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# WORK ZONE FORMULA:

**Increased Awareness  
+ Training  
+ Implementation  
= Positive Results**

## **This year's National Work Zone Awareness Week is being observed during the second week of April:**

National Work Zone Awareness Week is approaching and this year, it is being observed the week of April 6-10, 2009. This article, once again, is being written to bring a greater awareness for all of us who work in, and/or, just drive through work zones; these very important and much needed traffic safety zones. However, better described by the motoring public as, "VARO's" (very annoying roadway obstacles) that every one of us travel through on just about every vehicle trip one makes.

Over the years, as housing, commercial buildings, shopping centers, schools, etc. have been being built, on previously undeveloped land; the need for more and more roadways and utility infrastructures were being constructed. They still are, and will continue, for generations and generations to come. This expansion and construction process is an ongoing event, however the new construction expansion process does not eliminate the need to repair and replace existing infrastructures.

## **Many of our infrastructures are not only aging, need repair, also beyond their designed capacity:**

Work zone activities are everywhere, every year as existing utility infrastructures and many of our existing roadways are approaching middle and old age, they require numerous repairs, upgrades and replacement; this only means more construction, maintenance and utility work zones for motorists to navigate through.

Not only do many of our existing roadways and highways have an increasing number of motorists to handle, they

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are in many cases reaching or have reached their capacity limits. Twelve (12) percent of our highways, in 2001, already required construction activities for capacity additions alone. [U.S. Department of Transportation, FHWA, Highway Statistics 2001, Publication No. FHWA-PL-02-020.]

## **Most work zones are on our existing roadways already carrying traffic:**

A growing portion of capital expenditures is being spent on preserving existing roads and bridges. Between 1997 and 2004, the share of capital funds used for system preservation rose from 47.6 percent to 51.8 percent (\$36.4 billion). [U.S. Department of Transportation, 2006 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance, Report to Congress, 2007.]

In the year 2004, seventy-nine (79) percent of highway capital expenditures were allocated to system preservation (51.8 percent), expansion (18.3 percent), and enhancement (9 percent), all improvements that involve active work zones on existing roadways. [U.S. Department of Transportation, 2006 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance, Report to Congress, 2006.]

## **Motorists and workers are increasingly exposed to work zones:**

More than 12 billion vehicle miles of travel were estimated to have been through active contract work zones (i.e. roadwork performed by private contractors) during the year of 2001. That same year, highway workers spent 246.4 million hours working on the National Highway System (NHS) alone. [U.S. Department of Transportation,

FHWA, Characteristics of Today's Work Zones, presentation at TRB Annual Meeting by Gerald Ullman, Washington, D.C., January 2004.]

With an increased number of vehicles traveling on our roadways and an ever increasing number of work zones, it is obvious that these numbers have increased over the past seven plus years.

## **Approximately one-third of road users' frustrations are due to work zones:**

A survey conducted in 2000 for FHWA identified several issues the public has with work zones:

Thirty-two (32) percent of the respondents indicated dissatisfaction with work zones, the second highest rate of dissatisfaction among the attributes of major highways.

- Among the top transportation improvements cited by the public to overcome travel delay problems related how roadwork is done: repairs during non-rush hours; and reducing repair time.

[U.S. Department of Transportation, FHWA, Moving Ahead: The American Public Speaks on Roadways and Transportation Communities FHWA-OP-01-017. Washington, D.C., 2001.]

## **Safety in work zones continues to be a huge concern:**

More than 41,000 people were injured in 2003 as a result of motor vehicle crashes in work zones. This has grown from 36,000 in 1996, an increase of 14 percent. [U.S. Department of Transportation, National Highway Traffic Safety Administration, General Estimates System. Washington D.C., 2002.]

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The number of people injured as a result of motor vehicle crashes has remained around the 40,000 mark since 2003. Over the last five years, the number of persons killed in motor vehicle crashes in work zones has averaged 1,011 fatalities a year.

## **It is more dangerous travelling through a work zone than working in one:**

Over 40,000 people are injured each year as a result of motor vehicle crashes in work zones. The most surprising facts and statistics found were that it is more dangerous to drive, walk or bicycle through a work zone than to be working in one. On an average from 2003 to 2007, about fifteen (15) percent of the fatalities resulting from crashes in work zones were non-motorists, either pedestrians or bicyclists. Eighty-five (85) percent of those killed in a work zone are drivers or occupants of motor vehicles.

