



Larimer County Public Works Division

Road and Bridge Department

Developing and delivering innovative infrastructure maintenance and improvement solutions today, for tomorrow.

Annual Report 2008



Larimer County will add value to the lives of its citizens by:

- *Building Partnerships*
- *Being Customer Driven*
- *Empowering People to Take Responsibility*
- *Being a Fulfilling and Enjoyable Place to Work*
- *Being a Good Steward of Public Resources*



Welcome

It is my extreme pleasure to introduce you, not only to the Larimer County Road and Bridge Department, but also to the initial edition (Volume I, Number I) of our annual report – a collector’s item of sort. Here-in you should expect to find articles of interest regarding our transportation network and the folks that make it possible from within our area of responsibility.

The ladies and gentlemen of your Road and Bridge Department come from all walks of life with unique skill sets, interests and the common desire to make your travelling experience a positive one. Our responsibilities and mission, in your behalf, include the recognition of the importance of a properly planned, constructed and maintained transportation infrastructure. Additionally, our daily charge is to provide the individual main-

tenance and construction activities necessary for you to have an effective, efficient and safe transportation system. Your Larimer County system includes 464 miles of paved roads, 445 miles of non-paved roads, 203 major structures (bridges with a span of 20 feet or more), 437 minor structures (crossings which span from 4 feet to 20 feet), as well as innumerable culverts, signs and individual customers such as yourself. In addition, we maintain approximately 125 miles of U. S. Forest Service roads, by contract, in the public’s behalf. We trust you are supportive of our mission and will take the time to let us know how we are doing.

We hope you will enjoy reading and learning about our services and organization through the contributions provided within by many of our employees. If questions arise, please do not hesitate to contact our administrative offices (at 970-498-5653) or me personally (970-498-5653 or dmiller@larimer.org). We will do our best to address your ques-

tions and/or concerns promptly.

In addition, if you have thoughts and suggestions for articles in our future editions, please pass them along.

Thank you.

Dale L. Miller
Road and Bridge Director



Responsibly Managing Our Assets Today To Preserve Tomorrow

Since Larimer County’s road system makes up the largest single asset for the County, it is crucial that we are able to track and identify maintenance needs for the County’s road system assets in an accurate and timely manner. The term ‘road system asset’ is used by the County to describe items ranging from the roads themselves, to bridges, culverts and sign panels. As the County’s road system would cost over \$400 million to replace, it is important that we manage this system in the most efficient and cost effective manner possible.

Larimer County maintains and manages its road system using an asset management system. This tool provides us the ability to track the assets we have, the condition of these assets and determine which assets require maintenance. As multiple departments within the county access this tool, we are able to track our assets in one system, which in turn gives us one source of information that we can use to identify and prioritize which roads or other assets need maintenance and improvement. This data provides information we use to assist in determining our budget needs for the support, maintenance and improvement of the road system.

Larimer County has developed a Transportation Report Card webpage using the data from our asset management system. This webpage is available to the public at www.larimer.org. The report card contains an overview of each road of our system based on three categories:

road safety, road condition and road capacity. Overall ‘Grades’ are given to individual road segments as well as to the road system for each category. This high level overview of our road system is aimed at giving Larimer County and its citizens an opportunity to see how the county measures up, and what we, as a county are doing to preserve our most valuable asset.

Article by:

Ali Whitcomb
Business Analyst



Vac Truck helps keep culverts clean and our road drainage working.

