

FIBER OPTIC FOCUS

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New Fiber For Northern Nevada

In August 2011, Union Pacific embarked on a new fiber construction project with CC Communications along its rail corridor. The project follows the Truckee River through northern Nevada as it winds its way eastward from Reno toward Pyramid Lake.

Partnering with the railroad, CC Communications, one of Union Pacific's new fiber customers, began its project along the Nevada Subdivision westward from Hazen to Reno, Nevada. As the former Southern Pacific Transportation Company track nears the Reno area, the Truckee River Canyon provides more than a few narrow areas with limited access along the rail corridor which made it more challenging due to the rocky terrain and multiple river crossings.

"The new fiber optic cable being installed along the rail line will provide the bandwidth needed to allow CC Communications to offer state of the art services to their customers in Churchill County", said Robert (Bob) Adams, General Manager, CC

Communications. "The willingness of the UPRR to work with us to place this needed cable is much appreciated. The UPRR has been outstanding to

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Hydraulic impact hammer "Hoe-Ram" breaking rock in preparation of installing conduit



CC Communication's plow crew installing conduit and cable warning tape

Colonel's Inspection Trip Through the Feather River Canyon

The sky's the limit for a U.S. Air Force officer, Colonel Mike Greiner, who joined Union Pacific on an 11-month assignment Aug. 15 as a member of the Secretary of Defense Corporate Fellows Program (SDCFP).

Col. Greiner's work at UP will focus primarily on Information Technology and processes that support core business-user departments. He also will observe various inner workings of a large corporation, including organizational structure, business practices and operations. Greiner's mission will be mutually beneficial for the railroad and the U.S. Department of Defense (DoD).

While Col. Greiner provides insight from his military experience, he and 13 other officers selected to train with American corporations during their nearly yearlong assignments are expected to glean best practices that will enhance the DoD's efficiency.

On November 30, 2011, Regional Construction Coordinator Ron Christensen, conducted a hyrail trip through the Feather River Canyon from James to Keddie, California, along the Canyon Subdivision with Col. Greiner, Ed Kemp – AVP Telecommunications and Craig Johnston – Director, Fiber Optics & Asset Utilization. Ron is responsible for fiber optic construction coordination between UP and commercial telecommunication customers along the Feather River Canyon. He is also responsible for the safe and effective

activities related to specific fiber optic customer's cable routes located generally between Salt Lake City, Utah, and Hayward, California.

This over the rail inspection of the territory provided for an excellent opportunity for Col Greiner to gain insight on a typical day along the rail corridor for the region. Fortunately for that day, Detector Car-22 (DC-22) was also performing work in the territory. Dave Smith-Chief Detector Car Operator and Russell Stewart-Detector Car Operator provided an excellent overview of rail detection operations and its capabilities. A culvert being installed in an area only accessible by rail at Milepost 253.96 demonstrated the types of equipment and the track protection process needed to complete such a project. Finally, a small rock slide was encountered at Milepost 252.3 near Tobin, California that was cleared by the hyrail inspection team to continue the journey to Keddie.

Following the trip, Col. Greiner reflected, "The hyrail trip provided a thorough overview of how trains and other departments within the UP system coordinate to ensure strong rail velocities while maintaining the highest level of safety. The complexity of railroad operations and the IT network needed to support these operations have been a real eye-opener during my Fellowship. Throw in the scenery of the Feather River Canyon and great weather, and this will be an experience I will remember for the rest of my career."



Colonel Mike Greiner standing in front of hyrail vehicle

Working on the Railroad



Colton Yard

With the approach of 2012 Union Pacific forces are preparing for the largest Engineering Department budget ever to be allocated.

Across the system, miles of new sidings are to be constructed with additional miles of length added to existing sidings. New bridges will be built. Yard upgrades from Oregon to Texas and Minnesota are planned to increase efficiencies and speed train movements and switching work.

Multiple Signal projects planned for the coming year will extend Centralized Traffic Control or “CTC” to subdivisions presently operated by other means. Double main track construction projects will continue along the Sunset Route and numerous other lines such as the El Paso to Memphis Route and subdivisions in Louisiana and Idaho.

In Santa Teresa, New Mexico, construction continues on the new Strauss Yard facility, the largest construction project in the state of New Mexico in a decade. When complete the new facility will be one of the largest yards on the Union Pacific system.

