

# Comanche Creek Ranch Owners Association Road Maintenance Strategic Plan

15 Jan 2014



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## Revision History

17 July 2013 Initial Publication Version 1 (Ver 1)

15 Jan 2014 Revision 1 minor revisions / additions for clarity based on member comments, added summary of plan paragraph, and updated with 2013 actual budget (Ver1, Rev1)

## **Introduction**

"Wow, how did you ever find this place?", is often the very first things visitors to Comanche Creek say. This community is very special, and key to lifestyles out here are the roads. The purpose of this plan is to provide guidance for the current Comanche Creek Ranch Owners Association (CCROA) board of directors and members on the CCROA roads. The plan is written for the members, and the CCROA board actively seeks the members' comments. The board should update this plan yearly and it will provide an institutional memory for matters concerning the roads, and a basis for future road work. This plan is the CCROA policy for road maintenance. This is not the first plan. There was a similar effort in 2004 where members formed a "road committee" to establish a budget and near and far term goals. Those are discussed later.

## **Background**

This part of the plan begins with a description of the CCROA roads, to include a brief history of how they were established. Following that description, the plan presents a history of road maintenance actions so members can gain awareness of work done in the past and the fiscal constraints on this plan.

## **CCROA Roads Description**

As members are aware, CCROA is a planned community and was established in 1995. From the declaration the roads are leased in perpetuity to the Association:

1.03 Common Elements mean the easements for ingress, egress, utilities, drainage, pedestrian and equestrian uses, as shown on the Plat, leased in perpetuity to the Association; which, however, do not include the ten (10) foot and twenty (20) foot equestrian and trail easements shown on the Plat.

The Plat as recorded with Elbert County is below in Figure 1 CCROA Roads From Declaration.

