

ANALYSIS 4: PEDESTRIAN SAFETY

Critical Issue Research Method

Problem/Opportunity Statement

The critical industry issue, which also is a construction management issue, was the requirements for safety on jobsites. Since the L'Enfant Metro Station Entrance was within the construction site, it was a problematic feature to keep the pedestrians safe, but not limiting the use of the metro or the work taking place on the construction site. Safety is one of the biggest factors on jobsites, I would like to increase my knowledge on how companies are initiating the efforts to make their sites safer. The general audience and benefactor of this research are the companies that are managing jobsites.

Research Steps

1. Determine what the safety requirements are on the entire Constitution Center site.
2. Determine the OSHA requirements for areas within a construction site that are also open to the public.
3. Interview the DAVIS project team in order to determine if there were any special safety techniques that were unique to the site.
4. Create a survey to be sent to industry members to determine their site safety requirements.
5. Compile the results into a useful format in order to determine how companies are implementing safety procedures on their sites.

Survey Questions

1. How many employees does your company employ?
2. What market(s) does your company typically work in?
3. Does your company have a safety department?
4. Does your company have a full time safety manager on your site?
5. Does your company require specific safety training?
6. What types of consequences are enforced on your sites for not following safety procedures?
7. Do your sites have a full time nursing staff?
8. Does your company require a drug test before starting work on your sites?
9. Does your company have any sites that require special safety requirements?

Expected Outcome

The expected outcome of this research is to determine what safety requirements are implemented on job sites today and to determine if there were other ways to protect the pedestrians using the L'Enfant Metro Station.

Analysis

Constitution Center has the L'Enfant Plaza metro station entrance is directly beneath the building. One issue with this area was that the metro did not permit the entrance to be closed for the full duration of the project. The only time frame they allowed it to be closed was during the overhead curtain wall work along D Street. One stipulation for the closure was that it had to be fully reopened by the July 4th holiday since the National Mall is two blocks away. Therefore, from October 2007 till June 2008, the metro escalator was shut

Figure 24: Photo showing the escalator ceiling work.



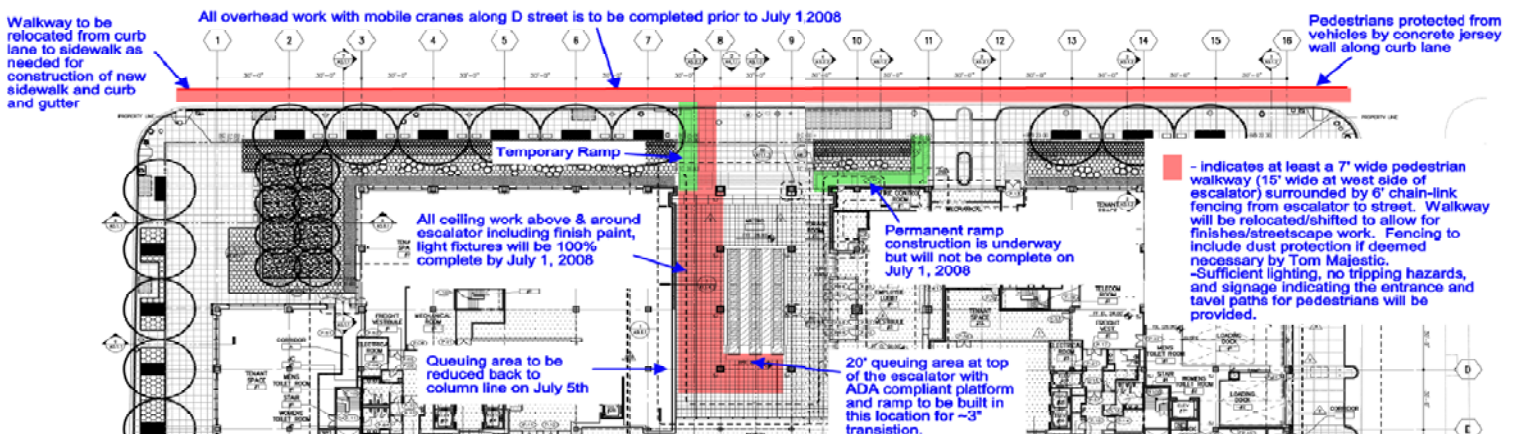
down and the curtain wall installation took place along D Street and the ceiling work directly above the escalators was completed. Figure 24 shows the ceiling work taking place over the metro escalator. From the start of the project, overhead protection was in place in order to protect pedestrians while demolition was taking place. Finally, the metro entrance was reopened on July 1, 2008 and overhead protection was eliminated since all overhead work was complete. Additionally, special measures were implemented to protect pedestrians while the remaining work along the streetscape and lobby are being completed.

Some of the special measures were:²⁵

- All ceiling work above and around the escalator is in the finishing stages – finish paint, final light fixtures, etc. will be completed by July 1, 2008.
- All overhead work involving mobile cranes along D Street will be completed by July 1, 2008.
- Construction of an ADA compliant platform and ramp at the escalator entrance to accommodate for the ~3" transition until the finish stone can be installed
- 6' high chain link fence surrounding the perimeter of the pedestrian pathway – dust protection will be provided if deemed necessary by site conditions and WMATA.
- Although the original metro easement did not include a ramp from the sidewalk to the escalator entrance, DAVIS constructed the new final ramp. While this construction was underway, it was not be completed by July 1, 2008.

