

RAILWORKS® TODAY

*A monthly newsletter for employees of
RailWorks Corporation and its subsidiaries*

Sound Transit's University Link Makes the Grade

As Seattle's new University Link extension begins revenue service this month, it not only means an extension of the region's light rail but also the operation of a smarter, better integrated control system for the entire network. RailWorks companies L.K. Comstock National Transit and HSQ Technology teamed up to make these improvements happen.

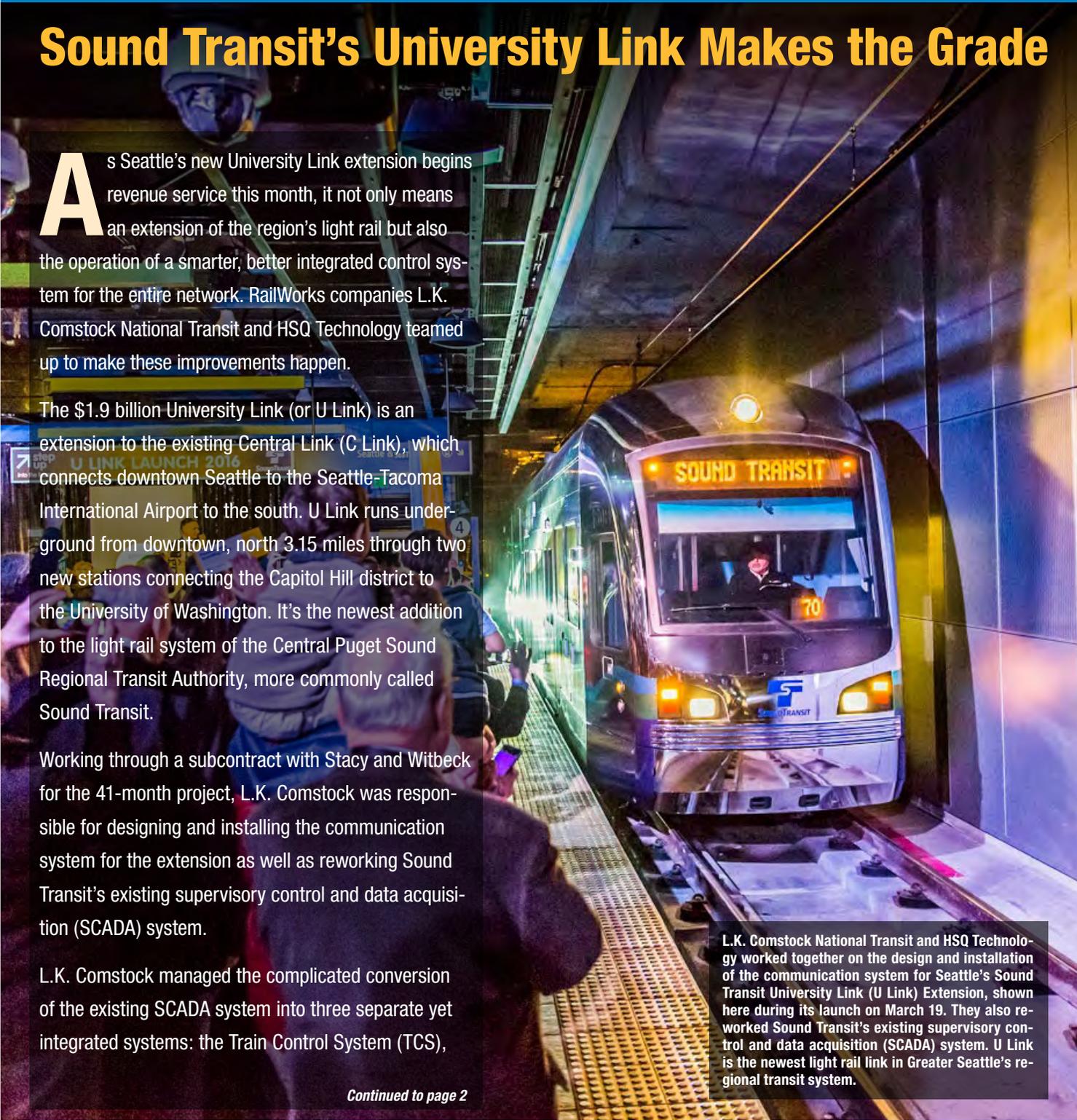
The \$1.9 billion University Link (or U Link) is an extension to the existing Central Link (C Link), which connects downtown Seattle to the Seattle-Tacoma International Airport to the south. U Link runs underground from downtown, north 3.15 miles through two new stations connecting the Capitol Hill district to the University of Washington. It's the newest addition to the light rail system of the Central Puget Sound Regional Transit Authority, more commonly called Sound Transit.

