



# IN THE ZONE

JOURNAL OF THE OREGON DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL PLANS UNIT SEPTEMBER 2011



Paving crews work on the upper deck of the Fremont Bridge (Southbound Interstate 405) in Portland in July 2011. The project required three weekends of full closure of Southbound I-405, along with several weeknights with multiple lane closures. The Fremont Bridge is the only bridge in Oregon with an epoxy asphalt concrete pavement wearing surface, which requires a minimum cure time of two hours before traffic can drive on it.

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*The ODOT Traffic Control Plans Unit develops the standards for traffic control plans for construction projects to provide safe and efficient movement of people and goods through work zones while allowing efficient completion of construction projects.*

## 2011 CONSTRUCTION SEASON BRINGS ANNUAL WORK ZONE SAFETY AUDITS

Oregon's summers undoubtedly bring orange drums and barricades to its highways, and the 2011 road construction season has been no exception with more than 120 road projects statewide.

The summer construction season also brings the Work Zone Safety Audit season. The TCP Unit, along with FHWA and ODOT Region staff, reviewed 43 projects in all five regions between July and August. The projects ranged from major bridge replacement projects on I-84 to a small culvert replacement on US 101.

Since 2002, ODOT has conducted formal work zone reviews as a key quality control and quality assurance program element. The audits give TCP designers, safety staff, project coordinators, and construction personnel an opportunity to observe temporary traffic control strengths and weaknesses in a variety of project contexts.

The purpose of the audits is to confirm design standards are being implemented consistently and uniformly; confirm the latest standards and practices are meeting expectations; highlight additional measures

needed to improve safety, traffic flow, and efficiency; and strengthen communication between different transportation disciplines.

Participants grade work zones on various measures, including signing, channelization devices, bicycle/pedestrian accommodation, flagger visibility and performance, mobility, and overall driver friendliness, among others. Scores are tabulated by the TCP Unit on a measure-by-measure, project-by-project, region-by-region, and statewide basis.

*(Continued on page 2)*

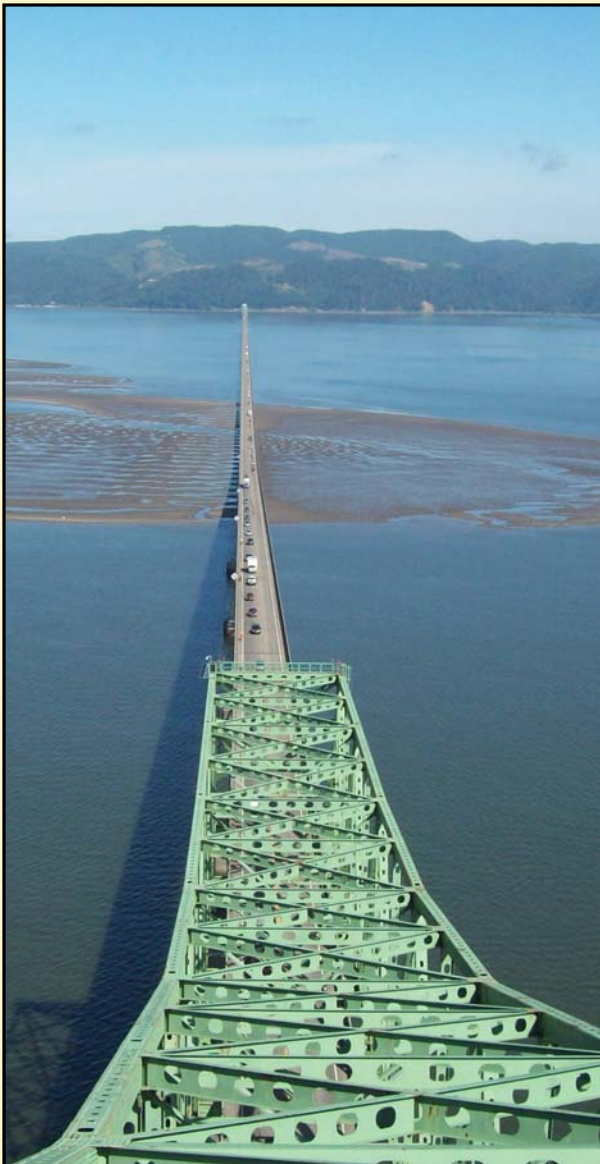
# WZ Safety Audits Evaluate Statewide Traffic Control, the State of the Practice

(Continued from page 1)

At first glance, the results of this year's audits reveal a number of strengths within ODOT work zones. And, despite a handful of identified weaknesses, the TCP Unit anticipates favorable scores and comments overall for Oregon's temporary traffic control plan program.