Figure 25 is the plan that was executed in order to have the L'Enfant Metro entrance reopened by July 1, 2008.

Figure 25: Metro entrance protection plan.



After learning about DAVIS' safety techniques, it was researched the OSHA requirements that are the same for every project. It is necessary that the employer must initiate and maintain accident prevention both on and around the site. In order to do so, there should be an established safety training and education program. Additionally, general housekeeping must be followed in order to keep everyone safety, including pedestrians that would be passing by. Since the construction site was shutting down one of the entrances to the metro, there had to be an established plan with the metro in case of an emergency would occur in the tunnel. This plan was then documented and hung around both the construction site and the metro area to make everyone aware of what to do in case of an emergency. Subpart G of the OSHA Standard for the Construction Industry outline the sign and barricade requirements. Figure 26 provides examples of what the signs should look like.



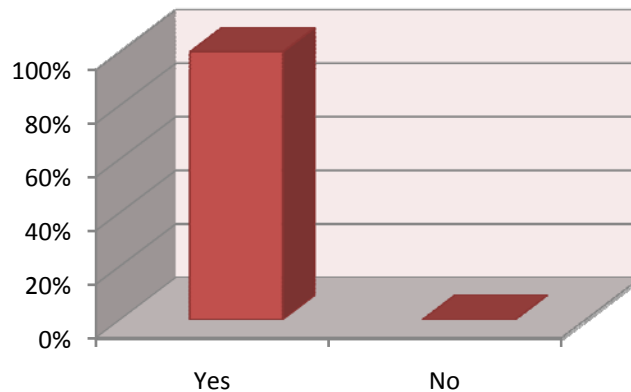
Figure 26: Examples of the Danger and Caution signs used according to Subpart G

Additionally, because not all of the curtain wall was installed before the metro was open, safety arrangements had to be made in order to finish the curtain wall of the north façade. In order to not have to install overhead protection, Enclos only worked on weekends in order to install the panels. Luckily the L'Enfant Plaza metro station entrance was not open on weekend; therefore no special arrangements had to be made.

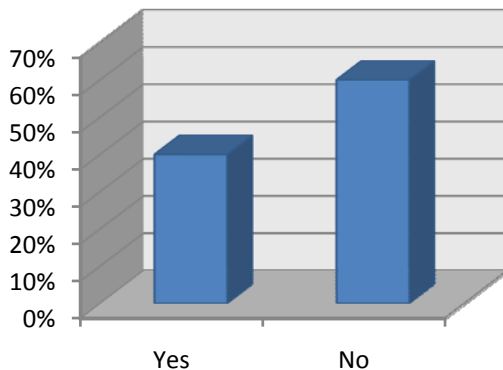
In order to learn more about site specific safety requirements, a survey was sent out to industry members. The results for the survey, although not many, came back exactly how expected. The first thing that was learned from this survey was that all of the companies that participated had a safety department. Additionally, only 60% of the companies have a full time safety manager onsite. The comments lift by the industry members mentioned that it depended on the specific site if full time coverage was required. If it was not full time, then most of the sites had periodic visits by someone involved in the safety department. All of the industry members noted that they require safety training. Some of the examples of the training include:

- 1st Aid/CPR certified
- Minimum 10 OSHA certified
- Department Of Labor, Division of PenSafe certified annually.
- OSHA 30 First aid

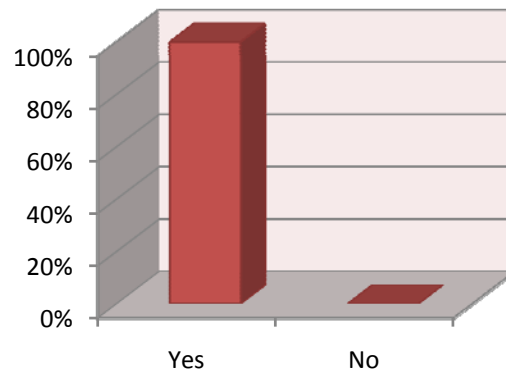
Safety Department



Full Time Safety Manager Onsite



Specific Safety Training



Each site has job specific consequences that are enforced for not following safety procedures. One particular company utilizes the “3 strikes and you’re out rule” while another has a zero-tolerance rule that requires a monetary fine or temporary removal from the site if mine items occur. It was discovered that not all project require drug testing, with a note that a company only requires them for government contracts.

Finally, it was asked if any of their sites require special safety requirements. Several companies noted that Owner Controlled Insurance Plans and Contractor Controlled Insurance Plans require additional safety requirements compared to general OSHA requirements. Additionally, one company has project specific orientation plans for every project. At their meetings, they go over basic safety standards, along with calling out any specific working conditions.

Outcome

Overall, by conducting the research on safety requirements, it was determined that each site will have to conduct their own safety plan. However, OSHA has special programs in order to assist project teams with the safety requirements.