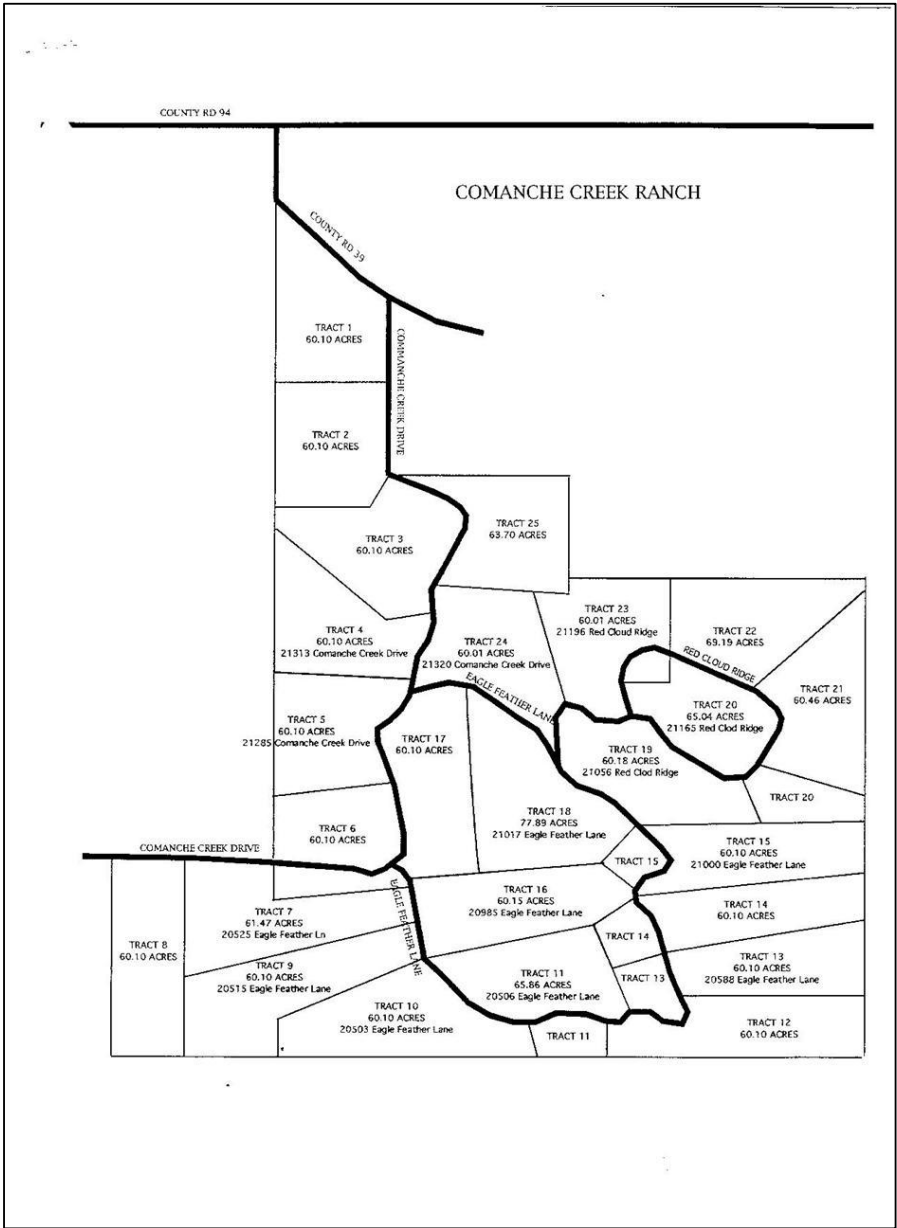


Figure 1 CCROA Roads From Declaration

There are roughly 6.2 miles of CCROA Roads with an easement of 60 feet, 30 feet on each side from the center of the road. CCROA has two entrances, one on the North onto County Road 39 and the other to the West onto county Road 37. The roads are maintained by the Association, hence the signs posted at each entrance, "Not a County Maintained Road". The developer established the roads. The roads were not engineered, that is there is no record of specifications or standards of construction. The road base came from a nearby pit, and contains considerable amounts of clay, which allows for good compaction, but results in very slippery roads and rutting when wet. There are cattle guards at the entrances, and a cattle guard at the western intersection of Comanche Creek Drive and Eagle Feather Lane. There are

four concrete crossings in low areas where water flows over the road, and one concrete crossing over an undersized culvert, where water over tops the road during heavier rains.

### The Local Improvement District

In October of 2001, members explored established what it would take to have Elbert County take over road maintenance to include snow plowing, road grading, and repairs as necessary. The initial plan was to get a bond issued that would be close to our assessment, and have the county take care of things, relieving the CCROA from road maintenance responsibilities. Elbert County Road and Bridge Department came out and inspected the roads. Roadway improvements to bring the roads up to county standards involved sub-grade preparation, drainage improvements, shouldering with aggregate base courses, and placement and preparation of road base. The county engineer then obtained bids from several road construction companies to develop a cost for the project. The total cost was \$585,000, \$23,400 per lot. Depending on a bond interest rate of 7% or 9.5% the yearly cost per lot over a 20 year period was between \$2172 to \$2616. As a consequence of this cost members voted down the issuance of a bond.

### The Lawsuit

In August of 2003 several CCROA members sued the developer over the status of the roads. This case is *Stan Ross et. al v. Co-Ka-Ne Consultants, Inc et. al.* The case is relevant to this plan as it concerned whether or not the roads are to be maintained by Elbert County and the developer's responsibility for that. The consequence of this case was the plaintiffs were awarded damages from the developer as the roads had been advertised as "will be county maintained", during the sales of the properties. This judgment effectively ended all discussion of the developer improving the roads to the point where the county would "take them over", and also ended the developer's participation with Comanche Creek.

### History of Road Maintenance

The history of CCROA road maintenance is best told by examining the road expenditures and road budgets. The association began collecting assessments in 2001. Figure 2 History of Road Maintenance Expenditures below is the history of expenditures from when the CCROA board was established and began functioning. Prior to that the developer maintained the roads.