On The Cover:

- | | |
|---|---|
| 1 | 5 |
| 2 | |
| 3 | 4 |
1. Pothole repair on CR 50.
Photographer: Lonnie Berett
 2. CR 44H.
Photographer: Dana Mortensen
 3. Prairie Divide Road.
Photographer: Ed Wilson
 4. CR 11H / Boise Ave.
Photographer: Lonnie Berett
 5. Estes Park chipseal

Not Just Your Average Road Warriors

Some times working in the County right of way (ROW) is like being a warrior. There are many requirements that must be met before a person can be considered for employment with the Larimer County Road and Bridge Department on a regular fulltime basis. All of our field positions require that an applicant must have a valid Commercial Driver License (CDL), of at least a “B” class with tanker, haz-mat endorsements and air-brakes. In addition one must have possession of and ability to maintain a Department of Transportation (DOT) medical certificate. Applicants are also required to have a high school diploma, or the equivalent, and one year experience in construction or maintenance of roads. These minimum requirements must be met to even be considered for apprentice operator, the entry-level position with the Road and Bridge Department.

The requirements for more responsible positions are more stringent and can include possession of a class “A” CDL and three to five years of experience operating various pieces of heavy equipment in the construction or maintenance

of roads.

The first assignment when applying for the position of a

Larimer County Road Warrior is to complete an employment application properly. After a thorough screening of the application, provided the applicant has met all the requirements, they are notified that they are eligible to take a written examination. Applicants are tested on their ability to follow oral and written instructions, knowledge of heavy equipment operation, equipment maintenance, general street repair, safe work practices and supervisory skills. A passing score is 70% or greater and the time to complete the test is two hours forty five minutes.

If an applicant receives a passing score on the written exam, we test their equipment operator and driving skills. We have demonstration grounds for testing on various special pieces of heavy equipment and there is no way an applicant can fake their way through this part of our process. For each classification group, Journey Operator, Senior Operator and Master Operator, there are specific pieces of equipment that must be operated to demonstrate the skills necessary and appropriate to the classification. The skill demonstration must be

accurately completed for that piece of equipment as well as for the specific classification. The driving skills test follows.

Subsequently, our interview process serves two purposes; one is to inform the applicant of what it is like to work for the Road and Bridge Department and of our expectations. The second is to assess the applicant’s attitude and work ethic.

The last processes are a criminal and credit background check and physical.

If you’re fortunate enough to make it through, then you’re ready to face all kinds of adversities such as extreme cold or hot weather, wind, rain, snow storms, flash floods, tailgating traffic, speeding and an occasional irate citizen.

To be a true Road Warrior you withstand all of the above and are still professional and effective. You get a quality job done in a safe and cost effective manner. The real Warriors enjoy the many daily challenges that we face and enjoy serving the public. To check for Road Warrior job openings, go to:

www.larimer.org/jobs

Article by:

Dennis Morrison
Assistant Road and Bridge Director

Bridges

Following the sunset of the former “State Bridge Program”, as administered by the Colorado Department of Transportation (CDOT), the Road and Bridge Department developed an internal bridge funding and replacement strategy. Our process supports routine maintenance being performed in-house while funding major repairs and replacements through contract construction. With a transportation system whose infrastructure includes 203 major structures (bridges with a span of 20 feet or more) and 437 minor structures (crossings which span from 4 feet to 20 feet), such an approach is imperative if we expect to protect our customers and



avoid a catastrophe similar to the recent Minneapolis collapse. In addition to internal maintenance operations funding, an annual allocation of \$1 Million is

designated for contract bridge repair and replacement. Given constrained funding sources and ever increasing costs, it is frequently necessary for us to pool several years’ of our internal allocation in order to secure sufficient funding to pay for large structure replacements. Typically, however, we replace at least one major bridge and one minor bridge per year. Though the expected service life of a currently replaced structure is approaching 100 years, we are barely able to stay ahead of the game. Fortunately, interplay between our Capital Improvements Program projects and Capital Expansion Funds (CEF) funding occasionally helps to shore-up our efforts.

Article by:

Dale Miller
Road and Bridge Director

Capital Improvements: Building for Our Future

Program greatly compliments those efforts.

