for material men and laborers involved in the Project; and thus, if said Principal, or any subcontractor or contractors, fail to pay for any materials, provisions, provender, or other supplies, or persons or machinery's used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind or for amounts due under the Unemployment Insurance Act with respect to such work or labor, the Surety will pay the same up to an amount not exceeding the sum specified in this bond and in case suit is brought upon this bond, additional, reasonable attorneys' fees to be fixed by the court. This bond shall inure to the benefit of any and all persons entitled to file claims under California Civil Code Section 3181, so as to give a right of action to such persons or his assigns in any suit brought upon this bond.

As part of the obligations secured hereby and in addition to the face amount specified above, there shall be included, in addition to the aforesaid bond sum, costs and reasonable expenses and fees, including attorneys' and paralegal fees, incurred by the RCD in successfully enforcing the obligations undertaken herein by the Principal and/or Surety, all be taxed as costs and included in any judgment rendered thereon.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Project or work to be performed hereunder, or the specifications and drawings that accompany same, shall in any way affect its obligations on this bond; and it does hereby waive notice of any such change, extension of time, alterations or addition to the terms of the Contract, to the work or Project, or to the drawings and specifications.

Whenever the Principal shall be, and declared by the RCD to be in default under the above Agreement, the Surety shall promptly remedy the default, or shall promptly pay the amount of the bond herein.

For the satisfactory completion of this Project and the Contract hereunder, the above obligations shall hold good for a period of one (1) year after the completion of the Project and its acceptance by the RCD, during which time if Principal shall fail to make full, complete and satisfactory repair and replacements and totally protect the RCD from loss or damage made evident during the period of one (1) year from the date of acceptance of the work and resulting from or caused by the defective materials or faulty workmanship, the above obligations shall remain in full force and effect. The obligation of the Surety hereunder shall continue so long as any obligation of the Principal remains.

IN WITNESS WHEREOF, this Material and Labor Bond is duly executed by the Principal and Surety above-named on

Date:			
By Principal:			
Signature		Name & Title	
	Bond No:		-
	Bond Type:		-
	Bond Amount:		-
Address:			_
Telephone:			
Principal:			
	Bond Type:		
	Bond No:		-
	Bond Amount:		-

#### 4. PERFORMANCE BOND

#### **PROJECT: Pilarcitos Creek Watershed Rural Roads Sediment Reduction Project**

This Performance Bond is tendered to the San Mateo County Resource Conservation District (herein "RCD") Coastside County Water District (CCWD) and L-3 Randtron, in conjunction with the **Pilarcitos Creek Watershed Rural Roads Sediment Reduction Project** and Contract for the RCD.

We, the Principal \_\_\_\_\_

a Surety Corporation, organizing existing under and by virtue of the laws of the State of \_\_\_\_\_\_, and duly authorized to transact business within the State of California as a surety, are held and firmly bound unto RCD in the sum of

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

lawful money of the United States of America, for the payment of which sum we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above-bound Principal, his or its heirs, executors, administrators, successors or assigns shall abide by, keep and perform the covenants, conditions, requirements, obligations, and provisions of the previously described Project and/or Contract, any alterations thereof, or any regulations or laws pertaining thereto on his or their part to be kept and performed at the time in the manner therein specified and if they also indemnify and hold the RCD, its officers, agents, employees harmless from all liability, costs, losses, expenses, and attorneys' fees thereon, then this obligation shall become null and void; but otherwise, it shall be and remain in full force and effect.

As a part of the obligations secured hereby, and in addition to the face amount specified above, there shall be included, in addition to the aforesaid bond sum, costs and reasonable expenses and fees, including attorneys' and paralegal fees, incurred by the RCD in successfully enforcing the obligations undertaken herein by the Principal and/or Surety, all be taxed as costs and included an any judgment rendered thereon.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Project or work to be performed hereunder, or the specifications and drawings that accompany same, shall in any way affect its obligations on this bond; and it does hereby waive notice of any such change, extension of time, alterations or addition to the terms of the Contract, to the work or Project, or to the drawings and specifications

Whenever the Principal shall be, and declared by the RCD to be in default under the above agreement, the Surety shall promptly remedy the default, or shall promptly pay the amount of the bond herein.

For the satisfactory completion of this Project and the Contract hereunder, the above obligations shall hold good for a period of one (1) year after the completion of the Project and its acceptance by the RCD, during which time if Principal shall fail to make full, complete and satisfactory repair and replacements and totally protect the RCD from loss or damage made evident during the period of one (1) year from the date of acceptance of the work and resulting from or caused by defective materials or faulty workmanship, the above obligations shall remain in full force and effect. The obligation of the Surety hereunder shall continue so long as any obligation of the Principal remains.

IN WITNESS WHEREOF, this Performance Bond is duly executed by the Principal and Surety above-named on

NAME OF INDIVIDUAL/CORPORATION	NAME OF CORPORATION
SIGNATURE	SIGNATURE
TYPE NAME AND TITLE	TYPE NAME AND TITLE
ADDRESS	ADDRESS
CITY, STATE, ZIP	CITY, STATE, ZIP
TELEPHONE	TELEPHONE

# **5. CERTIFICATE OF COMPLIANCE**

#### TO: SAN MATEO COUNTY RESOURCE CONSERVATION DISTRCT

# PROJECT: Pilarcitos Creek Watershed Rural Roads Sediment Reduction Project

This is to certify that all requirements for insurance of subcontractors as specified have been met.

[Contractor]Business name

By representative

Dated

(Please return this completed form with your Bonds and Certificates of Insurance.)

# 6. INSURANCE REQUIREMENTS FOR CONTRACTORS

#### **PROJECT:** Pilarcitos Creek Watershed Rural Roads Sediment Reduction Project

Contractors engaged by RCD shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the Contractor's bid.

#### Minimum Scope of Insurance

Coverage shall be at least as broad as:

- 1. Insurance Services Office Commercial General Liability coverage (occurrence form CG 0001).
- 2. Insurance Services Office form number CA 0001 (Ed. 1/87) covering Automobile Liability, code 1 (any auto).
- 3. Workers' Compensation insurance as required by the State of California and Employer's Liability insurance.

#### Minimum Limits of Insurance

Contractor shall maintain limits to no less than:

- 1. General Liability: \$1,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
- 2. Automobile Liability: \$1,000,000 per accident for bodily injury and property damage.
- 3. Employers Liability: \$1,000,000 per accident for bodily injury or disease.

#### **Deductibles and Self-Insured Retentions**

Any deductibles or self-insured retentions must be declared to and approved by the RCD. At the option of the RCD, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the RCD and its grantors, their officials, employees, agents, ; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

#### Other Insurance Provisions

The general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

- RCD Coastside County Water District (CCWD) and L-3 Randtron, and their respective
  officers, agents, and employees, to be covered as insureds as respects liability arising out of
  activities performed by or on behalf of the Contractor; products and completed operations of
  the Contractor; premises owned, occupied or used by the Contractor; or automobiles owned,
  leased, hired or borrowed by the Contractor. The coverage shall contain no special
  limitations on the scope of protection afforded to the RCD and the named insured parties,
  their officers, officials, employees, or agents.
- 2. For any claims related to this project, the Contractor's insurance coverage shall be primary insurance as respects the RCD and named insured parties. Any insurance or self-insurance maintained by the RCD or its officers, officials, employees, agents or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
- 3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to the RCD.
- 4. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
- 5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' written notice by certified mail, return receipt requested, has been given to the RCD.

#### Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII.

#### Verification of Coverage

Contractor shall furnish the RCD with original endorsements effecting coverage required by this clause. The endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. The endorsements are to be on forms provided by the RCD. All endorsements are to be received and approved by the RCD before work commences. As an alternative to the RCD's forms, the Contractors insurer may provide complete, certified copies of all required insurance policies, including endorsements affecting the coverage required by these specifications.

#### **Subcontractors**

Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

# 7. GENERAL LIABILITY SPECIAL ENDORSEMENT FOR RCD

ENDORSEMENT NO.

PLEASE SUBMIT IN DUPLICATE

ISSUE DATE (MM DD YY)

PRODUCER

NAME INSURED

Telephone

POLICY INFORMATION: Insurance Company: Policy No. Policy Period (from) LOSS ADJUSTMENT EXPENSE:

(to) Included in Limits In Addition to Limits

\_\_\_\_Deductible (check which) \_\_\_\_Self-Insured Retention of \$ with and Aggregate of \$ \_\_\_\_\_applies to coverage. \_\_\_\_Per Occurrence \_\_\_\_Per Claim which

APPLICABILITY. This insurance pertains to the operations, products and/or tenancy of the name insured under all written agreements and permits in force with the RCD unless checked here \_\_\_\_\_ in which case only the following specific agreements and permits with the RCD are covered:

RCD AGREEMENTS/PERMITS

# **TYPE OF INSURANCE**

# GENERAL LIABILITY

 Commercial General Liability	 Claims Made
 Comprehensive General Liability	 Retroactive Date
 Owners Contractors Protective	 Occurrence

Note: The RCD requires occurrence coverage. Claims made coverage requires special approval.

#### OTHER PROVISIONS

# COVERAGES

#### LIABILITY LIMITS IN THOUSANDS EACH OCCURRENCE AGGREGATE

	GENE	ERAL			
	PRODUCTS COMPLETED OPERATIONS				
	PERSONAL ADVERTISING INJURY				
	FIRE	DAMAGE			
CLAIM	S:	Underwriter's representative for claims pursuant to this insurance	e.		
Name:					
Address	:				
Telepho	ne:				

In consideration of the premium charged and notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any endorsement now or hereafter attached thereto, it is agreed as follows:

- 1. <u>INSURED</u>. RCD, and Coastside County Water District (CCWD) and L-3 Randtron, and their respective officers, agents, and employees, are included as insureds with regard to liability and defense of suits arising from the operations, products and activities performed by or on behalf of the named insured.
- 2. <u>CONTRIBUTION NOT REQUIRED</u>. As respects: (a) work performed by the Named insured for or on behalf of the RCD; or (b) products sold by the named Insured to the RCD; or (c) premises leased by the Named Insured from the RCD, the insurance afforded by this policy shall be primary insurance as respects the RCD; or stand in an unbroken chain of coverage excess of the Named Insured's scheduled underlying primary coverage. In either event, any other insurance maintained by the RCD, its officers, officials, employees and agents, shall be in excess of this insurance and shall not contribute with it.
- 3. <u>SEVERABILITY OF INTEREST</u>. This insurance applies separately to each insured against whom claim is made or suit is brought except with respect to the company's limits of liability. The inclusion of any person or organization as an insured shall not affect any right which such person or organization would have as a claimant if not so included.
- 4. <u>CANCELLATION NOTICE</u>. With respect to the interests of the RCD, this insurance shall not be canceled or materially reduced in coverage or in limits except after thirty (30) days prior written notice by receipt delivery has been given to the RCD.

- 5. <u>PROVISIONS REGARDING THE INSURED'S DUTIES</u>. Any failure to comply with reporting provisions of the policy or breaches or violations of warranties shall not affect coverage provided to the RCD, their officers, officials, employees and agents.
- 6. <u>SCOPE OF COVERAGE</u>. This policy, if primary, affords coverage at least as broad as:
  - (1)Insurance Services Office Commercial General Liability Coverage, "occurrence" form number CG 0001; or
  - (2) If excess, affords coverage which is at least as broad as the primary insurance form CG 0001.
- 7. <u>CANCELLATION NOTICE</u>. The insurance afforded by this policy shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the RCD. Such notice shall be addressed to the endorsement holder.

Except as stated above, nothing herein shall be held to waive, alter or extend any of the limits conditions, agreements or exclusions of the policy to which this endorsement is attached.

# **PROJECT: Pilarcitos Creek Watershed Rural Roads Sediment Reduction Project**

#### **ENDORSEMENT HOLDER**

Attn: Kellyx Nelson, Executive Director San Mateo County Resource Conservation District 625 Miramontes Street, Suite 103 Half Moon Bay, CA 94019 Telephone: (650) 712-7765

AUTHORIZED REPRESENTATIVE

\_\_\_\_Broker/Agent

I, \_\_\_\_\_ (print/type name), warrant that I have authority to bind the abovementioned insurance company and by my signature hereon do so bind this company to this endorsement.

Telephone: (_	)	Date Signed
---------------	---	-------------

# 8. AUTOMOBILE LIABILITY SPECIAL ENDORSEMENT FOR RCD

PLEASE SUBMIT IN DUPLICATE

ISSUE DATE (MM DD YY)

ENDORSEMENT NO.

ISSUE DATE (MM DD YY)

PRODUCER

NAMED INSURED

Telephone

POLICY INFORMATION: Insurance Company: Policy No: Policy Period (from) (to)

LOSS ADJUSTMENT EXPENSE \_\_\_\_\_Included in Limits \_\_\_\_\_In addition to Limits

\_\_\_\_Deductible (check which) \_\_\_\_Self-Insured Retention of \$\_\_\_\_\_

APPLICABILITY. This insurance pertains to the operations, products and/or tenancy of the name insured under all written agreements and permits in force with the RCD unless checked here \_\_\_\_\_ in which case only the following specific agreements and permits with the RCD are covered:

RCD AGREEMENTS/PERMITS

# **TYPE OF INSURANCE**

Commercial Auto Policy
Business Auto Policy
Other

#### OTHER PROVISIONS

### LIMIT OF LIABILITY

<u>\$</u>\_\_\_\_\_ per accident, for bodily injury and property damage.

CLAIMS: Underwriter's representative for claims pursuant to this insurance.