Near Los Angeles, California, on Union Pacific’s

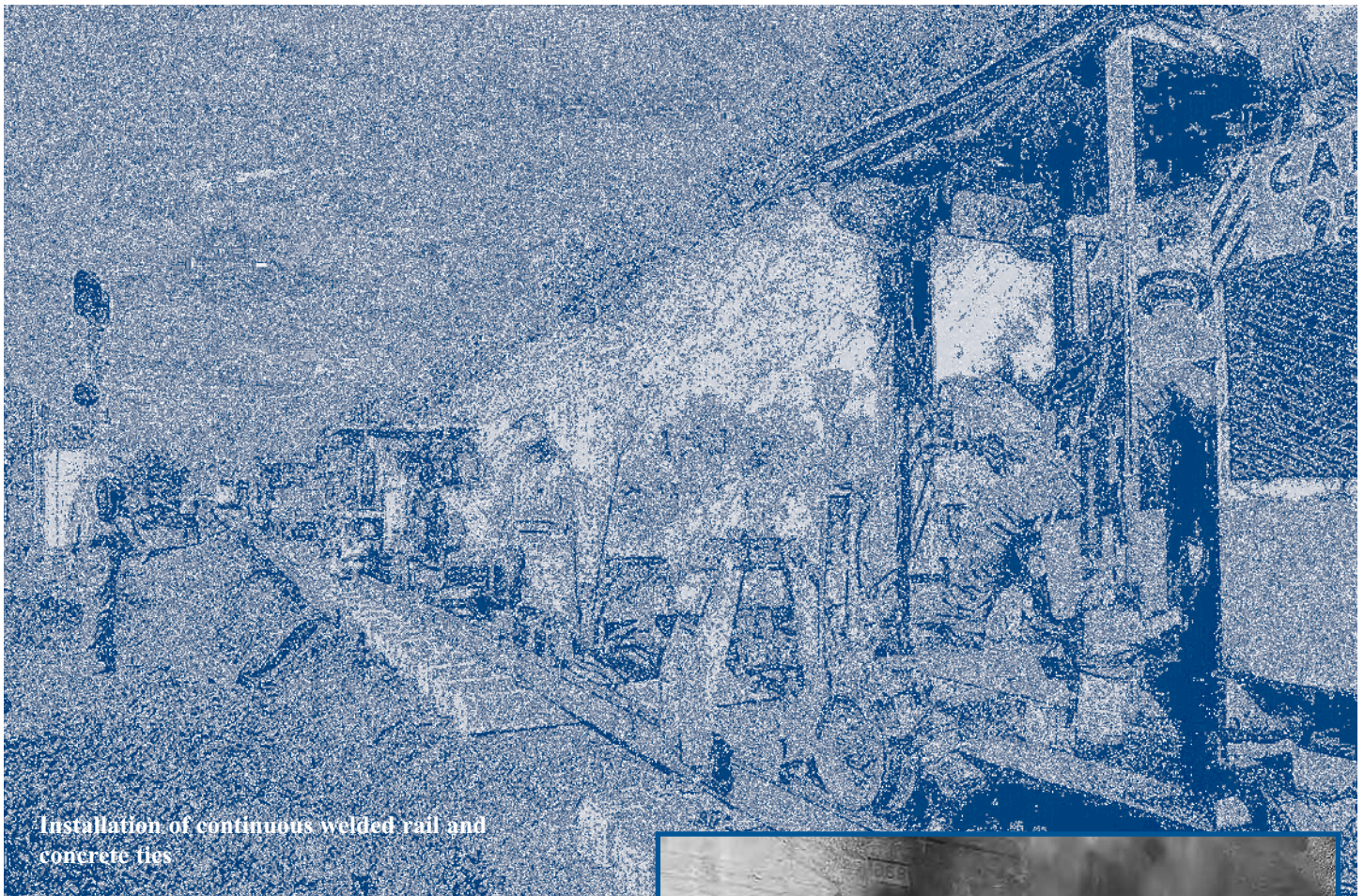
Alhambra Subdivision, construction work continues on the Colton “Fly Over.” The flyover is a 1.5 mile long elevated structure crossing 26 feet above a BNSF track to avoid crossing conflict with up to 70 trains per day. When completed the flyover will improve traffic congestion in the Los Angeles Basin and improve train speeds for both the Union Pacific and the BNSF. Three additional flyover tracks are planned for Union Pacific lines in Nebraska in the coming months.

