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TXLTAP MONTHLY NEWSLETTER

Every Day Counts 7: Strategic Workforce Development

Despite having ample funds available to repair dilapidated roads and construct new bridges, the construction industry faces the imminent challenge of labor shortages. The industry, which is already dealing with a scarcity of workers from COVID, may experience prolonged project timelines and increased expenses due to the reduced workforce. NPR online in April 2023 notes one of many causes, "Older workers retire faster than younger workers can take their place, according to Ken Simonson, chief economist at Associated General Contractors of America." A steady increase of baby boomer retirements and a decrease of workers entering the workforce has left many departments of transportation with a large number of vacancies. This lack of applicants is especially dire in rural communities.

As the demand for highway construction, maintenance, and operations workers continues to rise. A range of resources has become available, empowering state, local, and tribal communities to compete with other industries and showcase the immense value of a career in transportation. This presents an opportunity to recruit individuals from underrepresented groups, including minorities and women, and offer them life-changing employment prospects.

FHWA collaborated with American Association of State Highway and Transportation Officials, AGC, the American Road & Transportation Builders Association, and the U.S. Department of Labor's Employment and Training Administration to bring together those invested in workforce development within the highway construction sector. As a result of this collaboration, a comprehensive plan titled "Identify, Train, Place" was created to support state, local, and tribal communities in identifying, training, and placing individuals in the contractor workforce.

The plan consists of user-friendly and replicable "plays" that can be utilized by departments of transportation (DOTs), workforce

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Every Day Counts 7: Strategic Workforce Development Continued...

development boards, community colleges, non-profits, and contractors. These plays offer solutions to workforce development challenges and can be tailored to suit local needs. In conjunction with its workforce partners, FHWA developed an extensive toolkit, complete with informative factsheets, profiles, case studies, and marketing materials. Program benefits include effective solutions, proven training and customizable outreach. Examples of Strategic Workforce Development in practice include:

<u>Texas</u>: ConnectU2Jobs is a program that trains justice-involved young adults aged 18 to 24 for careers in the heavy highway construction industry. It provides job training, life skills coaching and job placement.

<u>Arizona</u>: The Arizona chapter of the AGC created an Industry Readiness Program that provides 10 weeks of on-the-job training for those interested in entering the heavy civil construction industry.

<u>Idaho</u>: Idaho's Highway Construction Workforce Partnership established a Heavy Equipment Operator Training program that includes certifications in heavy equipment operation as well as hazardous waste operations and emergency response.

Developing Performance Plans and Conducting Performance Evaluations

The Texas State Transportation Innovation Council has ongoing projects to assist cities and counties in the State of Texas. A special project was awarded to the University of Texas at Arlington, TxLTAP Center, to deliver a series of reference documents, training aids and a new training course. This course was designed to help cities and counties attract, onboard, train, engage and succession plan for current and incoming public works/road and bridge employees. This 5-Stage Model to Attract and Retain Public Employees was the focus of last month's newsletter and was presented at the VG Young conference in February 2023.

A component of the "Engagement" cycle, the new course, LTP405, is based around developing and conducting employee performance plans. LTP405 is an 8-hours course and provides several hands-on activities that will assist in the practical application of the learned material. The course will be available for registration in late summer 2023.

The course contains 8 Modules:

- Making the Case for Performance Plans and Evaluations
- Components of a Performance Plan
- Building the Performance Plan
- Putting the Performance Plan into Play
- Performing a Midpoint Check-in
- Preparing the Evaluation
- Conducting the Evaluation
- Next Steps After the Evaluation



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Wrong Way Driving: Countermeasures

Most wrong-way crashes occur at freeway intersections, exit ramps, on frontage roads, and on one-way streets in downtown areas. They are most likely to occur between midnight and 5 a.m., with a spike at 2 a.m. when the bars are closing. Drivers, impaired 50-75% of the time, will commonly turn left onto an exit ramp in an attempt to enter the freeway. Not only are wrong-way drivers commonly drunk or under the influence of drugs, but they are also usually incredibly intoxicated. Crashes tend to be more severe and result in death or serious injury more often than most other types of crashes on freeways.

Research has been focusing on how to prevent these incidents from happening on Texas roadways. The Texas Transportation Institute has developed a work plan that includes best practices for reducing wrong-way crashes and movements in Texas. These countermeasures/treatments were broken up into 4 categories: traditional signing and pavement marking, innovative signing and pavement marking, geometric modifications, and intelligent transportation system (ITS) applications.