Name:		 	 
Address:	<u> </u>	 	 
Telephone:			

In consideration of the premium charged and notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any endorsement now or hereafter attached thereto, it is agreed as follows:

- 1. <u>INSURED</u>. RCD, and Coastside County Water District (CCWD) and L-3 Randtronand their respective officers, agents, and employees, are included as insureds with regard to liability and defense of suits arising from the operations and activities performed by or on behalf of the named insured.
- 2. <u>CONTRIBUTION NOT REQUIRED</u>. As respects: (a) work performed by the Named Insured for or on behalf of the RCD; or (b) products sold by the Named Insured to the RCD; or (c) premises leased by the Named Insured from the RCD, the insurance afforded by this policy shall be primary insurance as respects the RCD, their officers, officials, employees or agents; or stand in an unbroken chain of coverage excess of the Named Insured's scheduled underlying primary coverage. In either event, any other insurance maintained by the RCD or the State of California, their officers, officials, employees or agents, shall be in excess of this insurance and shall not contribute with it.
- 3. <u>SEVERABILITY OF INTEREST</u>. This insurance applies separately to each insured against whom claim is made or suit is brought except with respect to the company's limits of liability. The inclusion of any person or organization as an insured shall not affect any right which such person or organization would have as a claimant if not so included.
- 4. <u>CANCELLATION NOTICE</u>. With respect to the interests of the RCD, this insurance shall not be canceled or materially reduced in coverage or in limits except after thirty (30) days prior written notice by receipt delivery has been given to the RCD.
- 5. <u>PROVISIONS REGARDING THE INSURED'S DUTIES</u>. Any failure to comply with reporting provisions of the policy or breaches or violations of warranties shall not affect coverage provided to the RCD, their officers, officials, employees or agents.

- 6. <u>SCOPE OF COVERAGE</u>. This policy, if primary, affords coverage at least as broad as:
  - (1) Insurance Services Office form number CA 0001 (Ed. 1/87), Code 1 ("any auto"); or
  - (2) If excess, affords coverage which is at least as broad as the primary insurance forms referenced in the preceding section (1).
- 7. <u>CANCELLATION NOTICE</u>. The insurance afforded by this policy shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested has been given to the RCD. Such notice shall be addressed to the endorsement holder.

Except as stated above nothing herein shall be held to waive, alter or extend any of the limits conditions, agreements or exclusions of the policy to which this endorsement is attached.

#### **ENDORSEMENT HOLDER**

San Mateo County Resource Conservation District 625 Miramontes Avenue, Suite 103 Half Moon Bay, CA 94019 Attn: Kellyx Nelson, RCD Executive Director Telephone: (650) 712-7765

Broker/Agent \_\_\_\_\_Underwriter \_\_\_\_\_

I, \_\_\_\_\_\_- print/type name), warrant that I have authority to bind the above-mentioned insurance company and by my signature hereon do so bind this company to this endorsement.

Signature \_\_\_\_\_

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

#### RE: Pilarcitos Creek Watershed Rural Roads Sediment Reduction Project

# 9. WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY SPECIAL ENDORSEMENT FOR RCD

#### PLEASE SUBMIT IN DUPLICATE

#### ENDORSEMENT NO.

#### ISSUE DATE (MM DD YY)

#### PRODUCER

NAMED INSURED

Telephone

POLICY INFORMATION:	
Insurance Company:	
Policy No:	
Policy Period (from)	(to)

#### OTHER PROVISIONS

CLAIMS: Underwriter's representative for claims pursuant to this insurance.

Name:	 	 	
Address:			

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

\$\_\_\_\_\_\_ (Each Accident)
\$\_\_\_\_\_\_ (Disease - Policy Limit)
\$\_\_\_\_\_\_ (Disease - Each Employee)

In consideration of the premium charged and notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any endorsement now or hereafter attached thereto, it is agreed a follows:

1. <u>CANCELLATION NOTICE</u>. With respect to the interests of the RCD, Coastside County Water District (CCWD) and L-3 Randtron, this insurance shall not be canceled or materially
reduced in coverage or in limits except after thirty (30) days prior written notice by receipt delivery has been given to the RCD.

2. <u>WAIVER OF SUBROGATION</u>. The Insurance Company agrees to waive all rights of subrogation against the Entity and their officers, officials, employees or agents for losses paid under the terms of this policy which arise from the work performed by the Named Insured for the Entity.

Except as stated above, nothing herein shall be held to waive, alter or extend any of the limits conditions, agreements or exclusions of the policy to which this endorsement is attached.

#### **ENDORSEMENT HOLDER**

San Mateo County Resource Conservation District Attn: Kellyx Nelson, Executive Director 625 Miramontes Street, Suite 103 Half Moon Bay, CA 94019

#### AUTHORIZED REPRESENTATIVE

Broker/Agent Underwriter \_\_\_\_\_

I, \_\_\_\_\_(print/type name), warrant that I have authority to bind the abovementioned insurance company and by my signature hereon do so bind this company to this endorsement.

Signature \_\_\_\_\_

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

Date Signed \_\_\_\_\_

END OF CONTRACT DOCUMENTS

## F. Attachments

### Permits

Permits for the Pilarcitos Creek Watershed Rural Roads Improvement Project in Half Moon Bay, CA can be found at the following link.

http://www.sanmateorcd.org/pilarcitos-roads-project-permits/

## Appendix A

### Road logs of proposed treatments

## Pilarcitos Creek Watershed Rural Roads Sediment Reduction Project San Mateo County, California.

Table #	Road name/item
A1	Pilarcitos Creek Road-North
A2 Pilarcitos Creek Road-South	
A3	Transmitter Road
A4	Cell Tower Road
A5	Material summary and specifications
A6	Material summary by road group
A7 Exclusion fencing permit requirement	

### Prepared for San Mateo County Resource Conservation District

#### **Certification and Limitations**

These Draft road logs of treatments for the *Pilarcitos Creek Watershed Road Improvement Project* was prepared under the direction of a licensed professional geologist at PWA, and all information herein is based on data and information collected by PWA staff. Sediment-source inventory and analysis for the project, as well as erosion control treatment prescription recommendations, were similarly conducted by or under the responsible charge of a California licensed professional at PWA.

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

The recommendations included in this design package are professional opinions derived in accordance with current standards of professional practice, and are valid as of the submittal date. No other warranty, expressed or implied, is made. PWA is not responsible for changes in the conditions of the property with the passage of time, whether due to natural processes or to the works of man, or changing conditions on adjacent areas. Furthermore, to ensure proper applicability to existing conditions, the information and recommendations contained in this design package shall be reevaluated after a period of no more than 3 years, and it is the responsibility of the landowner to ensure that no recommendations are inappropriately applied to conditions on the property that have changed since the recommendations were developed. Finally, PWA is not responsible for changes in applicable or appropriate standards beyond our control, such as those arising from changes in legislation or the broadening of knowledge, which may invalidate any of our findings.

Certified by:

Tara Zuroweste, California Professional Geologist #8418 Pacific Watershed Associates Inc.



# Table A1. <u>Pilarcitos Creek Road-North (upgrade)</u>: road log of treatments. Pilarcitos Creek Watershed Road Improvement Project, San Mateo County, California.