Considering the age of Larimer County (established in 1861 as one of Colorado's original seventeen), our Capital Improvements Program is relatively new. It was founded as a result of the De-Brucing initiative of our citizens in 1999 and provides us with the ability to fund nearly \$2 Million worth of improvements annually. Typically, these improvements are roadway and intersection capacity related (from widening, turn lanes and roundabouts to total roadway reconstruction and paving). Occasionally, in order to make the best use of Capital Expansion Funds (CEFs), those funds collected from developers for off-site improvements, we will use "Capital" funds for bridge improvements as well. Though no substitute for the regular and routine planned maintenance provided by the Road and Bridge Department, our Capital Improvements

Given fiscal realities, the Road and Bridge Department's ability to continue to protect our transportation infrastructure into the future should be viewed as mixed. We have the right employees and skills to tackle both today's needs and tomorrow's challenges. Unfortunately, our revenue may not be able to keep pace with growth, the expectations of our customers and the rising cost of the materials we must employ to continue to be successful. We appreciate our customers' support of our Capital Improvement efforts.



County Employee of the Month for February 2008



Sally Damge is, hands-down, THE BEST. Both we and the public couldn't ask for a more dedicated, sincere, enthusiastic, productive, fun and "real world" person with which to work and be on our team. We could all take a lesson from Sally in what to bring to work each day!

Maintaining our Paved Roads

To maximize efficiency in maintaining our paved road system we have divided the county into seven maintenance areas. These areas each have approximately the same number of paved road miles and are laid out in a horizontal pattern. Focusing maintenance efforts on roads located within close proximity of one another over a seven year period enables labor and materials to be located in a single geographic area each year thereby reducing mobilization costs.

As part of this process, our crack seal area is a year ahead of our overlay area which is one year ahead of our chipseal and seal coat area. Here is an example of how this works. In 2009 our overlay area will be in area 3, our chipseal and seal coat area will be in area 2 at the same time our crack seal is focused

on area 4 and area 7. This allows the crack seal to be completely cured before a road is overlaid. Non-cured crack seal can cause smoothness problems with an overlay. The other advantage is that we are able to seal the new pavement surfaces from the overlay as part of the seal coat program the following year. This

gains us several additional years in the pavement life at a relatively low cost.

There is another advantage to planning maintenance by geographic areas. Citizens will be inconvenienced less frequently with road work in their neighborhoods.



Contractor placing a seal coat on one of the county roads near Estes Park.

Budget issues caused '07 to have an seal coat program but not an overlay program. Likewise, '08 had an overlay program but not a seal coat program. If revenues hold steady, or improve, we will back on track.

There are other aspects of maintenance on the paved roads that are accomplished countywide on an annual basis. These include roadside mowing, shoulder grading, striping, signs, and of course, pothole repairing.

Article by:

Lonnie Berett
Paved Roads Group Manager



Loading CDOT Class 5 roadbase at Larimer County's Strang Pit



Freshly painted stripes put the finishing touch to a recently chipsealed road.

Operators have opportunities at the Road and Bridge training area. This cost effective method provides the means to broaden our operators' skill sets.



Crusher operations at Larimer County's Strang Pit

Steve Johnson, (Waverly Grading Team), finishes newly placed gravel to our road template. The template consists of a 4% crown, consistent width and well defined drainage.

*N*on-Paved Roads North and South

The Road and Bridge Department maintains approximately 445 miles of non-paved roads. Given the square mile area of the county, maintenance of our gravel roads is divided into two areas with the division being approximately along Colorado State Highway 14. The manager for the area north of SH14 is Jim Frick and Rick Gavaldon for south of SH14. They are in charge of main-



Snow Blower near Red Feather Lakes

taining the non-paved roads as well as the gravel shoulders of the paved roads. The Northern area has of four grading teams. A grading team consists of two road graders, a roller and a water truck. Two such teams are assigned to the Waverly area, one to the Livermore area, and one to the Laramie River area. The southern area has a grading team assigned to the Loveland area, one to the Estes Park area and one to the Stove Prairie area. Gravel roads are treated with Magnesium Chloride or X-Hesion for stabilization and dust control. We are gradually moving away from Magnesium Chloride and converting to X-Hesion and other more environmental friendly products. Native surface roads are not typically treated.