Working through a subcontract with Stacy and Witbeck for the 41-month project, L.K. Comstock was responsible for designing and installing the communication system for the extension as well as reworking Sound Transit's existing supervisory control and data acquisition (SCADA) system.

L.K. Comstock managed the complicated conversion of the existing SCADA system into three separate yet integrated systems: the Train Control System (TCS),

L.K. Comstock National Transit and HSQ Technology worked together on the design and installation of the communication system for Seattle's Sound Transit University Link (U Link) Extension, shown here during its launch on March 19. They also reworked Sound Transit's existing supervisory control and data acquisition (SCADA) system. U Link is the newest light rail link in Greater Seattle's regional transit system.

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Emergency Ventilation System (EVS), and Building Management System (BMS). The existing network setup carried all systems information — train control, traction power, communications (including closed-circuit television/CCTV, variable-message signage, telephones and the public address system), emergency systems, elevator, escalators and much more — in one network: the Communications Network, or TCN. The new setup resulted in two separate networks: the existing Communications Network (TCN) and the Emergency Fan/Fire Life Network (EFN).

“All these subsystems were previously configured onto one extremely congested network system,” explains Project Manager Juan Estrada. “If you have one CCTV hiccup and the network goes down — guess what? You don’t know where the train is; you lose all your systems information. You lose everything.

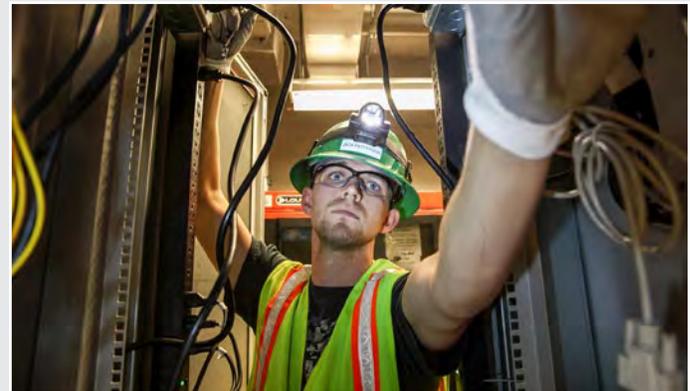
“That type of configuration puts a lot of strain on the network. You have (data-heavy) systems like the CCTV with a streaming video feed active in the same network as the system for fire protection and life safety, which sends a lot less information. If you need to do a repair or improvement on any part of the network, it’s that much more complex, because you are involving a lot more systems and people. And the permitting is that much more complex, too.”

In addition to responsibility for the TCN network separation into TCN and EFN, the RailWorks team was responsible for extending the two networks to the new U Link line.

Another major focus of the RailWorks companies: the design, installation and testing of the U Link communications system. HSQ Technology and another subcontractor, Rockwell Collins, were both tasked with aspects of designing the system, in the new U Link tunnels and the new University of Washington and Capitol Hill stations. This system includes the telephone, public address, variable-message signage, access control, radio and CCTV, as well as the overview display and consoles in the new Operations Control Center room. HSQ Technology handled design of the Field Control System (FCS) that collects field



Project Manager Juan Estrada, foreground, and Foreman Patrick Ritter stand alongside a Sound Transit light rail train during the final testing and commissioning of the U Link communications system.



Apprentice Jack Patterson grounds communications equipment in a rack that is part of the communications room in Sound Transit's new Capitol Hill Station.



Foreman Patrick Ritter works in the Capitol Hill Station fan room to check the wiring of the control panel for fans and dampers. The large blue fans are part of the Emergency Ventilation System and control exhaust air flow in the train tunnel.

information and integrates it within the Central Control System (CCS), and then managed Rockwell Collins' design of the CCS. L.K. Comstock was responsible for the overall project coordination and field installation and testing for all systems.

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Final integration of the U Link systems into the newly configured SCADA network was completed March 16, just in time for a March 19 soft launch. March 20 marked the start of revenue service on U Link.

Meanwhile, in a separate Sound Transit project, a RailWorks team is at work on the S Link, or 200th Street Extension, located south of the Seattle-Tacoma International Airport. L.K. Comstock is installing the overhead catenary system (OCS), train control, and the signal & communications systems on the 1.6-mile extension to connect the current SeaTac Airport station and the newly built Angle Lake station at South 200th Street in SeaTac, WA. HSQ Technology is working as a subcontractor to L.K. Comstock. As with U Link, the S Link systems will require assimilation into the existing SCADA system and networks. Revenue service is targeted for September 2016.

