

OSHA Strategic Partnership Program: An Effective Education for Latino Workers

**Anibal Franco, MCE, LEED AP, SPALW Chair
Sr. Project Engineer/Manager
HJ Russell & Company
Dallas, TX**

**Shane Morrow, CHST, SPALW Vice Chair
Sr. Loss Prevention Manager
Balfour Beatty Construction
Dallas, TX**

Introduction

OSHA has established cooperative relationships at workplaces that have implemented a comprehensive safety and health management system. Acceptance into VPP is OSHA's official recognition of an organization's exemplary occupational safety and health performance.

The common objective and goal of these agreements is to provide a safe and healthful work environment and to help prevent serious injuries and accidents in the construction industry. Increased training (Exhibit 1), implementation of best work practices, enhanced safety and health programs, and compliance with applicable OSHA standards and regulations help to promote the goals of the partnerships. Projects that partner with OSHA (VPP) have days away, restricted or transferred (DART) case rate 52% below the average for its industry.

Generally construction projects with above-average safety programs and performance seek to exceed OSHA compliance and expectations. With active and visible safety leaders, the projects have fewer injuries and illnesses, and are often rated as best places to work.

In construction projects with exemplary safety and health programs, management communication is honest, open, and understandable. Employees are treated with respect, receive positive feedback, and suggestions are encouraged. In other words, protection and prevention is aligned with work planning and ensures that workers have opportunities to communicate their safety concerns. Worker input to the safety program promotes ownership and teamwork within the project.

For companies seeking to move their safety program from good to outstanding, employee engagement provides the best return on investment. Employees who take ownership of the program and who are consistently challenged to find new solutions for workplace issues have significantly reduced workplace injuries and illness rates. Additionally, applying a best practices approach will help promote a safe work culture, and we believe that occupational safety and health is linked to construction performance.



Exhibit 1. Workers engaged in OSHA training and education throughout over the course of the project.

A comprehensive safety program, aligned with enforcement of project rules and regulations, coupled with engaged workers, will improve the morale and productivity of the project. Workers who trust the people they work for, and have pride and ownership in what they do will develop a culture that will engrain safety and health into their careers and, as a result, will spill over into their personal lives. Decreased injuries and illnesses will help promote a stable means of income for the family, and healthy family members are typically happier people.

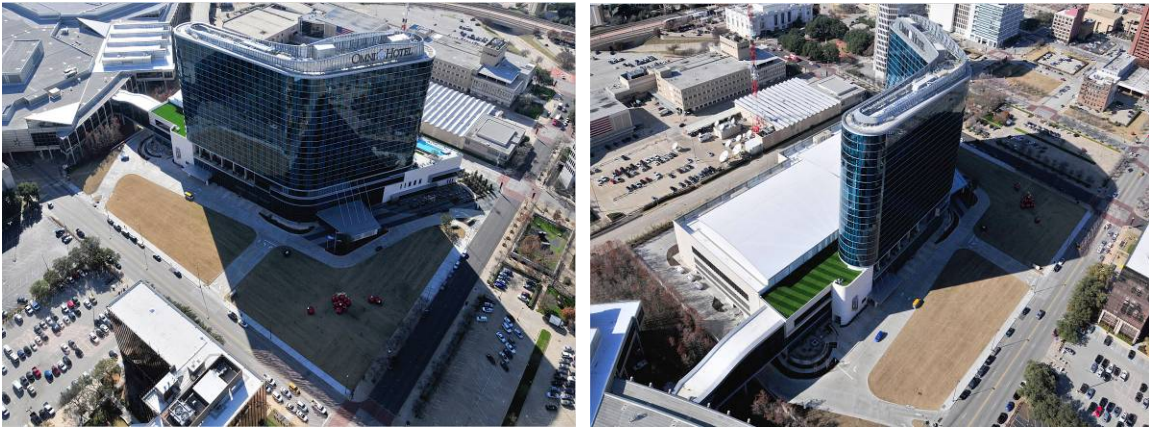
Another important part of a successful safety and health management system is the safety incentive program (Exhibit 2). Generally, projects with incentive programs experience reduced injury and illnesses rates compared to those that do not have similar programs. The awards and public recognition before their peers afforded by this program in conjunction with training, analysis, and positive reinforcement helps in the success of the overall safety program. As a result, the program will benefit and the workers will embrace the goal of zero harm.