<b>Abbreviations</b> $SOS = Start$ of survey (road log); $RSP = Install$ rock slope protection; Left or Right = Determined when looking downstream or downslope; $yd^3 = Cubic$ yards; $EOS = End$ of survey/road log.								
Distance on road (feet)	PWA site #	Road treatment	Site / treatment description	Culvert	Rock			
Road descri rock-surface. Road from th and Transmi vehicle route allow large the road available construction. following the outlined in b	<b>Road description and general treatment notes:</b> Pilarcitos Creek Road (previously called CCWD Access Road) is a year-round use, rock-surfaced road that extends from a locked gate at the property boundary with Santa's Tree Farm. Additional access via Cell Tower Road from the cemetery along the ridge. The project sites are located in the general vicinity of the two other project roads, Cell Tower and Transmitter Road. Pilarcitos Creek Road is flat to gently sloped ( $\leq$ 5% in grade) through the majority of its length and the main vehicle route to CCWD utilities. Pilarcitos Creek Road–North includes 3 sites of bank erosion to be treated. All completed work must allow large trucks and trailers to pass year-round. Final grading and road rock will be rolled to ensure proper compaction and make road available for immediate use. Any exposed soil areas adjacent to streams will need to be seeded and straw mulched post construction. Road shall maintain a minimum 10'-12' wide driving surface post construction. All treatments shall be installed following the PWA construction typical drawings (Appendix B) unless noted in this road log and follow all permit requirements outlined in bid documents.							
0+00		SOS	Start of survey (road log) for Pilarcitos Creek Road construction road log at large bay tree on cutbank approximately 0.93 mi from the locked gate at property boundary.					
0+15		Start RSP 1	Edge of riprap for Site 148.					
0+35	148		<ul> <li>Bank erosion site at 160° outside bend on Pilarcitos Creek. Install rock slope protection along 40'of left streambank.</li> <li>1. Dewater and electro-fish site (coordinate with PWA, RCD, and DFW for dewater location and fish removal).</li> <li>2. Layback a 40' wide length of 10' tall near vertical left bank to a 0.75:1 slope angle (no more than 3' in from the edge of the road).</li> <li>3. Dig 2' deep x 2' wide keyway into bed of stream and along the 40' long 0:75:1 left bank.</li> <li>4. Import 35 yd<sup>3</sup> of angular 2'-3' diameter boulders and place first course of largest boulders in streambed keyway edge to edge along the 40' long keyway (minimize void spaces), and stack remaining boulders on each subsequent course up the streambank in the keyway being sure to interlock each adjacent boulder to each other.</li> <li>5. Lay geofabric over the top course and backfill up to the current road surface with 10 yd<sup>3</sup> of 3" clean angular drain rock.</li> <li>6. Widen inside edge of road 2' by removing accumulated talus and/or colluvium from base of hillslope along cutbank.</li> <li>7. Rerock road with 10 yd<sup>3</sup> of 1.5" clean road rock.</li> </ul>		35 yd <sup>3</sup> 2'-3' angular riprap 10 yd <sup>3</sup> 3" clean angular drain rock 10 yd <sup>3</sup> 1.5" clean road rock			
0+55		End RSP 1	Edge of riprap for Site 148 (downstream end).					
0+95		Start RSP 2	Edge of riprap for Site 147.					

# Table A1. <u>Pilarcitos Creek Road-North (upgrade)</u>: road log of treatments. Pilarcitos Creek Watershed Road Improvement Project, San Mateo County, California.

**Abbreviations** SOS = Start of survey (road log); RSP = Install rock slope protection; Left or Right = Determined when looking downstream or downslope;  $yd^3$  = Cubic yards; EOS = End of survey/road log.

Distance on road (feet)	PWA site #	Road treatment	Site / treatment description	Culvert	Rock
1+10	147		<ul> <li>Bank erosion site on outside of broad 30° bend in</li> <li>Pilarcitos Creek. Install rock slope protection along 35' of left streambank.</li> <li>1. Dewater and electro-fish site (coordinate with PWA, RCD, and DFW for dewater location and fish removal).</li> <li>2. Remove riprap (~5yd<sup>3</sup>) along left bank from previous repair efforts and store for use.</li> <li>3. Layback a 35' wide length of 12' tall near vertical left bank to a 0.75:1 slope angle (no more than 3' in from the edge of the road).</li> <li>4. Dig 2' deep x 2' wide keyway into bed of stream and along the 35' long 0:75:1 left bank.</li> <li>5. Import 30 yd<sup>3</sup> of 2'-3' angular diameter boulders and place 1<sup>st</sup> course of largest boulders in streambed keyway edge to edge along the 35' long keyway (minimize void spaces), and stack remaining boulders on each subsequent course up the streambank in the keyway being sure to interlock each adjacent boulder to each other. Use onsite riprap (~5yd<sup>3</sup>) to help fill keyway.</li> <li>6. Lay geofabric over the top course and backfill up to the current road surface with 10 yd<sup>3</sup> of 3'' clean angular drain rock.</li> <li>7. If needed, widen inside edge of road 2' by removing accumulated talus and/or colluvium from base of hillslope/cutbank.</li> <li>8. Rerock road with 10 yd<sup>3</sup> of 1.5'' clean road rock.</li> </ul>		35 yd <sup>3</sup> 2'-3' riprap (import 30 yd <sup>3</sup> / 5 yd <sup>3</sup> on-site) 10 yd <sup>3</sup> 3" clean angular drain rock 10 yd <sup>3</sup> 1.5" clean road rock
1+30		End RSP 2	Edge of riprap for Site 147 (downstream end).		
4+35			At gate on the left for Cell Tower Road.		
6+00			At main stem Pilarcitos Creek Road crossing		
9+30	143	EOS	Minor bank erosion location at outside of 35° bend in Pilarcitos Creek. There is a 1' diameter waterline with 1/3 <sup>rd</sup> exposed at midpoint of 40° angle fillslope. Bedrock exposed in 9' tall cutbank and likely underlying the inner 2/3 <sup>rd</sup> of road. 1. Install a bioengineer bank stabilization structure 20' wide x 9' long utilizing (2) 20' long x 6" diameter rolls of live willow fascines placed on contour starting at water's edge above base of alder tree with second row 4' upslope of first row. Stake every 2' onto fillslope with 1" diameter x 2' long willow cuttings. Mulch the remainder of the slope area. Willow cuttings should be harvested nearby and soaked for a minimum of 3 days prior to installation (see attached instructions in Appendix B).		

Table A2. <u>Pilarcitos Creek Road-South (upgrade)</u>: road log of treatments. Pilarcitos Creek Watershed Road Improvement Project, San Mateo County, California.

**Abbreviations** SOS = Start of survey (road log); DRC = Ditch relief culvert; Left or Right = Determined when looking downstream or downslope; CMP = Corrugated metal pipe;  $yd^3 = Cubic yards$ ; EOS = End of survey/road log.