| Year | Snow Removal | Weed Control / Mowing | Grading      | Road Base Improvements | Emergency Repair |
|------|--------------|-----------------------|--------------|------------------------|------------------|
| 2001 |              |                       |              |                        |                  |
| 2002 | \$ 595.00    | \$ 600.00             | \$ 2,100.00  | \$ 45.60               | \$ -             |
| 2003 | \$ 1,510.00  | \$ 1,443.04           | \$ 1,452.50  | \$ 1,260.16            | \$ -             |
| 2004 | \$ 505.00    | \$ 1,404.62           | \$ 2,160.00  | \$ -                   | \$ -             |
| 2005 | \$ 1,678.50  | \$ 2,290.00           | \$ 3,502.50  | \$ 2,955.47            | \$ -             |
| 2006 | \$ 1,030.00  | \$ 3,396.25           | \$ 1,375.00  | \$ -                   | \$ -             |
| 2007 | \$ 8,517.50  | \$ 2,306.25           | \$ 3,990.00  | \$ -                   | \$ -             |
| 2008 | \$ 2,885.16  | \$ 2,155.00           | \$ 980.00    | \$ -                   | \$ -             |
| 2009 | \$ 2,200.00  | \$ 3,210.00           | \$ 1,540.00  | \$ 25,275.25           | \$ -             |
| 2010 | \$ 552.50    | \$ 3,018.75           | \$ 2,092.50  | \$ -                   | \$ -             |
| 2011 | \$ 945.33    | \$ 3,212.50           | \$ 1,052.50  | \$ -                   | \$ 3,250.00      |
| 2012 | \$ 1,602.50  | \$ 930.00             | \$ 4,951.25  | \$ -                   | \$ -             |
| 2013 | \$ 2,780.00  | \$ 1,080.00           | \$ 3,900.00  | \$ 12,000.00           | \$ -             |
|      | \$ 24,801.49 | \$ 25,046.41          | \$ 29,096.25 | \$ 41,536.48           | \$ 3,250.00      |

Figure 2. History of Road Maintenance as of 31 December 2013

Figure 2 History of Road Maintenance Expenditures

The value in Figure 2 for 2013 is as of 31 Dec 2013. Analysis of the numbers reveals excluding 2001, on average the Association has spent about 54% of its annual budget of \$15,000 on the roads. In 2009 the association made major improvements to the north entrance hill, the southern part of Eagle Feather Lane, and Comanche Creek Drive around the northern intersection of it and Eagle Feather Lane. These improvements have held up in general, except for the hill on the northern entrance. The emergency repairs were for the concrete crossing over the undersized culvert on Eagle Feather Lane. During a rainstorm the water overtopped the structure and washed the boulders and embankment down the creek, threatening to wash the entire structure out. In 2012 considerable effort was put on the west entrance. The overall frequency of road maintenance is often driven by weather conditions. Figure 3 below shows the frequency for 2012 and 2013.

| Frequency of Road Maintenance Activity |             |                        |
|--|-------------|------------------------|
| Date                                   | Payment     | Action                 |
| 2/18/2012                              | \$1,415.00  | Snow                   |
| 3/20/2012                              | \$785.00    | Grading                |
| 5/6/2012                               | \$237.50    | Grading                |
| 5/9/2012                               | \$308.75    | Grading                |
| 6/17/2012                              | \$330.00    | Mowing                 |
| 6/19/2012                              | \$300.00    | Mowing                 |
| 7/30/2012                              | \$200.00    | Grading                |
| 7/30/2012                              | \$300.00    | Mowing                 |
| 9/30/2012                              | \$570.00    | Grading                |
| 12/5/2012                              | \$2,850.00  | Road Base Improvements |
| 2/23/2013                              | \$260.00    | Snow                   |
| 2/25/2013                              | \$260.00    | Snow                   |
| 2/27/2013                              | \$780.00    | Snow                   |
| 3/10/2013                              | \$1,090.00  | Snow                   |
| 3/27/2013                              | \$350.00    | Grading                |
| 3/29/2013                              | \$390.00    | Snow                   |
| 5/27/2013                              | \$1,520.00  | Grading                |
| 6/27/2013                              | \$500.00    | Mowing                 |
| 8/6/2013                               | \$12,000.00 | Road Base Improvements |
| 8/21/2013                              | \$ 580.00   | Mowing                 |
| 8/29/2013                              | \$ 1,520.00 | Grading                |

As expected, snow removal activities occur in the winter, mowing in June / July and grading is interspersed, about every couple of months during the summer / fall. One key aspect of the last couple of years is the dry weather prevents effective road grading. This plan will cover aspects of road maintenance in the next major section "CCROA Road Maintenance Plan".