Figure 2. Safety incentive program is part of an overall comprehensive SH&E program.

DCCH OSHA Partnership

The Dallas Convention Center Hotel (DCCH) (Exhibits 3 and 4) was a challenging project and had an OSHA Partnership with some very commendable results. The project in itself was very complex, had a fast track schedule, and was a design build structure. The challenge to build such a structure under those circumstances is challenging enough, but when you consider the influx of non-English speaking workers on the site (more than 50% of the workers were Latino), and the goals set for safety, the pressure builds. The project team, along with our OSHA Partners, had an aggressive goal for training and safety results. Zero harm was the goal for safety, meaning no fatalities, no injuries to the public, and no disabling injuries to any of the workers.



Exhibits 3 and 4. Dallas Convention Center Hotel (DCCH)

To better help the reader understand the challenges that were faced with constructability, we put together a brief narrative and bullet-point summary about the project. The hotel is 1.2 million square feet, has level 4 finishes, a pool on the 4th floor, 4 levels of parking, and the original schedule was 28 months but was ultimately reduced to 26 months. This project took long hours, hard work, 185 tier subcontractors, and some pretty respectable milestones were attained:

- The project included 60,000 cubic yards of concrete, totaling 243,000,000 pounds.
- The project incorporated roughly 9,000,000 pounds of reinforcing steel.
- 1,221,500 pounds of post-tension cable, equal to 437 miles of post-tension cable
- The skin of the building has over 250,000 square feet, or almost six acres, of exterior glass.
- The project has approximately 65,000 square yards of carpet. The carpet would cover more than 10 football fields.
- Over 13,500 gallons of paint and 100,000 square yards of wall covering were used to finish the walls.
- The project diverted over 17,000 tons of construction debris from landfills, which equated to 89% of construction.
- Topped out seven months after the first elevated slab (despite 51 recorded weather days, contaminated soils and an underground river).

- The tower was glazed less than five weeks after the structure topped out.
- Start-up of every major system component six months prior to accelerated completion date.
- Finished two months early on a Design/Build contract schedule that included procurement and installation of FFE and OSE.
- Completed the project close-out 29 days after substantial completion.
- The DOH project has awarded one hundred and sixty three (163) contracts, totaling more than \$97M to M/WBE firms. This accounts for 37.90% of the total project value for the contracts issued.

The speed and complexity of a project can make it very difficult to keep safety first; battling cultural differences increases that challenge further. The majority of the workers on site during the structural phase of the project were Latino, and this posed a huge challenge. The safety culture of Mexico and the South American countries is not the same as it is here in the U.S. In those cultures, the fear of losing a job is very much a reality if one chooses to stop production because of safety issues. Additionally, all contractors here in the U.S. do not place the same emphasis on safety, so consistency is an additional issue. Changing these cultures takes training, leading by example, inspecting for your intended results, more training, positive feedback, enforcement, and charismatic leadership. The OSHA Partnership gave the workers an opportunity to experience all of this first hand. They were able to work with the local OSHA Compliance Assistance Officer; this helped to breakdown the walls of communication and allowed open dialogue with the workers. Additionally the Region VI Assistant Regional Administrator (Exhibits 5 and 6) would attend the safety meetings and speak about the importance of working safe. The training goals set forth in the Partnership made it possible for over 434 workers to be trained in the OSHA standards.



Exhibits 5 and 6. Dean Wingo attending safety meeting and speaking on the importance of working safe.

In addition to training, the project team provided appreciation luncheons (Exhibits 7 and 8) for reaching project milestones, which were attended by OSHA representatives. The positive atmosphere and acknowledging individual worker achievements for focusing on safety showed the commitment from the Partnership group.