Distance on road	PWA site #	Road treatment	Site / treatment description	Culvert	Rock
(feet)	SILC T	ti catiliciti			

**Road description and general treatment notes:** Pilarcitos Creek Road (previously called CCWD Access Road) is a year-round use, rock-surfaced road that extends from a locked gate at the property boundary with Santa's Tree Farm. Additional access via Cell Tower Road from the cemetery along the ridge. The project sites are located in the general vicinity of the two other project roads, Cell Tower and Transmitter Road. Pilarcitos Creek Road is flat to gently sloped ( $\leq$ 5% in grade) through the majority of its length and the main vehicle route to CCWD utilities. Pilarcitos Creek Road–South includes 2 culvert replacements/installations located near Transmitter Road. All completed work must allow large trucks and trailers to pass year-round. Final grading and road rock will be rolled to ensure proper compaction and make road available for immediate use. Any exposed soil areas adjacent to streams will need to be seeded and straw mulched post construction. Road shall maintain a minimum 10'-12' wide driving surface post construction. All treatments shall be installed following the PWA construction typical drawings (Appendix B) unless noted in this road log and follow all permit requirements outlined in bid documents.

0+00		SOS	Start of survey (road log) for Pilarcitos Creek Road-South at Site 143 (bank erosion)		
5+25	142	DRC 2/ SB 1	<ul> <li>Existing 12" ditch relief culvert (at intersection with Transmitter Road).</li> <li>1. Remove old ditch relief culvert, and install an 18" x 30' long CMP (move inlet 5' down road to the south and raise inlet 1' up from current elevation and keep the same outlet location).</li> <li>2. Deepen area beyond outlet 1' wide x 10' long and dig a 2' wide x 4'deep sediment basin at the end of deepened basin (periodic cleaning of sediment basin will be needed).</li> <li>3. Spoil locally along road at rolling dip locations.</li> <li>4. Rerock road with 10 yd<sup>3</sup> of 1.5" clean road rock.</li> </ul>	18" x 30', 1 coupler	10 yd <sup>3</sup> 1.5" clean road rock
7+60	141.1		At wet swale location below site 142.1 on Transmitter Road and 25' down road from utility pole on Pilarcitos Creek Road. 1. Install a new 24" x 20'long CMP at 10% grade with inlet in ditch and outlet 5' above right edge of channel of Pilarcitos Creek. 2. Define 2' wide x 2' deep inboard ditch for 25' on either side of inlet to insure we capture upslope swale flow at new corrugated metal pipe inlet. 3. Rerock road with 10 yd <sup>3</sup> of 1.5" clean road rock.	24" x 20'	10 yd <sup>3</sup> 1.5" clean road rock
		EOS	End of survey (road log) for Pilarcitos Creek Road-South at Site 141.1.		

13+15

14 + 70

RD 42

RD 43

10%).

#### Table A3. Transmitter Road (upgrade): road log of treatments. Pilarcitos Creek Watershed Road Improvement Project, San Mateo County, California.

Abbreviations SOS = Start of survey (road log); RD = Install rolling; OSR-FD = Outslope the road and fill any ditch; BB = berm breach; TOP = Top limit of excavation; BOT = Bottom limit of excavation; DRC = Ditch relief culvert; Left or Right = Determined when looking downstream or downslope; CMP = Corrugated metal pipe;  $yd^3 = Cubic yards$ ; CD = Critical dip; RG = existing roadade EOC 

	= End of st	irvey/road log.			
on road (feet)	PWA site #	Road treatment	Site / treatment description	Culvert	Rock
Road descri for 2,550' (0 completed w width where shall maintai construction documents.	<b>ption and</b> .48 mi). It rork must a possible. <i>A</i> in a minimu typical dra	general treatm is extremely ste llow large 4-wh Any exposed soi um 10' wide dri uwings (Append	<b>tent notes:</b> Transmitter Road extends from Pilarcitos Creek Road ep through most of its length and the sole vehicle access to transmieel-drive truck access during dry weather. At all hairpins, flatten a l area adjacent to streams will need to be seeded and straw mulcher ving surface post construction. All treatments shall be installed fol ix B) unless noted in this road log and follow all permit requirements.	at a locked gate itter at the top of and widen road ed post construc llowing the PW. ents outlined in l	near Site 142 of the hill. All to double tion. Road A bid
		SOS	Start Transmitter Road construction road log at the top of road along the east end of the landing.		
0+00		OSR-FD-2	Start outslope road and fill ditch; Outslope the road by re- grading the road surface, lowering the outer ½ of the road and compacting the material into any inboard ditch and the inner ½ of the road tread, resulting in a 6% outslope. Keep berms for safety but breach as noted in BB-1.		
2+00		RD 40	Install a Type II rolling dip, drain to the left and breach berm 10' wide and 5' long (RG= 10%).		
3+20		RD 41	Install a Type II rolling dip, drain to the left and breach berm 10' wide and 5' long (RG= 12%).		1
3+60		Start BB-1	Start berm breaches: Every 30' (approximate) excavate 3'wide (minimum) opening in the berm to allow road to drain (no more than 73 breaches). Use the excavated material to aid in road surface outsloping. Note: Specific berm breach locations to be flagged by PWA prior to implementation.		
			Start of very steep (40%+) section.		
10+30	142.9		Ditch relief culvert; pipe mostly plugged with greatly diminished functionality. 1. Plug pipe at the site and continue outsloping/berm breaches through the site.		
12+25	142.8		Potentially unstable fill material located on the outside bend in the road. 1. Excavate approximately 25' wide x 5' deep (average) x 12' long (limits of excavation to be flagged by PWA prior to implementation). Use excavated spoils to aid in outsloping.		
12+65	142.7		Ditch relief culvert; pipe mostly plugged with greatly diminished functionality. 1. Plug pipe at the site and continue outsloping/berm breaches through the site.		
12   15		DD 42	Install a Type II rolling dip, drain to the lower side and		1

At low berm install a Type II rolling dip, drain to the

lower side and breach berm 5' wide and 5' long (RG=

breach berm 5' wide and 5' long (RG= 10%).

**Abbreviations** SOS = Start of survey (road log); RD = Install rolling; OSR-FD = Outslope the road and fill any ditch; BB = berm breach; TOP = Top limit of excavation; BOT = Bottom limit of excavation; DRC = Ditch relief culvert; Left or Right = Determined when looking downstream or downslope; CMP = Corrugated metal pipe;  $yd^3$  = Cubic yards; CD = Critical dip; RG = existing road grade; EOS = End of survey/road log.