The final summary report will be published to the TCP Unit website and presented at the annual ODOT Project Manager's Meeting in early 2012.

Visit the TCP Publications website for 2009 and 2010 Summary Reports ([http://www.oregon.gov/ODOT/HWY/TS/publications.shtml#TCP\\_Publications](http://www.oregon.gov/ODOT/HWY/TS/publications.shtml#TCP_Publications)).



A southbound traffic platoon approaches flagging operations on the Astoria-Megler Bridge in Astoria. This project was one of 43 reviewed as part of the 2011 Work Zone Safety Audits. Credit: Matt Steigleder, ODOT District 1.

2011 WORK ZONE SAFETY AUDITS - EVALUATION FORM										
PROJECT NAME: _____					DATE: _____					
HIGHWAY: _____		MILEPOST: _____		REGION: _____		REVIEWED BY: _____				
PROJECT MANAGER: _____					OTHER CONTACTS: _____					
CONTRACTOR: _____					TOS: _____					
GENERAL NOTES: _____										
Only score Devices you witnessed on the Project. If a certain device was not present, do not score it.										
Notify PM or Field Project Representative!					S C O R I N G					
1	2	3	4	5	AVERAGE	ABOVE AVG.	GOOD	VERY GOOD	EXCELLENT	
CATEGORIES					SCORE	NOTES				
TEMPORARY SIGNING (Signs, Flags, Supports)		QUALITY								
		PLACEMENT								
		SPACING								
CHANNELIZATION DEVICES (Tubular Markers, Cones, Drums, Barricades)		TUBES/CONES								
		DRUMS								
		BARRICADES								
PAVEMENT MARKINGS (Paint, Tape, Reflective & Flexible Markers)		CONDITION								
		PLACEMENT								
CONCRETE BARRIER		CONDITION								
		PLACEMENT								
Reflective Barrier Panels? Y or N		CONDITION								
IMPACT ATTENUATORS (Drum Arrays, Narrow-Site & TMA)		CONDITION								
		PLACEMENT								
PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)		MESSAGE								
		PLACEMENT								
		CONDITION								
SEQUENTIAL ARROW PANEL (Arrow Board)		PLACEMENT								
		CONDITION								
TEMP. TRAFFIC SIGNALS		SET-UP								
		CONDITION								
BICYCLE, PEDESTRIAN & ADA FACILITIES (Score if existing facilities affected by construction)		SIGNING								
		Continuous Shores?								
		ADA Compliance								
FLAGGERS		VISIBILITY								
		Performance								
PILOT CARS		Equipment								
		Performance								
MOBILITY		Overall Flow								
		Time Stopped At Flagger or Signal (if applicable)								
		Approx. Travel Speed thru the work zone?								
WORKER GARMENTS & EQUIPMENT		GARMENTS								
		EQUIPMENT								
SITE HOUSEKEEPING		CLEAN, ORDERLY								
		ON-SITE?		Y or N						
POLICE ENFORCEMENT		PAYING OT?		Y or N						
DRIVER-FRIENDLY WORK ZONE		Ease of Navigation		This category for information only. Do not include in Page Total.						
		Consistency								
GRAND TOTAL = _____					FINAL SCORE = _____					
* N = The Number of Scored Categories										

2011 WZ Safety Audit Evaluation Form. Each participant evaluated projects using this form on several measures, including signing, flagger performance, and overall driver-friendliness.



A flagger stops southbound traffic on US 97 near Biggs Junction during the Regions 4 & 5 Work Zone Safety Audits in August 2011. In addition to the evaluation scores, the Safety Audits also provide opportunities to take pictures for examples of devices in the field, examples of TCP deployment, and examples for training classes.

## 2011 Oregon Temporary Traffic Control Handbook— Publication Date Delayed

The Oregon Temporary Traffic Control Handbook (OTTCH) is being revised to address outstanding issues in the 2006 OTTCH and to meet the federal policies given in the 2009 Manual on Uniform Traffic Control Devices (MUTCD).