The Gravel Road Managers are also responsible for snow removal on both paved and non-paved

roads in their respective areas. We employ thirty-three plow trucks county-wide. Sixteen road graders and eight front end loaders are also available if the severity of a storm warrants. Other maintenance performed by the teams includes roadside trash pickup, dead animal removal and miscellaneous other duties to insure the safety of the traveling public. We take great pride in serving the public and our role in making Northern Larimer County a great place to live.

Article by:

Jim Frick and Rick Gavaldon
North and South Gravel Road Managers



Grading new gravel on one of the roads in northern Larimer County

*P*lacing Gravel

The Larimer County Road and Bridge Department Materials Group saw a busy and productive 2008. The Materials Group consists of the Hauling and Placing Teams, which are charged with graveling the county's native surfaced roads, re-graveling roads that require new gravel and implementing our chip seal program. Due to fiscal constraints, we



did not have a chip seal program during 2008, so the Materials Group spent the majority of the year working on native surface roads in the foothills that were in dire need of an aggregate base course.

When graveling, we normally use a modified CDOT Class 5 aggregate that the Road and Bridge Department manufactures at our Strang Gravel Pit. We have found that this aggregate, compared with other locally manufactured materials, is the best fit for the needs of our roads. The beginning of 2008 saw us working to gravel

County Road 44H in the upper Buckhorn Canyon. We worked on 44H until the winter weather hindered our operations at which time we moved to lower elevations to complete several re-gravel projects. As springtime came, we moved to gravel a 7 mile long portion of County Road 63E (Pingree Park road). As

the summer unfolded, we returned to gravel 44H in the Buckhorn Canyon. As winter crept back upon us in late 2008, we had completed approximately 6 miles, no small feat considering the location and the difficulty of maneuvering the winding canyon road with a fleet of approximately 17 large trucks. As the weather hindered us once again in the late fall, we moved our operations to the Waverly area to start a re-graveling project on County Road 17. Overall, we hauled and placed gravel on approximately 12 miles of road, amounting to more than 102,000 tons of aggregate base and requiring the Hauling Team to log more than 475,000 miles. We were able to alleviate some longstanding needs, greatly increasing the maintainability, drive-ability and therefore safety of some of the more mountainous roads in Larimer County.

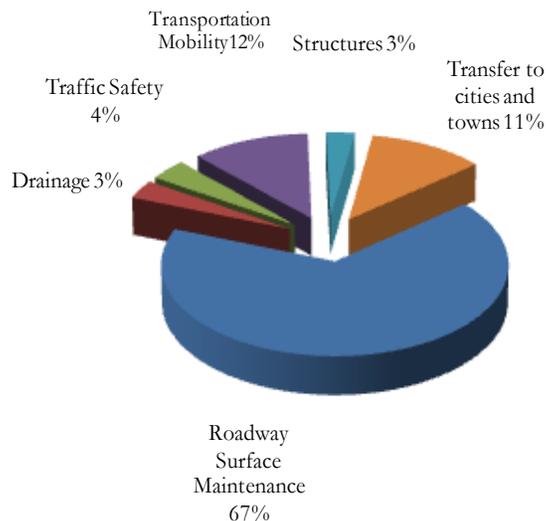
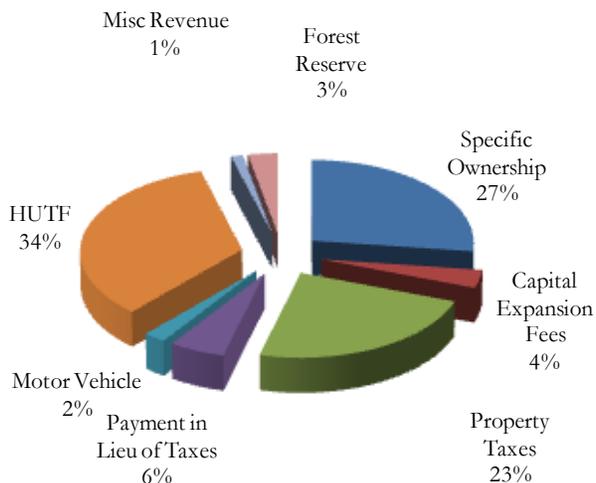
Article by:

Justin Hersh
Interim Group Manager

Summary of Finances

2008 Revenues
\$18,141,506

2008 Expenses
\$15,288,373



**These figures are unaudited. Audit to be complete mid 2009*

Where Does our Revenue Come From?