Distance on road (feet)	PWA site #	Road treatment	Site / treatment description	Culvert	Rock
15+80		RD 44	Install a Type I rolling dip (RG = 17%).		
17+40	142.5		<ul> <li>Road surface/ditch discharge point at hairpin turn in road.</li> <li>1. Continue outsloping/berm breaches through this location.</li> <li>2. Route road onto landing area to lessen grade and widen driving surface through the turn.</li> </ul>		
19+80	142.4		<ul> <li>Road surface/ditch discharge point at hairpin turn in road.</li> <li>1. Continue outsloping/berm breaches through this location.</li> <li>2. Route road onto landing area to lessen grade and widen driving surface through the turn.</li> </ul>		
20+65			At hairpin, route road onto landing area to lessen grade and widen driving surface through the turn.		
21+25	142.2		<ul> <li>Road surface/ditch discharge point at hairpin turn in road and perched, potentially unstable roadfill from past grading activities stockpiled along outboard edge.</li> <li>1. Continue outsloping/berm breaches through this location.</li> <li>2. Route road onto landing area to lessen grade through hairpin turn.</li> <li>3. Excavate unstable fill material from outboard edge of road approximately 20' wide x 5 deep x 15' long.</li> <li>4. Work spoils into road surface to aid in outslope.</li> </ul>		
21+50		RD 45	Construct a Type III rolling dip: Any inboard ditch is filled and compacted and the dip reverses grade for proper drainage; berm pulled at OBR (essentially outsloping the road for the duration of the dip, 50'-70'); brush and lower tree limbs removed, work completed around larger trees. (RG=15%).		
22+10			Start major cutbank spring-do not disturb ditch for its entire length to Site 142.1		
22+50		RD 46	Construct a Type I rolling dip to drain road only (RG=14%).		

**Abbreviations** SOS = Start of survey (road log); RD = Install rolling; OSR-FD = Outslope the road and fill any ditch; BB = berm breach; TOP = Top limit of excavation; BOT = Bottom limit of excavation; DRC = Ditch relief culvert; Left or Right = Determined when looking downstream or downslope; CMP = Corrugated metal pipe;  $yd^3$  = Cubic yards; CD = Critical dip; RG = existing road grade; EOS = End of survey/road log.

Distance on road (feet)	PWA site #	Road treatment	Site / treatment description	Culvert	Rock
23+55	142.1	CD 2	<ul> <li>Culverted headwater wet swale stream crossing; pipe is undersized and nearly worn out with evidence of past plugging and possible diversion.</li> <li>1. Excavate 6' wide x 50'long to remove existing pipe (dispose of properly).</li> <li>2. Replace with 24" x 50' long CMP with the inlet in same location and new pipe in same alignment with &gt; 30% slope (attempt to place pipe under large tree or remove if needed).</li> <li>3. Construct a critical dip along the left hingeline.</li> <li>4. Armor the lower half of outboard fillslope with 15 yd<sup>3</sup> 0.5'-2' riprap; ensure armor extends up to critical dip outlet.</li> <li>5. Increase frequency of berm breaches to every 10' for final 195' to intersection with Pilarcitos Creek Road.</li> </ul>	24" x 50', 2 couplers	15 yd <sup>3</sup> 0.5'-2' riprap
25+50		End OSR-FD-2/ End BB-1	End road outsloping and berm breaches at locked gate.		
		EOS	End Transmitter Road construction road log at intersection with Pilarcitos Creek Road and locked gate.		

# **Table A4**. <u>Cell Tower Road (upgrade)</u>: road log of treatments. Pilarcitos Creek Watershed Road Improvement Project, San Mateo County, California.

D' (							
on road (feet)	PWA site #	Road treatment	Site / treatment description	Culvert	Rock		
<b>Road description and general treatment notes:</b> Cell Tower Road extends from Pilarcitos Creek Road near Site 107 and climbs to the ridge onto cemetery property for 5,005' (.95 mi). Any exposed soil area adjacent to streams will need to be seeded and straw							
installed follo berm is prese	owing the I ent, pull tal	PWA constructi berm for 10+'	on typical drawings (Appendix B) unless noted in this road log. Fo wide below (downslope) of dip axis (use material as element of co	or all rolling dip onstruction of re	os where a everse grade).		
0+00		SOS	Start of road log at the intersection with paved ridgetop cemetery road.				
2+50		RD 1	Install a Type II rolling dip to the right and open outlet into grassland 20' long with $4\%$ grade into a closed basin. (RG= 7%).				

Distance on road (feet)	PWA site #	Road treatment	Site / treatment description	Culvert	Rock
4+40		RD 1.1	At existing waterbar, install Type I rolling dip in throughcut to drain road runoff into right inboard ditch (RG=15%).		
6+60		RD 1.2	In throughcut, install Type I rolling dip to drain road runoff into right inboard ditch. (RG= 25%).		
7+60		CCD 1	Ditch is plugged from cutbank failure-define a 2 wide' x 1'deep x 40' long inboard ditch.		
8+20		RD 2	Install a Type II rolling dip, breech 3' tall berm and drain and drain road surface only to the left downslope of silt fence-see note above (RG= 17%).		
8+60		DRC 1	Install an 18" x 40' long ditch relief culvert set at 30 degrees to the road with minimum 10% fall. Set outlet to the right of the old pump in soggy marsh area left of the road. Plug inboard ditch on downhill side of new pipe (RG= 18%).	18" x 40', 1 coupler	
9+50		RD 3	Install a Type II rolling dip to drain road surface only, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope into grassland (RG= 19%).		
10+20	102		<ul><li>18" ditch relief culvert with riprap in outlet gully:</li><li>Flow is piping under and around riprap which is reactivating and widening old gully.</li><li>1. Redistribute existing riprap to fill voids.</li></ul>		
11+30		RD 4	Install a Type II rolling dip, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 16%).		
13+40		RD 5	Install a Type II rolling dip, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 14%).		
14+75		RD 6	Install a Type I rolling dip, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 20%).		

Distance on road (feet)	PWA site #	Road treatment	Site / treatment description	Culvert	Rock
15+35	103		Stream crossing with barbwire fencing and old structures: 1. Clean existing culvert inlet, and install an armored fill crossing on top of existing culvert: Create a broad dip through the axis of the stream by lowering the road 2' maximum to eliminate diversion potential. Use spoil to right of stream axis to improve grade reversal and eliminate diversion potential. At the new outboard edge of the road, excavate a keyway 20' wide, tapering to 4' wide at the base of fill. Place 15 yd <sup>3</sup> of 0.5'-1.5' riprap in keyway and the outer 1/3 of the roadbed. Note: keyway dimensions will be confirmed by PWA after site is brushed.		15 yd <sup>3</sup> 0.5'-1.5' riprap
16+65		RD 7	Install a Type II rolling dip, drain to the left and open 10' wide breech in 3' tall berm at outlet for 8' length downslope (RG= 18%).		
17+75		RD 8	Install a Type II rolling dip, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 18%).		
19+00		RD 9	Install a Type II rolling dip, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 20%).		
	104		<ul><li>12" ditch relief culvert:</li><li>1. Remove existing culvert at site.</li></ul>		
20+30		RD 10	Install a Type II rolling dip, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 18%).		
21+70		RD 11	Install a Type II rolling dip, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 18%).		
23+40		RD 12	Install a Type I rolling dip at plugged, non-delivering ditch relief culvert in open grassland, drain to the left and open 10' wide breech in 3' tall berm at outlet for 8' length downslope. (RG= 14%). Pipe is buried and non- functional: remove or abandon in place during implementation.		
24+90		RD 13	Install a Type II rolling dip, drain to the left and open 10' wide breech in 3' tall berm at outlet for 8' length downslope (RG= 15%).		
26+30		RD 14	Install a Type II rolling dip at plugged ditch relief culvert near shrubs, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 15%).		