Union Pacific is considering the possibility of constructing a new Mississippi River bridge to replace an older structure on the railroad’s Midwest corridor. The new bridge would be a clear span with sufficient elevation to allow barge traffic to pass under the bridge without affecting rail operations. The existing span is currently unavailable to rail traffic for 4-6 hours a day to allow barge traffic to pass. On the border with Mexico another bridge near Brownsville, Texas, is planned, to eliminate traffic concerns and speed train interchange into and from Mexico.

Working closely with U.P. Engineering, Amtrak is

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Installation of continuous welded rail and concrete ties

continuing with a multi-year passenger station and platform improvement effort along Union Pacific lines. In places such as Alpine, Texas, new platforms are presently under construction.

Union Pacific has in recent years focused on improving its fleet of locomotives to increase dependability, fuel economy, and train speeds leading to increased customer satisfaction and stockholder value. With an eye to the future amid growing demand for its services, the railroad is planning well into the future to insure that its infrastructure will be ready for growth as demand increases.

As in the past, Union Pacific's "Fiber Optic Group" will closely coordinate with its counterparts in Engineering to insure its fiber customers receive notification well in advance of any planned work to be done where fiber optic cables share the right of way with trains.



Tunnel notching operations

Getting the Focus?

Now available online at
Telecom/Fiber Optic/SAFT under the "About Us"
section on www.up.com

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The Colorado One Call Center



Union Pacific's SAFT group and team members of the Colorado 811 team are listed left to right: Tim Neumaier, Marty Mead, Paul Pino, Mike Shallow, Clarence Styvar, Don Tobias, Michael Heald, Ron Christensen, Mike Wallman, Steve Waits, Mike Argo, Bob Giery, Bill Wright, Brent Sumner, Phil Stevenson, Craig Johnston, J.D. Maniscalco, Sandy Samuelson, Jose Espino and Jeff Osthus.

In addition to the annual staff meeting for Union Pacific's Safety, Asset Utilization and Fiber Optic Technology group during the end of October, a planned visit to the Colorado 811 Center in Golden gave the group an "up close" view of the daily operations of a dedicated damage prevention organization.

Colorado 811, under the leadership of Executive Director J.D. Maniscalco, is Colorado's one call (811) center dedicated to the prevention of damage to property or injury to persons by anyone performing excavation work. It is governed by a board of directors comprised of facility owners &

operators with professional excavator representation. Colorado 811 issues an annual Damage Data Report for the state of Colorado and makes recommendations that often become law.

Colorado 811 is also home to the Damage Information Reporting Tool "DIRT." DIRT is a national database of utility damage closely aligned with the Common Ground Alliance, an organization promoting shared responsibility in utility and pipeline damage prevention. All data reported to DIRT is on a voluntary basis.

In addition to the daily "Call Before You Dig" operations, the Colorado 811 also offers dispute

resolution hearings known as Alternate Dispute Resolution to any facility owner, operator, excavator or other interested party for certain disputes arising from damage to facilities from excavation.

As an 811 call center, anyone unsure of the local phone number for the state one call center may call "811" and be automatically routed to the center. Colorado 811 will process approximately five hundred thousand "call before you dig" requests in 2011. The total number of outgoing notices to member facility owners and operators is expected to surpass two and a half million.

Call 811 Before You Dig

August 11 is the day for everyone to remember that you should always use 811 to “Know What’s Below” through the use of Call Before You Dig. As we conduct our job briefings today please keep in mind the important message of underground damage prevention.

Anyone that is planning to dig can help prevent the unintentional damage of an underground utility line. The use of the nationwide 811 number makes this process so simple. As background, the 811 number was established in 2005 by the Federal Communications Commission to provide an easy and free method for protecting underground utility lines. All callers to 811 are connected to their local one call center, which notifies the appropriate utility companies of the intent to dig. Professional locators are then sent to the requested digging site to mark the approximate location of underground lines.