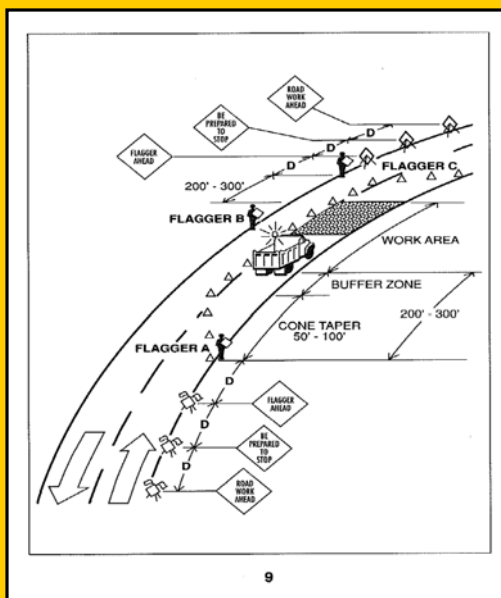
The draft has moved through the Oregon Administrative Rule (OAR) adoption process and is awaiting final consent from the Oregon Transportation Commission (OTC).

The 2011 OTTCH and the Oregon Supplement to the 2009 MUTCD were originally scheduled to be approved and published in August 2011. Editions of the Oregon Supplement to the MUTCD and the OTTCH are adopted together at the same time under Oregon Administrative Rule (OAR) 734-020-0005. In other words, one book can't be approved without the other.

Currently, there are unresolved issues within other chapters of the Oregon Supplement to the 2009 MUTCD—not related to temporary traffic control—which have delayed the adoption and approval of the 2011 OTTCH. These issues must be resolved before the OTC can adopt the Oregon Supplement and the 2011 OTTCH.

It is unknown at this time when these issues

will be resolved. In accordance with federal regulation (23 CFR 655.063), state supplements to the 2009 MUTCD must be adopted by the end of calendar year 2011.



*Single Lane Closure diagram from the 1990 Signing and Flagging Standards for Short-Term Work Zones. This predecessor to the Oregon Temporary Traffic Control Handbook was 35 pages long and contained 14 diagrams. The draft 2011 edition of the OTTCH is 157 pages long and contains 59 diagrams and figures.*

A draft final copy of the 2011 OTTCH can be viewed at [http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/docs/pdf/2011\\_OTTCH-FINAL\\_DRAFT\\_June15.pdf](http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/docs/pdf/2011_OTTCH-FINAL_DRAFT_June15.pdf).

The OTTCH applies to temporary traffic control zones of three days or less for any reason on any public road in Oregon. It is based on the premise that simplified traffic control procedures are warranted for short term activities in order to limit workers' exposure to traffic.

For work requiring traffic control devices in place longer than three days, the OTTCH does not apply and a more comprehensive Traffic Control Plan is required.

Once approved, the 2011 Edition OTTCH will be posted to the TCP Unit website and be printed for hard copy distribution. The ODOT Traffic-Roadway Section will announce publication once the OTC has given final approval.

For other questions regarding the 2011 OTTCH, contact Eric Leaming at 503-986-3493 or [eric.s.leaming@odot.state.or.us](mailto:eric.s.leaming@odot.state.or.us).



*Pavement removal operation on the upper deck of the Fremont Bridge (Southbound Interstate 405) in Portland in July 2011. The paving project required three weekends of full closure of Southbound I-405, along with several weeknights with multiple lane closures. Traffic was detoured around full closures to the I-5 Marquam Bridge, south of downtown Portland.*

# Three Portable Traffic Management Systems Added to ODOT Qualified Products List

## What can Smart Work Zones do to improve your traffic management strategy?

Smart work zones are an emerging traffic management strategy designed to address mobility and safety issues through road construction projects. The idea behind smart work zones is to actively advise drivers of traveling conditions through work zones in real-time, such as slowed or stopped traffic, or alternate routes that may be faster.

Three Portable Traffic Management System vendors have been moved from the Conditional Use List to the Qualified Products List (QPL) under "PTMS Vendor." The "qualified product" is an ITS provider who supplies the smart work zone system. The three companies are iCone Products, LLC; ASTI Transportation Systems, and Ver-Mac.

The iCone system is a ground mounted, Doppler radar sensor system contained within a portable traffic drum. The system is GPS enabled and automatically recalibrates its calculations if the traffic drums are moved. The system has been crash tested and has been approved by the FHWA. For more information, go to [www.iconeproducts.com](http://www.iconeproducts.com).

The ASTI system is a trailer-mounted, elevated microwave and Bluetooth sensor system. The data it collects is transmitted by cellular

network and can be accessed and stored remotely. For more information, go to [www.asti-trans.com](http://www.asti-trans.com).

Ver-Mac provides several smart work zone systems, including traffic responsive (congestion/queue mitigation), vehicle responsive (dynamic speed displays), and condition responsive systems (trucks entering/exiting roadway). For more information, go to [www.ver-mac.com](http://www.ver-mac.com).

