

# Tombs Creek Bridge

## Project Update

Client Wickersham Ranch Road Association  
Project Tombs Creek Bridge Renovation / Replacement  
DTA Project # **1109-wrb** Date 6/15/11

### Owners Meeting Update

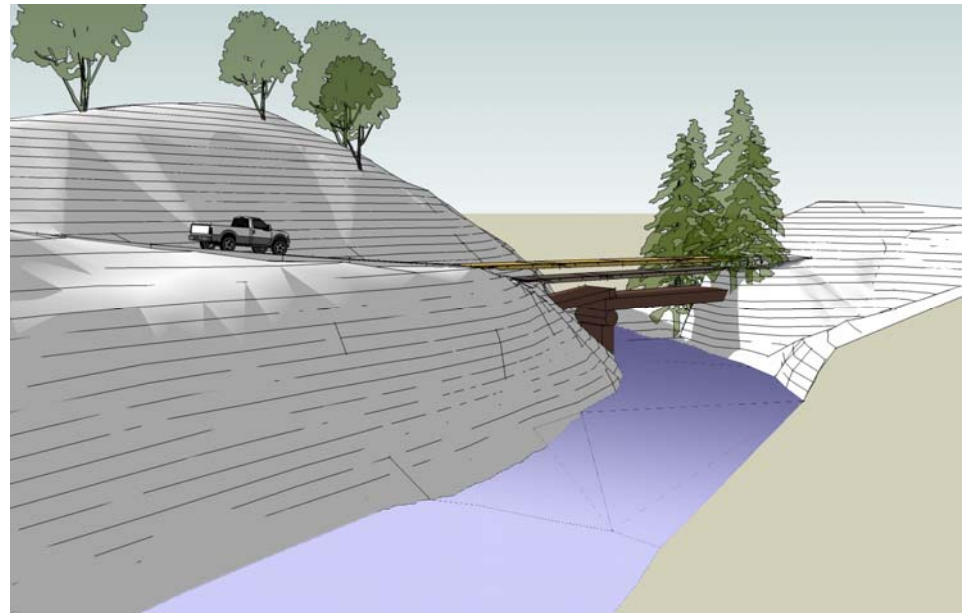
This report has been prepared to recap the recent Owner's Meeting for all attendees and to share the outcome of that meeting with the owners who were not able to attend.

Attendance included approximately 35 people representing 16 parcels out of the 32 parcels served by the Wickersham Ranch Road.

Also in attendance was Darrell Rodgers, our current road vendor.

The event was hosted by David Otero and Tami Bobb and great food, excellent wine and a pleasant afternoon were provided by all.

No incidents were reported...



## Meeting Overview

### Background

The Road Committee presented an overview of the various research and design development efforts that have occurred over the course of the project to date. Included were current plans of the recommended Alternative as well as an overview of the pros-and cons of the various options for bridge repair and replacement.

Items covered included:

- Site Topographic Survey

A detailed survey of the bridge site was prepared with support from Lea and Braze Engineering in Hayward, California. Lea and Braze staff were made available at cost to the Road Association and Martin Dreiling assisted staff on site in conducting the survey. Final topo was prepared by Dreiling Terrones Architecture (DTA) and used for analysis of the various options.

- Preliminary Needs / Goals Assessment

Preliminary needs and goals were assembled by the Road Committee in conjunction with Peter Beall (property owner at the bridge site) to determine key criteria for a bridge strategy. Based on our familiarity with the concerns of our neighbors we were also able to anticipate most of the issues that would be important to the owners. The survey and owners meeting, as well as direct dialogue with a number of Owners has helped complete the full list of considerations.

- Preliminary Resource Assessment

The Road Committee looked at internal resources, Owner's capability to absorb supplemental dues and available external resources from various public agencies. It was determined early on that there were likely no external resources available that would offer genuine value to the Owners.

More on this item below.