Distance on road (feet)	PWA site #	Road treatment	Site / treatment description	Culvert	Rock
27+90		RD 15	Install a Type II rolling dip, drain to the left and open 10' wide breech in 3' tall berm at outlet for 8' length downslope (RG= 16%).		
28+80			Non-delivering 12" ditch relief culvert. Leave as is.		
29+50		RD 16	Install a Type I rolling dip, drain to the left (RG= 10%).		
30+65	105	CD 1	<ul> <li>Stream crossing with failing 30" culvert.</li> <li>1. Excavate a 5' wide x 60' long channel to remove existing pipe (properly dispose) and define natural channel gradient.</li> <li>2. Replace with a 30" x 50' long CMP set at the base of fill and in the natural stream axis.</li> <li>3. Construct a critical dip along the right hingeline of the crossing.</li> <li>4. Armor the outboard fillface with 15 yd<sup>3</sup> 0.5'-2' mixed riprap; ensure armor extends from base of fill to outboard edge of road and to outlet of critical dip.</li> <li>5. Install a 6' tall t-post trash rack 2.5' above and centered on the new inlet.</li> </ul>	30" x 50', 2 couplers 1 trash rack	15 yd <sup>3</sup> 0.5'-2' riprap
32+20		RD 17	Install a Type II rolling dip just before right turn in the road, drain to the left and open 10' wide breech in 3' tall berm at outlet for 8' length downslope ( $RG=20\%$ ).		
33+50		RD 18	Install a Type II rolling dip, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 15%).		
34+65			Non-delivering ditch relief culvert. 1. Clean inlet.		
35+15		RD 19	Install a Type II rolling dip, drain to the left and open 10' wide breech in 1.5' tall berm at outlet for 8' length downslope (RG= 15%).		
37+10		RD 20	Install Type I rolling dip, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 20%).		
37+10			Plugged non-functional ditch relief culvert. 1. Remove/abandon in place during implementation.		
38+85		RD 21	Install a Type II rolling dip, drain to the left and open 10' wide breech in 3' tall berm at outlet for 8' length downslope (RG= 15%).		
40+45		RD 22	Install a Type II rolling dip in broad left bend in road, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 12%).		
42+45			Hairpin turn to the right.		
42+90		RD 23	Install Type I rolling dip, drain to the left (RG= 10%).		

Distance on road (feet)	PWA site #	Road treatment	Site / treatment description	Culvert	Rock
44+15		RD 24	Install Type II rolling dip, drain to the left and open 10' wide breech in 2' tall berm at outlet for 8' length downslope (RG= 12%).		
45+75		RD 25	Install Type II rolling dip, drain to the left and open 10' wide breech in 2.5' tall berm at outlet for 8' length downslope (RG= 10%).		
		Start OSR-FD 1	Start outslope road and remove any ditch with a 5% outslope for 175'.		
47+50		End OSR-FD 1	End outslope road and fill ditch.		
		Start OSR-KD 1	Start outslope road and keep ditch where wet springy ditch begins-continue with 5% outslope for 245'.		
		RD 26	Install Type I rolling dip to drain road only to the left (RG= 10%).		
48+25	106		<ul><li>18" ditch relief culvert draining prominent spring.</li><li>1. No treatments-do not disturb existing wet ditch draining to culvert.</li></ul>		
48+70		RD 27	Install Type I rolling dip to drain road only to the left (RG= 10%).		
49+45		End OSR-KD 1	End outslope road and keep ditch at willow clump at outboard road edge before (upslope of) pullout.		
50+05		EOS	End of Cell Tower Road construction road log at gate at intersection with Pilarcitos Creek Road.		

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Item Material totals		Specification		
Culvert	18" x 70', 2 couplers; 24" x 70', 2 couplers; 30" x 50', 2 couplers	Corrugated metal pipes: 14ga 18" and 24"; 12 ga 30"		
Trash rack	1 6' T-post	Heavy duty steel 1.5" x 72" T-post		
RockRiprap $(0.5^{\circ}-2^{\circ})$ : 45 yd³ Riprap $(2.0^{\circ}-3.0^{\circ})$ : 70 yd³ Road rock $(1.5^{\circ\circ}$ clean): 60 yd³ Drain rock $(3^{\circ\circ}$ clean): 20 yd³		All riprap must be angular, not rounded Road rock and drain rock should be clean and angular.		
Straw	17 bales	Certified weed free seed free rice straw		
Seed	12 lbs.	Native erosion control seed mix		
Willow cuttings (harvest on-site)	<ul> <li>(2) 20' long x 6" diameter rolls of live willow fascines</li> <li>1" diameter x 2' long willow cuttings (stakes)</li> </ul>	Willow cuttings should be harvested nearby and soaked for a minimum of 3 days prior to installation		

Table A5.	Material	summary	with s	pecification.	Pilarcitos	Creek	Watershed	Road	Improvem	ent
Project, Sat	n Mateo (	County, (	Californ	ia.					-	

Table A6. Material summary by road group. Pilarcitos Creek Watershed Road Improvement Project, San Mateo County, California.

Road group	Item	Material totals		
(CCWD)	Rock	Riprap $(2.0'-3.0')$ : 70 yd <sup>3</sup> Road rock $(1.5"$ clean): 20 yd <sup>3</sup> Drain rock $(3"$ clean): 20 yd <sup>3</sup>		
Pilarcitos Creek	Straw 4 bales			
Road-North	Seed	3 lbs		
	Willow cuttings (harvest on-site)	(2) 20' long x 6" diameter rolls of live willow fascines 1" diameter x 2' long willow cuttings (stakes)		
(Randtron)	Culvert	18" x 70', 2 couplers; 24" x 70', 2 couplers; 30" x 50', 2 couplers		
Pilarcitos Creek	Trash rack	1 6' T-post		
Road-South, Cell Tower and Transmitter	Rock	Riprap (0.5'-2'): 45 yd <sup>3</sup> Road rock (1.5" clean): 20 yd <sup>3</sup>		
Tansilitter	Straw	13 bales		
	Seed	9 lbs		

## Appendix B





Road upgrading tasks typically include upgrading stream crossings by installing larger culverts and inlet protection (trash barriers) to prevent plugging. Culvert sizing for the 100-year peak storm flow should be determined by both field observation and calulations using a procedure such as the Rational Formula.