Traditional countermeasures and markings include "Wrong-Way" (WW) and "Do Not Enter" (DNE) signs on separate posts, oversized signs, redback raised pavement markers, WW pavement arrows, yellow edge lines on the left side of exit ramps, "One-Way" signs and turn restriction signs.

Innovative signing and pavement marking treatments include lowering WW and DNE signs to stand a few feet off the ground. This is quickly becoming the trend as research has shown intoxicated drivers tend to focus on the road directly in front of them just over their hood. Lowering the signs to eye level catches the attention of a drunk driver. These two signs are mounted on the same post and can be supplemented with flashing lights. Overhead signs, internally illuminated signs, non-standard WW pavement markings, WW pavement lights, red reflective tape on the back of freeway signs and red delineators on each side of the exit ramp leading to the WW/DNE signs round out the innovative category.

Geometric countermeasures involve designing and constructing off-set entry and exit ramps and off-ramp throat reductions.

Countermeasures also include new detection and alert technology or ITS. Sensors in the pavement, on signs and radar equipment can detect the movements of a vehicle going the wrong way. Alert systems such as flashing lights and even audible warnings can urge the driver to pull over and turn around. Detection and alert systems are highly effective and most wrong-way drivers self-correct before entering a highway or freeway.

In the DFW area, the NTTA has been working to correct wrong way driving on its tollway. They've lowered signage in an initiative to deter wrong-way driving and have a message board alert system to warn other drivers. The City of Dallas has been testing tools such as reflective tape on sign poles and flashing lights on signs to prevent wrong-way accidents. These are just a few of the efforts being made by Texas Public Works/Road & Bridge divisions to implement life-saving innovations combatting wrong-way driving.









Focus on Training: Wheel Loader (LTP160)

Among the various heavy equipment used in construction, the wheel loader stands out as one of the most popular and versatile machines. The wheel loader is a powerful workhorse on a construction site. Its articulating center steering design makes it highly maneuverable, and its powerful hydraulics allow it to handle heavy loads. The loader is primarily used for: Loading dump trucks, stockpiling, grading, excavating and backfilling. The interchangeable tool system allows for additional functions including rough terrain forklift, sweeper, hoisting system, and grapple.

The wheel loader is the most requested heavy equipment course offered by TxLTAP, owing to its versatility and wide range of applications. This 16-hour course is designed to provide basic instruction for the safe and efficient operation of wheel loaders. It covers the following topics in-depth:

- Safety
- Preventative maintenance and pre-operational inspections
- Driving the machine
- Building, dressing and loading from stockpiles
- Grading
- Loading dump trucks
- Excavating
- Use of interchangeable Tool



Practical training sessions allow participants to apply their knowledge in real-world scenarios, practicing tasks such as loading and unloading materials, working on uneven terrain, and navigating obstacles. By the end of the wheel loader training course, participants are equipped with the necessary skills and confidence to operate a wheel loader effectively while prioritizing safety for themselves and those around them. For more information on this course, go to www.txltap.org.

Instructor Spotlight



LYNN CLOW

During his tenure with TxDOT, Lynn served as crew leader, heavy equipment operator, then later crew chief. He maintained all asphalt surfaces and right of way for more than 28 years. Lynn's heavy equipment experience includes motor graders, bull dozers, loaders, backhoes, rollers and more. After retiring in 2007, Lynn began teaching heavy equipment classes for TxDOT until 2017, at which point he joined TxLTAP. His love for heavy equipment can be seen in every course he teaches, and he is always open to learning new techniques to help better his students.

Happily married for 44 years to his lovely wife Honey (as the grandchildren call her), Lynn has 2 grown children and 3 beautiful grandchildren. In his spare time, he does "Honey do jobs" and helps maintain his children's homes to make their lives easier.

"I would give this man a 'big' raise. He is great, knows his stuff. Great class, can't wait for the next one!"

What was the most valuable part of this course? "The instructors experience and knowledge."

"The instructor is very knowledgeable, like I've known him all my life." "The instructor was real knowledgeable and knew what he talked about...If we could get this instructor the next class, the would be awesome!"



TXLTAP IS LOOKING FOR EXPERTS IN:

Email Your Resume and Letter of Interest to: TxLTAP@uta.edu

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