- Preliminary Structural Design

DTA conducted preliminary structural design to assess foundation options and capabilities for various structural alternatives for the bridge.

- Vendor Research / Inquiry

DTA researched a wide range of vendors for various types of bridge solutions to evaluate likely costs and implementation constraints for various options. Research included legal requirements for bridge performance, specific vendors and suppliers and relevant guidelines for rural roads.

- Development of Alternative Solutions

Alternative solutions were developed by the Road Committee and modeled by DTA measured against the research collected to establish pros and cons for each possible choice. These were presented in the original information packet.

- Preferred Alternative Recommendation

Based on the full consideration of available information coupled with knowledge of most owner's concerns and interests the Recommended Alternative was determined to be Alternative #2 as presented in the prior package.

- Preferred vendor interview, plant inspection

Based on the increased likelihood of pursuing Alternative #2, further research was performed to establish a likely vendor and obtain preliminary cost and schedule information. Martin Dreiling conducted an on-site inspection with Daniel Steel and Machine, to assess the actual bridge site as well as the access to that site over the Wickersham Ranch Road. Additionally Martin conducted a plant inspect of Daniel's operation in Ukiah to assess their capability of fabricating and delivering a bridge in a timely and cost effective manner.

Various clarification questions were asked by the attendees regarding some of this information. Key questions will be addresses by category later in this report.

## Alternative #2

In developing Alternatives for the bridge project, the Road Committee initiated conversations with Daniel Steel and Machine. Daniel has constructed a number of railcar bridges as well as structural steel bridges and has extensive experience in rural bridge construction.

Daniel Steel is located in Ukiah and operates a full structural steel fabrication facility as well a large capacity machine shop. Historically they have built entire industrial saw mill operations. More recently they have served a particular niche building docks and boat handling facilities for commercial Clear Lake customers

Bill Daniel toured the site and assessed both the immediate site constraints as well as access across our roads and concluded that he could fabricate, deliver and install the desired bridge for approximately \$68,000

The Road Committee estimates that we will require approximately \$10,000 of on-site preparation and final grading as well as minimal logistical support for the installation operation.

This generates a current estimated cost of \$78,000 for the bridge project. Assuming that we will utilize a portion of our current Maintenance resource in support of contingency and unforeseen items related to the project, this results in a likely cost per owner of \$2,500 per parcel. This figure was used as the base figure in the recent survey.

We have included a reduced plan below as well as a simple 3D model of the site.

### Cost per Parcel

Current Proposal from Daniels Steel and Machine	68,000.00
Recommended reserve for On-Site Preparation, Final Grading	10,000.00
Recommended Construction Contingency for unforeseens@ 3%	2,340.00
<b>Total Projected Cost</b>	<b>80,340.00</b>

### Projected Resources

Projected Supplemental Dues		
Per Parcel	2,500.00	
Total Parcels	32	
Projected Participating Parcels	31	
<b>Total Projected Supplemental Dues</b>	<b>77,500.00</b>	<b>77,500.00</b>
Current WRRR Resources (including current receivables)	14,000.00	
2011 Recommended Maint Reserve	6,000.00	
<b>Available WRRR Resources</b>	<b>8,000.00</b>	<b>8,000.00</b>
<b>Total Projected Resources</b>	<b>85,500.00</b>	

**General Notes**

These Drawings and their contents are and shall remain the property of **DREILING TERRONES ARCHITECTURE** whether the project for which they were prepared is executed or not. They are not to be used by any person other than the Wickersham Ranch Road Association (WRRA) or for any other project or extension to this project except by agreement in writing with the Architect.

The Architect expressly reserves the common law copyright and other proprietary rights relating to these Drawings and their content. These Drawings are not to be reproduced, altered or otherwise modified in any manner whatsoever without the consent of the Architect.

No guarantee for quality of construction is implied or intended by these Documents. The Contractor (herein referred to as the "Supplier") shall assume full responsibility for compliance with the requirements of the contract and the intent of these documents.