Striking a single line can cause injury, repair costs, fines and inconvenient outages. Every digging project, no matter how large or small, warrants a call to 811. Installing a mailbox, putting in a fence, building a deck and laying a patio are all examples of digging

projects that need a call to 811 before starting. For those of us here at Union Pacific this would include the installation of permanent markers, post and poles, the digging in of signal wires and utility lines and virtually all projects located outside of the track structure. “On August 11 and throughout the year, we need to remind homeowners and contractors alike to call 811 before digging to eliminate the risk of striking an underground utility line,” said Mike Shallow, Manager of Union Pacific’s Call-Before-You-Dig hotline. “Failure to call before digging results in more than 250,000 unintentional hits annually, and we do not want anyone’s project to become part of the statistic.”

Union Pacific is proud to recognize and support the national reminder to utilize the “Call 811 Before You Dig” campaign. Visit www.call811.com for more information about 811 and the call-before-you-dig process.



**Know what's below.
Call before you dig.**

From left to right: Mike Shallow, Craig Johnston, Paul Pino, Mike Wallman and Jeff Osthus



Tom McGovern Returns to the Fiber Optics and Asset Utilization Group

Effective October 1, 2011, Tom has once again returned to the Safety, Asset Utilization & Fiber Optics Technology group within the IT-Telecommunications Department. Tom's responsibilities include the licensing of all Union Pacific frequencies used for day to day operations as well as the management of Union Pacific wireless communication sites. "We are very fortunate to have Tom return to our work group. Tom is a great addition to our team by bringing his technological capabilities and applying them to applications we envision to be successful while meeting our customer commitments," said Craig Johnston, Director-Fiber Optics & Asset Utilization.

His railroad experience began in January of 2000 when he first joined the Precision Measurement



Vehicle (PMV) team as an operating group within the Safety, Asset Utilization & Fiber Optics Technology group.

Ultimately, on July 1, 2008, the PMV group transitioned its operations to Union Pacific's Engineering Department and continues to effectively collect, measure and process data along the railroad corridors. During his tenure working within the PMV group, Tom was responsible for collecting track side data and processing the data for video simulation.

Tom graduated from Iowa State in 1999. He is happily married with four children and his hobbies are reading, riding his bike and spending time with his family. "I couldn't have found a better company to work for. The people here at Union Pacific are team oriented and willing to lend a helping hand. It's like family here," says Tom.

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work with and if there is the potential to work with them again in the future for long haul fiber optic projects we would welcome their participation."

Recent tunnel expansion work on the Nevada Subdivision in the Donner Pass area has enabled the railroad to utilize this Nevada route for double stack container trains that were previously required to operate over Union Pacific's "Feather River Route" creating a substantial increase in train traffic along the rail line. The installation of the new cable will also serve to increase the railroad's signal and communication capabilities creating new efficiencies for rail traffic across this corridor.

Union Pacific's Construction Coordinator, Phil Stevenson, oversees this project and interacts with several of the other Construction Coordinators from around the Union Pacific system providing relief and support as needed to complete this project during the first quarter of 2012.

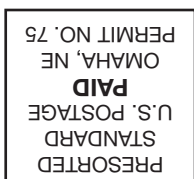
UP employees can access Fiber Optic Focus on the employee homepage under "News and Info / Your Local News"



In Memoriam

Former Engineering Inspector – Fiber Optics, **Robert M. McFadzen** passed away suddenly October 4, 2011. Robert started his career with Union Pacific in the Engineering Department on June 22, 1959. He officially was assigned to the “Fiber Optic” group April 16, 1987. Robert worked with what has become known as the Safety, Asset Utilization and Fiber Optic Technology group until his retirement at the end of the year in 1996. “I first worked with Robert on a fiber optic construction project generally from North Little Rock to Van Buren, Arkansas. I soon learned that Robert valued his integrity, work ethics and he was one of the kindest individuals I have worked with. He was always willing to do whatever it takes and travel to any location along our system to get the job done,” recalled Craig Johnston, Director-Fiber Optics and Asset Utilization.

Union Pacific Employees were saddened to learn of the sudden passing of longtime Sprint employee **Ivan Keup**. Ivan began his career many years ago with the Southern Pacific Railroad's Telecom Department and had been with Sprint since its inception with the railroad. Ivan had become an employee of Ericsson at the time of their agreement with Sprint and had for many years been the Sprint Technician covering the Southeast Texas area, including Corpus Christi, Texas. Union Pacific employees would like to extend their condolences to Ivan's family during this time and wish them well.



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