Exhibits 7 and 8. A worker appreciation luncheon helps boost morale during a project.

The project could not have experienced such success had it not been for the influence achieved without the help of our Partners in the Region VI OSHA office. When you see the statistics below, I think you will see that we were able to handle adversity and still maintain a very safe project.

Some of the goals that we able to attain that we believe helped reduce injuries are:

Orientations:

- Orientated 4,150 people
- Hours spent orientating 442 (@ 40 hours per week that would be 11.05 weeks conducting orientation alone)

As a result of our OSHA Partnership, the following training success has been made possible (Exhibits 9-11):

OSHA TRAINING			
Class Type	# Classes	# Employees Trained	# Hours Spent Training
10 Hr	33	242	330
30 Hr	<u>26</u>	<u>192</u>	<u>780</u>
Totals	59	434	1,110
(@ 40 hours per week that would be 27.75 weeks of OSHA training alone)			

Exhibit 9. OSHA Training

REGIONAL HISPANIC CONTRACTORS ASSOCIATION (ANIBAL FRANCO'S EFFORTS) OSHA TRAINING	
Class Type: 10 Hr	# People Trained: 476

Exhibit 10. OSHA Training

Training Course	Provided By
First Aid/CPR	American Heart Association
Fork Lift Training	Sunbelt Rentals
Fall Protection	BRP
Crane Safety Seminar	BRP/Crane Safety & Inspections (Trained 22 OSHA Representatives)
Crane Flagging/Rigging	BRP
Leadership Skills Workshop	The Hartford
Forklift Training	BRP
Industrial Hygiene Sampling/Training	The Hartford

Exhibit 11. Additional Training

Industrial hygiene samplings for noise and silica exposures were conducted by The Hartford during the heavy phase of construction. All test subjects were found to be below the PEL or with the use of engineering controls.

Hours worked from 9/11/09 – 11/11/11

- 2,272,294.54

Accident data

- RIs: 20
- LTIs: 7
- RIR: 1.76
- LTIR: .62
- First Aid cases reported: 23

As you can see, the project was very challenging, but we believe that the OSHA Partnership training goals and site visits helped reduce injuries.

DFW Airport

Currently Dallas/Fort Word (DFW) is executing a 1.9 Billion Terminal Renewal and Improvement Program (TRIP) at Dallas/Fort Worth International Airport, and it is taking advantage of the success of the last expansion project in 2000.

As a part of the last expansion project, a mandatory 40-hour safety training program was developed and implemented. Classes were presented in English and Spanish, with the individual students choosing which language class they would attend. Classes conducted in Spanish had one-half day dedicated to teaching students how to say basic construction tool names and terms in English. In the English language classes, English-speaking students were taught how to communicate basic construction tool names and terminology in Spanish. The Regional Hispanic Contractors Association was a big help in this process.

The instruction was a mix of classroom and hands-on lab work. Students also received print materials to take on the job, including pocket cards with translations of key construction terms. The safety training program graduated 14,272 students by the time the expansion project was completed, with 8,100 completing the classes presented in English and 6,172 completing the classes presented in Spanish.

According to OSHA, the program has proven results, with recordable and lost-time rates significantly below both state and national averages. With over 24 million man-hours worked by the time the expansion project was completed in 2005, the program has posted a lost-time rate of 0.42/200,000 man-hours, compared to a national average of 3.60/200,000 man-hours and a state average of 2.4/200,000 man-hours.

The program had a recordable rate of 3.68/200,000 man-hours, compared to a national average of 6.80/200,000 man-hours and a state average of 4.3/200,000 man-hours.

In addition there were no fatalities, after nearly five years of work was completed in 2005. The project included a new, two-million-square-foot international terminal building, and the world's largest airport train system. Construction of the train system took place at night and involved construction of the equivalent of a five-mile long bridge, 50-80 feet above ground. These results were not solely due to the training; many dedicated safety professionals and countless toolbox meetings also played a significant role in reinforcing the training.