The project includes specialized fabrication by the Supplier which is not fully defined in these documents and which shall be coordinated directly between the Supplier and the WRRA. This is a performance based contract.

Portions of the work shall be performed by the WRRA utilizing its own forces or sub-contractors. The Supplier shall coordinate delivery and installation with the WRRA.

The Supplier, in conjunction with the WRRA shall seek to minimize road closures and traffic impacts during installation.

**Site Information**

The Contractor shall thoroughly examine the site and satisfy himself as to the conditions under which the Work is to be performed. The Contractor shall verify at the site all measurements and conditions affecting the work and shall be responsible for errors unless brought to the attention of the WRRA prior to proceeding with the Work.

**General Contract**

It is the responsibility of the Contractor to check and verify all conditions, dimensions, lines and levels alignments indicated proper fit and attachment of all parts is required.

All dimensions like presented over scale. Where dimensions are not entirely clear the Contractor shall notify the Architect and request clarification.

**Damage and not be exact**

**Site Notes**

Topographic information used for design and represented in these Documents was obtained from historical and topographic survey prepared by Leo and Isaac Engineering. Topographic information is relative only and has not been checked with either actual elevations or actual horizontal controls beyond the work area.

The map shall not be taken to represent actual property lines or any other legal boundary, easement or restriction.

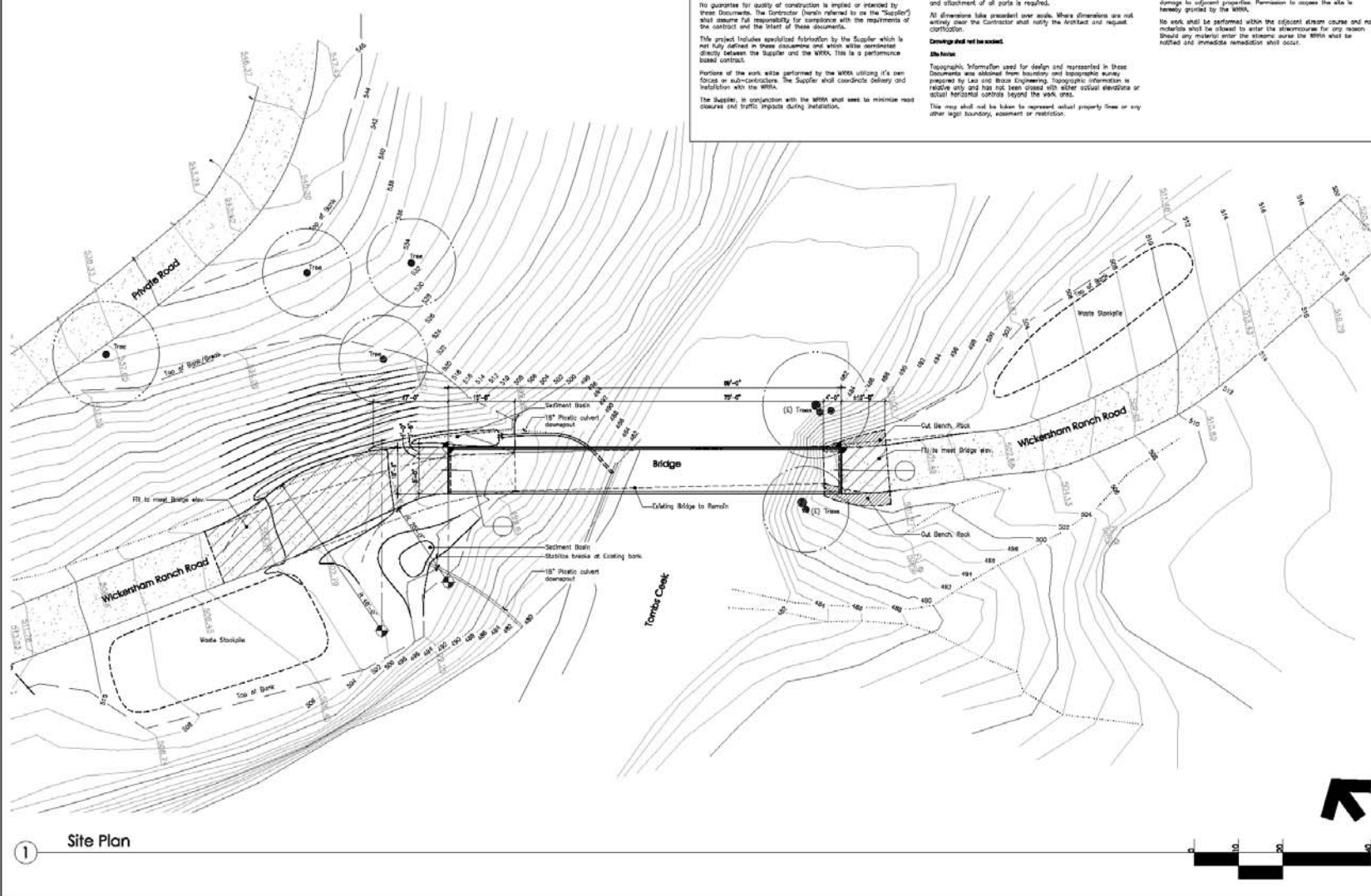
Design contours and drainage shown are informational only. All final grading and drainage shall be coordinated directly in the field with WRRA.