### Summary

From the outset, CCROA roads were beset with issues associated with the original construction. Improvements to bring them up to county standard are estimated to be well over \$500,000. These improvements are in sub-grade preparation, drainage improvements, shouldering with aggregate base courses, and placement and preparation of road base. CCROA has spent approximately \$123,000 on the roads over the last 12 years.

Figure 3 Frequency of Expenses

## CCROA Road Maintenance Plan

This plan spans 2013 to 2016, a three year period, and is now in its second year. It is expected to have its second major review by the members in April of 2014. Recognizing the association has an annual budget of \$15,000 generated entirely from members' assessments, this plan lays out a short and long term plan to effectively apply those resources to the CCROA roads. This plan intends to solve the problem of "How to best maintain the roads?" Road maintenance requirements can be divided into snow removal, mowing, road grading, road improvements, and road repair. Within each of these areas, there exist minimum standards to be met, and standards which would meet any reasonable expectation. The two main challenges to overcome are finding companies to do the work, and keeping within the allowable budget.

### Snow Removal

Comanche Creek is one of the most beautiful places to live, and its beauty is enhanced by our remote location. The advantages of remoteness such as solitude, also come with the fact that Comanche Creek

"is too far away" for some people to live, or provide services first thing in the morning. The association makes every reasonable attempt to have the roads open in the morning, but weather conditions and other factors outside of the Association's control often preclude this. During periods of heavy blowing snow, it is common for Hwy 86 to become impassable, as well as county roads near Comanche Creek. Snow removal standards are defined in the Snow Removal Policy adopted in 2004. This policy is in Appendix A, Snow Removal Policy. All snow removal work should be performed by insured contractors with a tax identification number (TIN) for 1099's. One problem to guard against in snow removal operations is taking the crown off the road, or putting too much material into the ditches. The roads should be cleared shoulder to shoulder. Snow removal is the most unpredictable part of the Road Maintenance Budget. The CCROA Board of Directors (BOD) should consider institutionalizing the practice of taking any unspent budget in April, and apply that to the other categories of road maintenance.

## Mowing

Mowing has two major benefits as it is one of the keys to a good gravel road, and it controls the weeds.<sup>1</sup> Generally the first mowing should be done in June before the weeds get too tall and go to seed. Some property owners mow their own easements and that is encouraged. When possible mowing should be done ahead of shoulder operations on the road because mowing reduces the amount of vegetation pulled up into the road. The standard for CCROA mowing is at least once in the spring. Mowing equipment should be able to get at least 10 feet into the easements. In practice that translates into a couple of passes on each side of the road with a rotary mower most mowers have on their tractors.

## Road Grading

The main purpose for road grading is to keep the crown on the road, and to take out the washboard that regularly sets up. The washboard is the number one source of complaints about the CCROA roads, and gravel roads in general.<sup>2</sup> The three causes of washboarding are lack of moisture, driving habits and poor quality of gravel. It is highly unlikely we will be able to influence CCROA member driving habits and the weather. The gradation of gravel can be modified by scarifying, pulling more fines from shoulders, etc. But the key is to get a high quality surface gravel in place in washboarding areas. With heavy traffic in prolonged dry periods, even good surface gravel will not guarantee elimination of washboarding. However, it definitely will reduce it. The standard for CCROA road grading should be 1 to 2 road grading events for maintenance, timed to effectively deal with the inevitable washboarding, and road improvement activities.

## Road Improvements

Road improvements are undertaken to re-crown roads and bring in good road base. The road base for much of CCROA roads is sub-standard. The minimum standard for CCROA road improvement activities is one event per year. In 2004 the Road Committee developed the following goals for road maintenance:

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<sup>1</sup> Gravel Road Maintenance and Design, US DOT, FHA, Nov 2000, page 17

<sup>2</sup> See [www.t2.unr.edu/StreetWise/streetwiseSum02-V11-01.pdf](http://www.t2.unr.edu/StreetWise/streetwiseSum02-V11-01.pdf).