University Link Project Leadership Team

L.K. Comstock National Transit

- Bill Heavin, Officer in Charge/Program Director
- Juan Estrada, Project Manager
- Scott Rafferty, Safety and QC Manager
- Mike Akin, Construction Manager C Link Existing Retrofit
- Mike Bello, Construction Manager U Link
- Seab Hamilton, Contracts Director
- Jackson Mitz, Test Director
- Forrest Erickson, Project Engineer
- Andy Ledesma, Project Engineer
- Shannon Anderson, Administrative Assistant
- Scott Ridenour, Field General Foreman U Link
- Chuck Merritt, Field General Foreman C Link

HSQ Technology

- Tony Mateo, Project Manager
- Michael Jerabek, Design Manager
- Brendan Doss, Assistant Design Manager
- Gary Watters, Senior Controls Engineer
- John Mattison, Project Engineer

Off the Clock: Beth Kellum



When the Great Recession took hold in 2008, it prompted Beth Kellum to find a new and meaningful endeavor that would connect her to her community. Read about Beth's off-the-clock accomplishments as a member of the Board of Education in Clayton, NJ. www.railworks.com/off-the-clock

Can you think of a RailWorks employee who is a serious hobbyist, volunteer, craftsman, athlete or artist who is doing something interesting outside of work? Let us know with an email to railworkstoday@railworks.com.



Calendar Notes

RailWorks Training and Events

March 31 - April 1	RailWorks Track Systems – South Region Session 2	Houston, TX
April 5	RailWorks Leadership Meeting	Grapevine, TX
April 7 - 8	RailWorks Track Systems – South Region Session 3	Houston, TX
April 21 - 22	RailWorks Track Systems – South Region Session 4	Houston, TX
April 26 - 27	Frontline Supervision I Training	Houston, TX
May 5 - 6	RailWorks Track Systems – South Region Session 5	Houston, TX

Industry Events

April 3 - 6	American Short Line and Regional Railroad Association (ASLRRA) Conference	National Harbor, MD
Week of May 2	Safety Week	Companywide

RAILWORKSMART RAILWORKSAFE

Compliance and Safety Go Hand in Hand

Compliance issues related to commercial vehicles and commercial motor vehicle (CMV) drivers have been getting quite a bit of attention in the field in recent months, and for good reason. As the Equipment Management Team points out to Track employees attending annual safety training, there's a strong relationship between compliance and the

potential for a U.S. Department of Transportation/commercial vehicle operator's registration (USDOT/CVOR) audit or a crash.

Check out how these field managers are giving renewed attention to reducing infractions and improving overall compliance and safety.

"We've grown as company and have a lot of new people. That's when we saw our CVOR infractions start to creep up. Last November-December, we began training, starting with the GO (Transit) Maintenance forces. We talked about what's expected of drivers – the rules of the road — especially when it comes to completing the driver's daily log. We reminded our drivers that the log book is a binding and legal document and the importance of doing it properly. Once you put your name on it, you tell the government, so you have to fill it out in accordance with the law."



Ed Hanzel
Equipment Manager
PNR RailWorks

"We've had positives from the training. We're monitoring everyone now. Managers are turning in logs within 20 days. We're reading all of them and sending a report to the managers where we have some issues. The managers are working directly with the drivers to address issues."

"Our region doesn't have a full-time safety manager at this time, so our managers have taken it upon themselves to step up their safety game to make sure all areas are covered. They don't assume that the safety manager or equipment foreman is taking care of it. That's caused everyone to be more knowledgeable and in tune with the requirements. This has really benefitted us because more people are involved to help the entire group be in compliance. It's promoted more buy-in from the group, instead of just something the safety guy is pushing."



Ralph Berg
Area Manager, Southern California Region
RailWorks Track Services

"Our managers are reviewing the capabilities of all of our CMV drivers. Senior guys are working with newer guys to go through a checklist or walkthrough together. Our equipment foreman or I ride with commercial drivers to get a hands-on feel for their abilities and safety practices — good and bad. These drivers are getting a pat on the back, or a tune-up on something they need to brush up on."

"Out West we are focusing our training on log books, driving hours, speed limits and stopping distance when towing or loaded. One of the best tools I use is the Navman GPS system. It allows us to monitor drivers on speed and hours of service and helps us to stay in compliance with all state and federal laws. I've made a point of checking every day. It just takes five minutes. Then I follow up and call drivers when I see any issues."



Dale Morgan
Equipment Manager, West Region
RailWorks Track Systems

"We also are identifying key employees — operators, mechanics or laborers — for additional training. Our field apprentice mechanic just completed a 40-hour Class B CDL course. The training better the individual but also the company. Having additional employees who are trained gives us more flexibility in the field."