Waste excavation materials shall be placed in the designated storage and graded to avoid erosion.

**Access**

The work of this project occurs entirely on private property and adjacent easements associated with those properties. Contractor shall limit all operations to the work zone shown in the drawings and shall report all damage to adjacent properties. Permission to access the site is hereby granted by the WRRA.

No work shall be performed within the adjacent stream course and no materials shall be allowed to enter the streamcourse for any reason. Should any materials enter the streamcourse the WRRA shall be notified and immediate remediation shall occur.



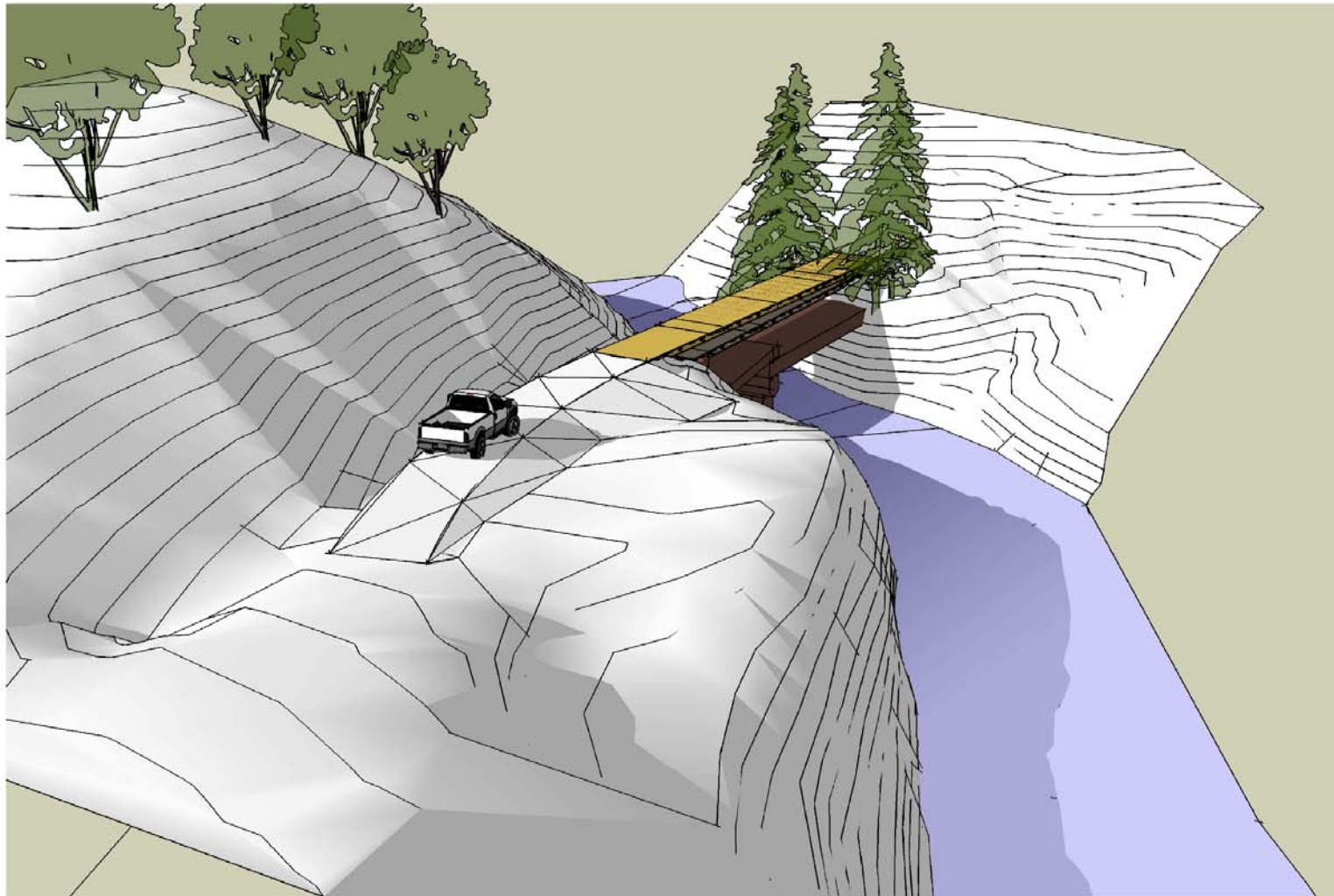
1 Site Plan

**DREILING TERRONES ARCHITECTURE INC.**  
 BUILDING | LAND | STEWARDSHIP | ACTIVISM

**TOWNWORKS**  
 resilient. healthy. adaptive communities.

Map for Tombs Creek Bridge located at  
**Wickersham Ranch**  
 Wickersham Road  
 Sonoma County, California

Site Plan  
 A1.1  
 1109



① Perspective

NTS

DREILING  
TERRONES

ARCHITECTURE INC.  
BUILDING | LAND | STEWARDSHIP | ACTIVISM

Townworks  
PLANNING, DESIGN, CONSTRUCTION

Map for Tombs Creek Bridge located at  
**Wickersham Ranch**  
Wickersham Road  
Sonoma County, California

Perspective View

A1.3

1109