|                             |  |
|-----------------------------|--|
| Near term goals (1-3 years) |  |
| 1                           | Identify contractors/costs for road repairs road grading, road base, and larger gravel.                                      |
| 2                           | Repair road conditions where roads are the worst road base and larger gravel in trouble areas.                               |
| 3                           | Place signs "Crossing while water is present is forbidden" at Texas crossing between the Johnson and the Akerberg properties |
| 4                           | Identification of snow fencing in areas where snow fall is the worst.  |
| 5                           | Identification of areas where weeds are the worst.   |
| 6                           | Spray for weed and grass control (Twice yearly Early Spring and Early Fall)  |
| 7                           | Drag roads on entire tract (twice yearly Spring and Fall)  |
| 8                           | Establish a road maintenance rollover account  |
| Long term goals (3-5 years) |  |
| 1                           | Place new road base on all roads.  |
| 2                           | Locate snow fencing at all areas that have potential of closing roads.   |
| 3                           | Remove cattle crossing at the top of the Comanche Creek and Eagle Feather Y .  |
| 4                           | Determine a plan for spraying for thistle and the grass that is encroaching onto our roads.                                  |

Figure 4 2004 Road Goals

Beginning with the original Goals in Figure 4 above, the association has a way of measuring the effectiveness of them and progress in our plan. Since then (2004) the association abandoned the idea of spraying to reduce the thistle as experience with spraying showed it that was less effective than mowing. In 2009 three trouble areas were addressed:

- the hill just south east of the Johnson's
- the Hill between the Sinel's and the Skowronek's
- the main north entrance hill

Each of these areas are currently "ok" in 2013 with the exception of the main north entrance hill. (From that we can expect the average life of an improvement can be about 4-5 years, depending on traffic.) The association abandoned the idea of snow fencing, primarily because of the need to put it up and take it down on property for each season. The practice of establishing a roll over account was implicitly established, although not explicitly stated by revising the bylaws. There is a backlog of pent up demand for bringing in new road base, however, beginning in 2013 the board will start again, by focusing on the following four sections of the roads:

- The main hill on the north entrance, 2013
- The west entrance hill, 2014
- The east turn of Eagle Feather Lane, 2015
- The Red Cloud Hill, 2016

Each of these areas will be addressed in turn, with the cycle of road improvements<sup>3</sup> continuing after a yearly review of conditions. The two most important components of good gravel roads are good road base, a decent crown, and shoulder/ditches. It is important to guard against short term fixes that are ineffective or counterproductive. Other than poor roadbase, activities that take the crown off, or move road base into the ditches are the number one cause for bad roads. Scraping roads with a box scraper to reduce washboarding causes more damage than good as that practice takes the crown off the road. Grading when it is dry is ineffective.

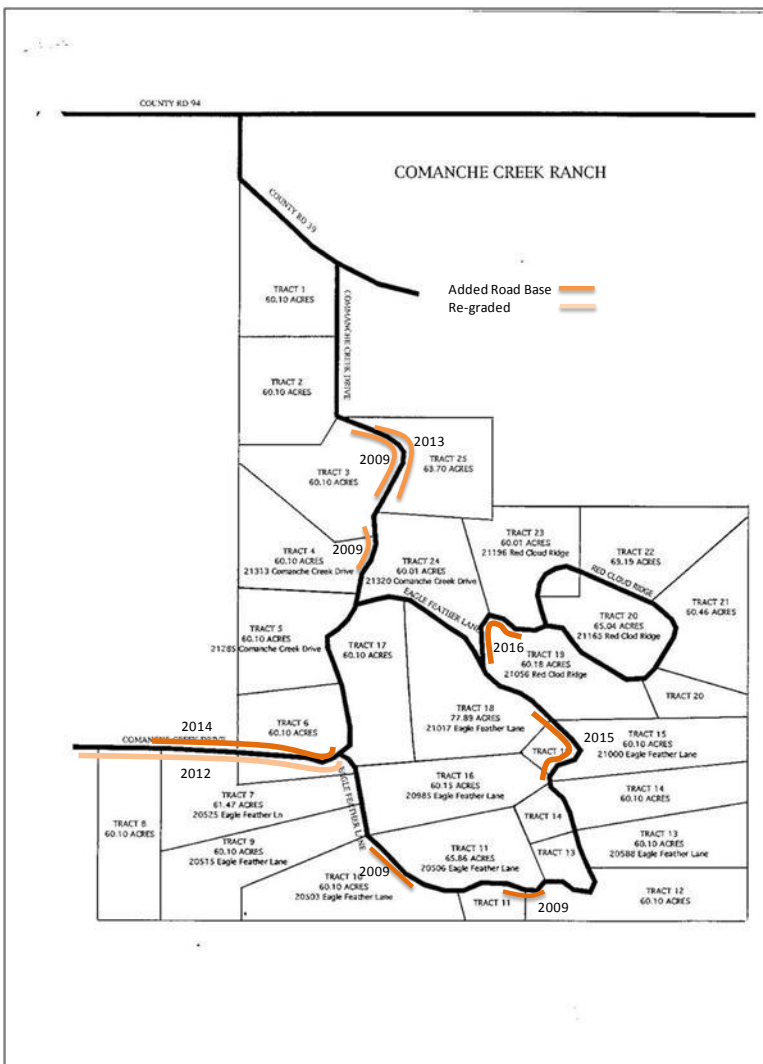
<sup>3</sup> See [www.epa.gov/owow/nps/gravelman.pdf](http://www.epa.gov/owow/nps/gravelman.pdf) for an excellent summary of how to maintain a gravel road.