"Our drivers are paying more attention to load securement before they get down the road. For a lot of these guys, it's a tight fit to get all the tools in a truck bed. You can't just throw things in the bed. It's got to be organized. One foreman is using a net over the bed to secure the load. A couple of our new foreman trucks have a positive new feature: a hard-top flat cover that keeps everything dry and covered up. Foremen can lock their tailgate, which discourages theft, as long as they pay attention to where they park."



George Luce
Safety Manager, St. Louis Region
RailWorks Track Services

"We're also looking at truck weights to avoid overloading. Tim (Scheller, Area Manager) is evaluating equipment and what's needed for each customer. We're trying to make sure we have the right equipment for our customers and still be compliant. That may mean going to a different configuration to avoid overloading the trucks. That's part of preventive maintenance so we don't put excessive wear and tear on the truck or are out of compliance."

RailWorks Values In Action: **Industry Leadership**

Shaping the Passenger Rail Landscape

40 years of Dedicated Service

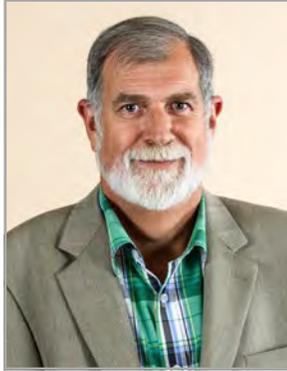
Mike Rothschild has been busy over the past four decades working on many of the major transit systems across the United States. He's built a legacy that has changed the landscape of passenger rail transportation in the United States and established L.K. Comstock as one of the most accomplished transit systems contractors in North America.

His impact has been forged at L.K. Comstock National Transit, where he signed on as an electrical engineer March 1, 1976. Today Mike serves as vice president, leading efforts to win and execute systems projects across the United States, outside of New York City.

Coworkers who've been with him over the years can point to the secrets of Mike's success, such as his innate ability to organize people.

"Mike works very well when you're in a cooperative setting," says John Little, a project controls manager with RailWorks Projects Inc., who first worked with Mike as an independent contractor in 1998. "When people are interfacing over a period of time, Mike is just marvelous at orchestrating and driving a team."

Mike Bello, an L.K. Comstock construction manager who has known Mike Rothschild since the two first worked together in the '80s, recognizes that ability in Mike to coordinate others. "He's real good at picking out where people should be and putting them in their places to support the whole team. ... He's well respected by everyone I know – every electrician in the field, the engineers, the managers ..."



Mike Rothschild
Vice President
L.K. Comstock National Transit

Respect is what 40 years in the industry as a "very savvy and smart engineer" will earn you. Mike is known as an expert in catenary and traction power who is equally versed at signals & communications.

He's also known around the company as someone who simply "commands a situation" If he's in the room, his coworkers say, he's likely to take charge in one way or another. Says one associate, "Everybody quickly understands his expert presence and lets him do it."

Colleagues note that besides being a natural leader, Mike is pretty low-key. Funny. Family-oriented. Generous. And "he doesn't take himself too seriously," says John, who observes that Mike's dress code in their Concord, CA, office is huarache sandals. "He just doesn't succumb to the whole formality thing. He's not of the mindset that an organized mind has to appear in a suit and tie."

Mike's approach to his work is anything but low-key. Kathleen Kelly, vice president and controller for RailWorks Projects who first met Mike in 1983, isn't alone when she says Mike is "extremely intense" and "very passionate about what he does."

His passion is appreciated by L.K. Comstock National Transit President Mark Patterson, who also notes that besides Mike's "vast technical knowledge and expertise regarding what we do, his dedication and enthusiasm for the work is incredible. I'm sure I'm not alone when I say this: I'm sure glad he is part of my team."

Respect for Mike has gone a long way. The acknowledged all-star brings the type of glue that holds teams together to produce some extraordinary results. Mike, along with his teams over the past 40 years, has changed the way people move within cities and airports across the United States.

News Across the Line

RailWorks Maintenance of Way

Business is bustling for RailWorks Maintenance of Way. A new switch and crossing grinder — a 20-stone Harsco RGH10-C1 — went into service on Canadian Pacific Railway (CP) near Saratoga Springs, NY, in late February. The grinding team, led by Grinding Foreman **Shea Swindall**, will operate in upstate New York until early April and then move to the Chicago area for additional CP work.



Harsco RGH10-C1 Rail Grinder

Meanwhile, RailWorks also launched its new undercutting service during March on the Florida East Coast Railway (FECR). Foreman **Ray McKee** is leading operation of the RM76 ballast cleaner, with capacity to undercut up to 900 feet of track per hour. In late-April, our newly rehabbed, high-performance RM80 ballast-cleaning machine will start work on Canadian National Railway (CN) in British Columbia. Led by Foreman **Wesley North**, this machine undercuts up to 1,200 feet of track per hour.



RM80 Ballast Cleaner