## Owner’s Survey Results

The Road Committee shared an overview of the recent Owner’s Survey results with the attendees and included a written synopsis of those results. That synopsis is included herein:

truncated for space, but original copies of all responses will be available at the owners meeting and upon request of the Road Committee.

Below is a compilation of responses to relevant portions of the questionnaire coupled with an overview of written comments. Comments have been

Item	Response
<b>General Road Use Questions</b>	
	Total Responses <b>18</b>
	Representing <b>19 Parcels</b>
Is your use generally recreational or commercial?	Recreational: 20 Commercial: 0
Are you generally satisfied with the rural, rustic character of the road?	
	Satisfied <b>19</b>
	Not Satisfied <b>0</b>
Example Comments	“As long as it’s kept in good shape.” “Recommend all work aimed at reducing maint, supporting water quality”
<b>Bridge Questions</b>	
Did you receive the Bridge Report mailed on April 13, 2011?	
	Yes <b>20</b>
	No <b>0</b>
Was the information in the report clear regarding possible choices for bridge Repair or Replacement? (We can go over the report at the June 11 Meeting.)	
	Yes <b>15</b>
	No <b>0</b>
	More info needed <b>2</b>
Example Comments	“Great information, clear, useful” “Fire code questions” “Need more explanation at BBQ” Fire Code questions, funding alternatives
If not are there specific items you would like to discuss at the June 11 Owners Meeting?	