Our primary source of revenue is the Highway Users Tax Fund which is the distribution method for gasoline tax, motor vehicle license fees and registration fees. In 2008 we experienced a 7% decrease in HUTF revenue. Our secondary revenue stream is from Specific Ownership Tax which is made up of taxes charged for vehicle and equipment registration within Larimer County. Property Tax is our third largest revenue stream. Fifteen percent of the Road and Bridge Department's revenue is from

Capital Expansion.

In 2008 Road and Bridge total expenses were \$15,288,373. The majority of expenditures are made to maintain the existing roadway system. Expenses include gravel and paved road maintenance, snow removal, bridge repair/replacement and system administration. Transportation mobility is our second largest expense category. This includes new road construction projects. Other programs include signs and drainage.

other sources such as Payments in Lieu of Taxes, Forest Reserve Distribution, and

Statutory Distributions to cities and towns within Larimer County comprised 11% of our total expenses in 2008.

The difference in revenues and expenses as shown above is readily explained by the need of the Road and Bridge Department to hold funds in reserve that are designated for future programs and services. Some of the programs reserves fund are the bridge replacement, capital improvement and investments in our outlying shops such as Loveland or Estes Park.

Article by:
Diana Crow
Accountant II

Railroad Crossings

One of the safety objectives of the Road and Bridge Department is to have every at-grade railroad crossing in unincorporated Larimer County equipped with lights, bells, signal arms, concrete crossing materials and paved approaches. Though this is a lofty goal (approximately \$30,000 for surface improvements and \$120,000 for safety improvements, per crossing) it is one worthy of the effort. Such configuration helps to protect our customers, our employees and the railroad(s) from the potential of property damage, injury and

death.

Properly implemented, such improvements also enhance our customers' traveling experience. No one appreciates a well designed, constructed and maintained road if it is interrupted by the jolt of a rough railroad track crossing. Our specific criteria were formulated and are implemented to eliminate the displeasure of a rough crossing while enhancing the safety within the area of our at-grade railroad crossings.

You will improve your personal safety if you always expect that any time you are within 10 feet of the rails, a speeding train may come from either direction

that you will not see or hear. Improved or not, please be extra cautious as you approach any railroad crossing.



Before



After



An early photo of a Larimer County Road Crew headed out for a days work (origin of photo unknown)

Contact Information

Address

Administrative Offices
2643 Midpoint Suite C
Fort Collins, CO 80525

Mailing Address

PO Box 1190
Fort Collins, CO 80522

Phone

(970) 498-5650
(970) 498-5678 Fax

Office Hours

7:00 a.m. - 4:30 p.m.
Monday - Friday

On the Web at:

www.larimer.org/roads

Public Works Division

Marc Engemoen, Director

Engineering

Fleet

Natural Resources

Road and Bridge

Solid Waste

The Ranch



Road and Bridge Satellite Facilities

Estes Park

543 Elm Avenue
Estes Park, CO 80517
970-586-2840

Livermore

124 West CR 74E
Livermore, CO 80549
970-493-7826

Waverly

241 W. CR #70
Waverly, CO 80549
970-498-5660

Loveland

2205 East SH #402
Loveland, CO 80537
970-679-4514

Stove Prairie

17218 CR #52
Bellvue, CO 80512
970-493-8612

Laramie River

21137 CR #103
Glendevy, CO
(mail: Jelm, WY
82063)
970-435-5718



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