#### Stream crossing culvert Installation

- 1. Culverts shall be aligned with natural stream channels to ensure proper function, and prevent bank erosion and plugging by debris.
- 2. Culverts shall be placed at the base of the fill and the grade of the original streambed, or downspouted past the base of the fill.
- 3. Culverts shall be set slightly below the original stream grade so that the water drops several inches as it enters the pipe.
- 5. To allow for sagging after burial, a camber shall be between 1.5 to 3 incher per 10 feet culvert pipe length.
- 6. Backfill material shall be free of rocks, limbs or other debris that could dent or puncture the pipe or allow water to seep around pipe.
- 7. First one end then the other end of the culvert shall be covered and secured. The center is covered last.
- 8. Backfill material shall be tamped and compacted throughout the entire process:
- Base and side wall material will be compacted before the pipe is placed in its bed.
- Backfill compacting will be done in 0.5 1 foot lifts until 1/3 of the diameter of the culvert has been covered. A gas powered tamper can be used for this work.
- 9. Inlets and outlets shall be armored with rock or mulched and seeded with grass as needed.
- 10. Trash protectors shall be installed just upstream from the culvert where there is a hazard of floating debris plugging the culvert.
- 11. Layers of fill will be pushed over the crossing until the final designed road grade is achieved, at a minimum of 1/3 to 1/2 the culvert diameter.

#### Erosion control measures for culvert replacement

Both mechanical and vegetative measures will be employed to minimize accelerated erosion from stream crossing and ditch relief culvert upgrading. Erosion control measures implemented will be evaluated on a site by site basis. Erosion control measures include but are not limited to:

- 1. Minimizing soil exposure by limiting excavation areas and heavy equipment distrubance.
- 2. Installing filter windrows of slash at the base of the road fill to minimize the movement of eroded soil to downslope areas and stream channels.
- 3. Retaining rooted trees and shrubs at the base of the fill as "anchor" for the fill and filter windrows.
- 4. Bare slopes created by construction operations will be protected until vegetation can stabilize the surface. Surface erosion on exposed cuts and fills will be minimized by mulching, seeding, planting, compacting, armoring, and/or benching prior to the first rains.
- 5. Excess or unusable soil will be stored in long term spoil disposal locations that are not limited by factors such as excessive moisture, steep slopes greater than 10%, archeology potential, or proximity to a watercourse.
- 6. On running streams, water will be pumped or diverted past the crossing and into the downstream channel during the construction process.
- 7. Straw bales and/or silt fencing will be employed where necessary to control runoff within the construction zone.

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## Typical Design of a Single-post Culvert Inlet Trash Rack

#### **Cross section view**







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Typical Drawing #6



## **Typical Ditch Relief Culvert Installation**





#### Ditch relief culvert installation

- 1) The same basic steps followed for stream crossing installation shall be employed.
- 2) Culverts shall be installed at a 30 degree angle to the ditch to lessen the chance of inlet erosion and plugging.
- 3) Culverts shall be seated on the natural slope or at a minimum depth of 5 feet at the outside edge of the road, whichever is less.
- 4) At a minimum, culverts shall be installed at a slope of 2 to 4 percent steeper than the approaching ditch grade, or at least 5 inches every 10 feet.
- 5) Backfill shall be compacted from the bed to a depth of 1 foot or 1/3 of the culvert diameter, which ever is greater, over the top of the culvert.
- 6) Culvert outlets shall extend beyond the base of the road fill (or a flume downspout will be used).
   Culverts will be seated on the natural slope or at a depth of 5 feet at the outside edge of the road, whichever is less.

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## **Typical Road Surface Drainage by Rolling Dips**



### **Rolling dip installation:**

- 1. Rolling dips will be installed in the roadbed as needed to drain the road surface.
- 2. Rolling dips will be sloped either into the ditch or to the outside of the road edge as required to properly drain the road.
- 3. Rolling dips are usually built at 30 to 45 degree angles to the road alignment with cross road grade of at least 1% greater than the grade of the road.
- 4. Excavation for the dips will be done with a medium-size bulldozer or similar equipment.
- 5. Excavation of the dips will begin 50 to 100 feet up road from where the axis of the dip is planned as per guidelines established in the rolling dip dimensions table.
- 6. Material will be progressively excavated from the roadbed, steepening the grade unitl the axis is reached.
- 7. The depth of the dip will be determined by the grade of the road (see table below).
- 8. On the down road side of the rolling dip axis, a grade change will be installed to prevent the runoff from continuing down the road (see figure above).
- 9. The rise in the reverse grade will be carried for about 10 to 20 feet and then return to the original slope.
- 10. The transition from axis to bottom, through rising grade to falling grade, will be in a road distance of at least 15 to 30 feet.

Table of rolling dip dimensions by road grade						
Road grade %	Upslope approach distance (from up road start to trough) ft	Reverse grade distance (from trough to crest) ft	Depth at trough outlet (below average road grade) ft	Depth at trough inlet (below average road grade) ft		
<6	55	15 - 20	0.9	0.3		
8	65	15 - 20	1.0	0.2		
10	75	15 - 20	1.1	0.01		
12	85	20 - 25	1.2	0.01		
>12	100	20 - 25	1.3	0.01		

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## Typical Sidecast or Excavation Methods for Removing Outboard Berms on a Maintained Road

- 1. On gentle road segments berms can be removed continuously (see B-B').
- 2. On steep road segments, where safety is a concern, the berm can be frequently breached (see A-A' & B-B') Berm breaches should be spaced every 30 to 100 feet to provide adequate drainage of the road system while maintaining a semi-continuous berm for vehicle safety.







## Typical Design for Road Decommisioning Treatments Employing Export and In-Place Outsloping Techniques

**Export outslope (EPOS)** 



In-place outslope (IPOS)



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*Cross road drain* construction will ensure gullies, springs, road runoff and other concentrated flow will no longer collect over long lengths of road causing gully erosion and sediment delivery to streams. Cross road drains will be constructed at approximately 75 ft spacing intervals and these cross road drains will direct road surface runoff off the road onto stable hillslope locations.

*Ripping* the road surface 16 to 24 inches deep will increase road surface infiltration rates, decompact the road surface, and prevent concentrated runoff. Road ripping will also pulverize the compacted road surface or hardpan and allow for vegetation to establish and recover naturally.

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### Cross section parallel and perpendicular to watercourse



#### Notes

The main objective is to create a structure that will not be flanked, undercut, or eroded by the stream.

- The critical elements of a successful grade control structure are:
- 1) Excavating the headcut to a gentler channel gradient over a distance of stream (See road log for details)
- 2) rock selection- rock should be selected that is resistant to transport during design flows, and has a bell shaped distribution of sizes with the median diameter equivalent to the D50 particle size of the stream at the site of installation (See road log for range of rock diameters).
- 3) The rock must be placed in a "U" shape that will contain the 100 yr. return interval stream flow, won't constrict the channel cross sectional area, and be flush with the streambed and not deflect flow.
- 4) The rock must be imbedded into the channel at least two rock diameters in thickness.
- 5) The largest rock should be used at the base and top of the grade control structure to buttress the other rock

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