Item	Response
<p>Are there major reservations you may have regarding the Bridge project?</p> <p>Example Comments:</p>	<p>Keep costs low            Durability of selected options, particularly #2: Will it last 50 years?            Concerns about higher benefit to commercial users            "Can extension plates be used at ends" : As a means to extend life of current bridge?            Just get fixed ASAP            Replacement can't take weeks            Just do it</p>
<p>When was the last time you traversed the Wickersham Ranch Road?</p>	<p>Most responders have seen the bridge since winter.</p>
<p>What is your general characterization of the Bridge condition?</p> <p>Example Comments:</p>	<p>Washing out, perhaps another year            Looked OK            Good            Dangerous (2 similar)            "Circling the Drain"            Undermined            Concerned            Sufficient for our use except for erosion damage (2 similar)            Needs replacement as degradation will continue (4 similar)            "Ask the Geologist"</p>
<p>What is your level of concern for the service capability of the current bridge?</p> <p>Example Comments:</p>	<p>Concerned it will fall in the creek            Recreational: minimal; Commercial: hesitant to use.            OK with actual bridge, concerned about water quality (erosion)            Very concerned (7 similar)            "Ask the Geologist"            Barely sufficient            "Bottom of the Ninth"</p>
<p>Do you think it should be addressed this year or can it wait?</p> <p>This Year            This year or next            Example Comments:</p>	<p><b>14</b>  <b>2</b>            "If we do it this year we aren't doing it as an emergency"            "Need closer inspection, defer to engineer."</p>
<p>What is the most important factor in determining the solution for the bridge? Please number these in order of preference, #1 being first choice.</p> <p>Lower initial costs            Lower overall costs including service life            Increased durability, offering longer time until replacement or</p>	<p>This one is hard to tabulate but the trend is toward lowest initial cost, lowest life cycle cost while ensuring access.</p> <p>Selection and quantity of #1 scores are indicated below</p> <p>1 person favored this as #1            9 people favored this as #1</p>

Item	Response
<p style="text-align: center;">major repairs are necessary Increased service capacity based on width Increased durability based on length Combination of low costs and durability Aesthetics</p> <p>Based on the issues and costs defined in the bridge Report, do you have a preference for Repair or Replacement of the existing bridge?</p>	<p>3 people favored this as #1</p>
	<p style="text-align: right;">Repair <b>1</b> Replacement <b>12</b> Not Sure <b>2</b></p>
<p>If you prefer Replacement, is there a Replacement solution that you prefer.</p>	<p>6 people noted #2 No other options were supported. One owner made reference to a preference for #3 elsewhere (3# is the double wide bridge which, upon completing the topo survey, is not readily feasible due to limited approach widths.</p>
<p>Are you satisfied with a rail-car bridge in terms of appearance and features?</p>	<p style="text-align: right;">Yes <b>18</b> No <b>0</b></p>
<p>In order to make a more informed choice about any solution the following questions address the preferred solution as a way to gauge Owners capability to commit supplemental dues this year. This does not mean we have determined a solution; this is simply a way to measure our collective ability to raise money for any project.</p>	
<p>The recommended solution for the bridge is replacement with a longer 10'6 wide flatcar. We have recently gotten more accurate pricing for that solution that will require a commitment of approximately \$2,500 per parcel. This is lower than our original estimates and still includes a buffer for unforeseen costs, which will be returned if unused.</p>	
<p style="text-align: right;">As an Owner does this amount seem reasonable?</p>	<p><b>Yes:16</b> <b>No:</b> <b>Not Sure:2</b></p>
<p style="text-align: right;">As an Owner does this amount seem feasible for a one-time payment?</p>	<p><b>Yes:16</b> <b>No:0</b> <b>Not Sure:2</b></p>