## Road Repair

Road repair will occur when an event damages the roads, and must be repaired for safety reasons. It is reasonable to expect some repairs as a result of a heavy rain, or run off after a heavy snow. The 2013 approved budget leaves the Association with a surplus in the checking account, and we would anticipate using that for unexpected repairs, if necessary. In the event the roads required repair as the result of something other than the weather, the Board would expect the person who damaged the road to repair it, at no cost to the community.

## 2013-2016 Plan Summary

Figure 5 below shows the recent and planned road improvements from 2009 through 2016. Road grading will be done 1-2 times per year to restore crown, and eliminate washboarding. Grading will be



timed with moisture, and other improvements when possible. Mowing will occur at least once in the spring after the main growth period and before the weeds go to seed. Snow removal will be as stated in Appendix A, Snow Removal Policy. Road repair will occur as required.

Figure 5 Recent and Planned Road Improvements

## Appendix A, Snow Removal Policy

### CCROA Snow Removal Policy

14 Feb 2004

The CCROA snow removal team will contract with a snow clearing contractor when snow plowing is required on CCROA roads.

**Designation of “snow plow caller.”** The snow removal team lead is the primary member to make the call and will generally do this in consultation with other members. In the event he or she is not in town, arrangements will be made to designate a specific person to make the call. This designation is required to avoid two people calling to have the roads plowed. The current team lead is Milt Johnson (303) 648-3401.

**General Guidelines.** The roads will be cleared when the following conditions occur: snow accumulates to a depth greater than six inches, or snow drifts across the road more than 12 inches in multiple locations. Timing of snow clearing will be aimed to have roads cleared for the early morning workers, after the snowfall quits. We would expect to have the roads cleared once per snow event.

**Members clearing the roads.** Some members have equipment capable of clearing the roads. When it snows a little bit and someone wants to clear the roads, or a portion of the road, they are welcome to do this on a volunteer basis. The committee requests such volunteers coordinate this with the snow removal team. Volunteers assume all responsibility for their actions, and the association bears no responsibility or liability for injuries/damages to persons, equipment, or property. In the event of a larger snowstorm, the committee may contract with members to have the roads cleared if their equipment is suitable for the task.

**Blizzards.** It is neither safe, nor practical to attempt clearing the roads during a blizzard. There will certainly be times when the combination of accumulated snow and drifts will make the roads impassible within Comanche Creek and Elbert County. The snow removal team will make reasonable efforts to have the CCROA Roads cleared to coincide with the clearing of County Roads 37 or 39.

**Types of clearing.** Depending on the amount of snow, the snow removal team will consider calling for a truck-mounted blade, or a grader. The distinction is some snows cannot be cleared with a truck, and heavier equipment is required. It is only by experience and inspection of the problems areas can this judgment be made. The snow removal team will maintain records on the frequency and types of clearing required.

**Billing.** Bills for snow clearing will be submitted to CCROA, PO Box 292, Elbert CO 80106.