It has been found that approximately half of all fatal work zone crashes occurred during the day. More than two times as many fatal work zone crashes occurred on weekdays as on weekends. Summer and fall fatal work zone crashes are the highest.

## **Changes in work zone philosophies and improvements have shown positive results:**

As a response to public outcry, it is obvious that government started to listen and has been trying to help manage work zone delays and reduce exposure of workers and motorists. More and more construction and/or repair activities that can be conducted during nighttime hours are now being done, instead of during daylight hours only.

In a Federal report assembled six years ago, it showed that fifty-three (53) percent of the work zones were designated as day work, twenty-two (22) percent as night work, and eighteen (18) percent were active all day or nearly all day (18 hours or more). Additionally, greater than 60 million vehicles per hour per day of capacity were estimated lost to work zones over a two week period during the peak summer roadwork season in 2001. [U.S. Department of

Transportation, FHWA, A Snapshot of Peak Summer Work Zone Activity Reported on State Road Closure and Construction Websites. Washington, D.C., August 2002.]

## **Work zone fatalities are at a ten year low:**

In 2007, 835 fatalities in work zones resulted from motor vehicle crashes, a ten year low. This is a seventeen (17) percent decrease from 2006 (1,004 fatalities) and a 22 percent decrease from 2005 (1,074 fatalities). [National Work Zone Safety Information Clearinghouse Work Zone Fatalities, <http://www.workzone-safety.org/taxonomy/term23>, based on information from National Highway Traffic Safety Administration Fatality Analysis Reporting System (FARS).]

In 2007, there were 105 fatal occupational injuries at road construction site. This is a twenty-four (24) percent decrease from 2006 (139 fatal occupational injuries). [U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries [http://www.workzonesafety.org/files/documents/crash\\_data/worker\\_fatalities\\_2003-2007.pdf](http://www.workzonesafety.org/files/documents/crash_data/worker_fatalities_2003-2007.pdf), 2008.]

## **Work zones are becoming safer for motorists and workers; however, as can be seen they still have a long, long way to go:**

In my previous articles for National Work Zone Awareness Week, I was critical about the need for all of our construction, maintenance and utility workers to be trained, and if possible, to be work zone safety certified by a nationally recognized organization, such as the IMSA. Additionally, the need for all of our work zones, no matter how large or small or insignificant as they may appear, need to be properly designed, implemented and maintained for safety of the worker and the motoring public. There is still a need for all work zones to become safer and more efficient for everyone while driving through or working within one.

By implementation of improved work

zone safety methods, additional use of newly developed work zone traffic control equipment/devices, and increased training, the results speak for themselves, Reduction of: 1) motorist and worker conflicts; 2) motorist/worker frustrations; 3) motorist confusion; 4) vehicular crashes; 5) worker accidents; and 6) injury / death to motorists and workers.

## **Work zone safety improvements and awareness must be conducted every day of the year:**

As one can see, the trend in work zones indicate they are becoming increasingly safer. However, we can also see, they are still extremely dangerous and crashes within them can be fatal to motorists driving through them. We must continue to improve our work zone designs, initiate the use of new technologies and improved equipment/materials whenever possible, continue training of our construction, maintenance and utility workers, and increase work zone awareness to the general public. Increased safety awareness for work zones should be given through driver education classes, news media public safety announcements (newspapers, TV, radio, and the internet) not only during National Work Zone Awareness Week... each and every day of the year.

## ***For those who design, implement, and/or inspect construction, maintenance and utility work zones, keep up the good work in making our roadways much safer to drive and work in!***

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He has also been designing/reviewing traffic signalizations, channelization and signing plans for the County for over 37 years. Bob has a B.S. degree in Urban Systems Engineering Technology from FIU and numerous certifications in TTC, Traffic Signals and Signs and Markings. In addition, Bob was previously both a certified Police Officer and certified Police Instructor in the State of Florida for 13 years, while working concurrently part-time. He has been a long time member of both IMSA and ITE.