Item	Response
<p>Would you prefer to spread payments over several years? This may mean a delay in the project or the possibility of finance costs from a vendor.</p>	<p><b>Yes: 0</b>  <b>No:15</b>  <b>Not Sure:1</b></p>
<p>Will you be able to attend the Owner's Meeting, BBQ on June 11?</p>	<p><b>Yes:13</b>  <b>No:4</b></p>
<p>If not, would you like to share any concerns with the Road Committee or the full Ownership? Any major concerns will be included in the next Newsletter.</p>	<p>Earl Farnsworth reference to advice from Nick Kent</p>
<p>Example Comments:</p>	<p>"Trust the Road Committee based on their research and investigation."</p>
	<p>Notes from Ben Hockett re: increased share for commercial use.</p>
	<p>Notes from Ortiz re: commercial use</p>
<p>End of Survey</p>	

The general result of the survey is as follows:

The majority of responders seek to replace the bridge, to do it this year and to pay for it all at once. This is consistent with the attendees at the owner's meeting as well.

There are very few questions and concerns, although we have addressed those below and they were discussed extensively at the meeting.

## Key Questions from the Meeting

### **Is Alternative #2 truly a 50 year solution.**

The current bridge has been in place for approximately 31 years. Based on the extended length and more durable foundation for the proposed bridge we have modeled it as a 50 year solution.

Of course there are no guarantees that ongoing severe weather or unforeseens such as seismic events may affect bridge durability. But for comparison purposes we believe that 50 years is a reasonable modeling tool.

### **Have we looked at outside funding?**

Earl Farnsworth raised a series of questions about grants through various agencies. We had originally looked into each of the likely sources and determined that there was no real opportunity available. Upon Earls questions we inquired again and found similar results.

There are currently several programs in place that support upgrades of rural roads as a whole. There are no programs specifically applicable to a bridge project however a bridge may be eligible as part of a larger road project. In all cases there is no current funding available for these programs due to larger budget issues with state and federal agencies.

In all cases access to public funds requires a long application period and a series of preliminary research exercises that would require outside consultants resulting in increased costs. In many cases the interests of the funding agencies go beyond our current bridge needs and project scope would be expanded to address their interests thus increasing the cost and complexity of the bridge project.

It is generally agreed at the meeting that pursuit of outside funding is more appropriate for long term road projects where we have flexibility in both scope and timing, as was the case with the recent grant application for portions of the road surrounding the bridge.

For the bridge in particular, the semi-emergency nature of the work indicates that we should try to solve the problem within the year, an option not available with any funding source. It is also our opinion that outside funding

would likely include enough strings that the net amount required of the owners as a match would either remain as it is now or increase over what we have estimated should we do the bridge with our own resources.

It should also be noted that the type of management necessary to properly pursue a grant increases the need for the WRRRA to hire it's own consultant to support the process, as an added cost, and generates an incentive for the kinds of consultants who do this work to encourage owners to pursue such grants.

### **The Commercial User Question**

Several owners asked whether this bridge offered a distinct advantage to commercial operators and whether they should pay a higher share of the costs. While that is a logical question, the bridge width recommended generates a basic 10 foot wide lane, which is a sensible and comfortable width for all users. We could, in fact, purchase an 8' wide bridge for only about \$1000 less, as the cost is not in the bridge but in the delivery and installation.

The recommendation to use a 10' wide bridge is based simply on the availability of that width without generating extra cost because the vendor happens to have railcars of that dimension. No commercial advantage was planned nor was that a criteria for any design work.

All owners present at the meeting were satisfied that there was not an issue worth pursuing here.

### **The Repair vs. Replace Question**

There were a couple of questions about replacement strategies and several were rehearsed, both in our design and verbally at the meeting. In each case repair requires work within the stream channel. One of our most important criteria in design was to remain fully outside of the stream channel for all work as this can open a can of worms for project complexity.

Additionally all repair scenarios offer only a short term fix as the current bank will continue to erode and undermine the key support components of the current bridge. Per the survey and the meeting the majority of Owners prefer a replacement option that will offer longer durability.

**What if Everyone Does Not Participate?**

Several owners asked how we planned to collect resources and ensure that everyone pays their fair share.

Our current review of the Road Association roster, coupled with the commitment of all attending the meeting suggest that we will likely collect

from 31 out of 32 parcels. This will cover the current estimate cost for the bridge plus our own site development costs associated with installation.

It was agreed at the meeting that we should send out a single invoice for a one-time payment of Supplemental Dues to be collected immediately. A vote was taken and 16 of the 16 parcels present agreed to this method.

Please see above for the specific amounts and distribution intended.

**General results of the Meeting and Current Direction**

Based on the dialogue at the owner’s Meeting coupled with the input from the Survey, the Road Committee is acting on the following direction. The contents of this outline was presented to the attending Owners and they were asked to vote on a per-parcel basis. This was not an official election, simply a poll taken to ensure that those in attendance were clear on the alternatives. Attending Owners voted in favor of the following 16-0, representing 16 of 32 parcels. Comments in the Survey by non-attending Owners indicate a majority support for these items as well.

Item	Comments
1	The Road Association seeks to pursue a replacement strategy for the bridge this year. The overall preference is to collect adequate funds this year and pay for the project directly
2	The Road Association favors Alternative #2, replacement of the current bridge with a 10’6 by 89’0 railcar as described in the included drawings.
3	The Road Association favors immediate collection of Supplemental Dues via invoice
4	The Road Association requests that the Road Committee continue to pursue a contract with Daniel Steel and Machine for provision of the bridge pending receipt of a written proposal consistent with the verbal proposal already received.

## Next Steps

With general consensus from the owners the following outlines the next steps in the process.

Item	Description
Supplemental Dues Collection	The Road Association will send out Supplemental Dues Invoices next week. Payment is due upon receipt. Supplemental dues will be collected in the regular WRRRA account and tracked via a specific budget for the bridge project. The Road Committee will provide periodic accounting and updates regarding both dues collection and expenditures.
Initiate Agreement with Vendor	We will request a draft contract from the vendor for review. Dreiling Terrones Architecture will review the contract for adequate protection of our interests and adequate safeguards for performance by the vendor.
Additional Plant Inspection	DTA will visit the fabrication plant to look at the specific rail car proposed and review construction and fabrication details with Bill Daniel.
Refine Schedule	We will refine the actual schedule as we move through summer.  Target install period is late August, early September. As we get closer we will coordinate specific dates and notify the owners about anticipated delays or closures.
Fabrication Inspection	Once fabrication has begun DTA will inspect for quality and conformance.
Perform Site Preparation	Prior to installation, we will prepare the site for both the bridge and the installation equipment. This will include crane pad preparation, adjustments to existing approaches and precise layout for foundation installation.
Install bridge	Once the site is ready, we will trigger bridge delivery and installation by the vendor. DTA will oversee and manage the delivery and placement of the bridge. Owners are welcome to attend and observe, however the site will be a construction zone and access will be limited for safety reasons.

Thanks to all Owner's for their careful consideration of this material, their participation in the ongoing selection process and their timely support for a sensible and cost effective solution.

We have been anticipating bridge replacement for about 10 years now and our ability to do this project this year will complete a major long-term task and allow us to focus again on long-term improvements to the road as a whole.

Sincerely

Wickersham Ranch Road Committee  
 Martin Dreiling  
 David Katz  
 Rob Weinstock