Projects that may benefit from these systems are usually complex and are located on high volume, high speed facilities where the safe and smooth operation of traffic is critical.

Smart work zone systems can also feature:

- Alerts of slowed or stopped traffic to PM staff via email or smart phone;
- Estimates of travel time;
- Alerts to motorists about an entering construction vehicle;
- Display of pre-programmed legal speed reductions;
- Site cameras for monitoring by PM staff; and
- Collection of traffic data for analysis during and post-project.

For more information about smart work zones, their uses, and if the systems can work for your project, contact Scott McCanna at 503-986-3788.

## TTC Standard Drawings Updated—What Major Changes Should You Be Aware Of?

The TM800 series of Standard Drawings has been updated and posted to the ODOT Standard Drawing Website for use in the first half of 2012. This update was part of regular, semiannual maintenance on Standard Drawings to keep them up-to-date on the latest design standards. Some changes were minor, such as grammar corrections, but some are noteworthy changes to design standards used in the past.

### TM 810—Temporary Pavement Markers

TM 810 includes details for a variety of patterns using temporary reflective pavement markers to either simulate or supplement other pavement markings.

Typical application examples were added to each layout for this update to better clarify typical uses of each layout. For example, Layout "B" and Layout "S" are both supplemented solid lines and look very similar. Adding typical applications aimed to clarify typical uses for both. Layout "B" and Layout "S" are typically used for alignment shifts or crossovers, and are used to discourage lane changes in multilane sections. The difference between the two is duration: Layout "B" is typically used for projects in place through winter months, whereas Layout "S" is typically used for short duration work of less than 30 days.

### TM 820—Temporary Barricades

TM 820 includes fabrication and notation details for Type I, II, and III temporary barricades.

A barricade slope marking for a full roadway closure, CLOSED-C, was added for this update to comply with the MUTCD.

### TM 821—Temporary Sign Supports

TM 821 includes a detail describing proper temporary sign placement as well as details for three types of temporary sign supports.

Rural and Urban Area descriptions in the Temporary Sign Placement detail were clarified to clearly show where the placement details apply. For example, the "Rural and Uncurbed Areas" detail has been renamed to "Urban Areas—No Curb; Rural Areas—Curb or No Curb." The "Urban, Curbed Areas" detail has been renamed to "Urban Areas with Curb" and a typical curb and gutter section was added to the drawing.

In addition, the Concrete Barrier Sign Support detail was clarified with additional notes specifying a maximum sign size of 9 square feet.

### TM 830—Temporary Concrete Barrier

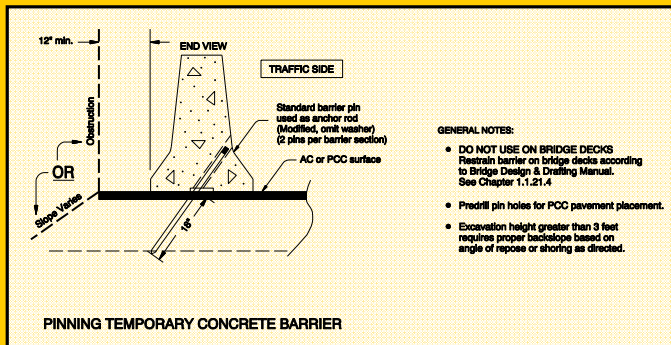
TM 830 includes details for pinning of temporary concrete barrier to roadway surfaces and includes a detail for existing rumble strip removal.

TM 830 went through the most significant change for this update. Past Standard Drawings included different barrier pinning methods, depending on the pavement surface (asphalt or PCC). This update changed the pinning method for PCC surfaces to be the same as the pinning method for asphalt surfaces.

The pinning method still should not be used on bridge decks. Barrier should be restrained on bridge decks according to the Bridge Design and Drafting Manual.

Standard Drawings give general information on how to set up work zones and are not intended to substitute for complex, multi-stage traffic control plans. The Drawings should not be dissected by being cut, copied, pasted, or edited into other portions of a traffic control plan, and should be selected to closely represent the scope of work for the activity or project.

To view the updated drawings, see the ODOT Traffic Standard Drawings website.



Updated TTC Standard Drawing TM 830 for use December 1, 2011—May 31, 2012.  
The PCC pinning method has been changed to be the same as the AC pinning method.

# Construction Speed Zone Reviews Moving to Traffic Control Plans Unit

The process to request reduced speed limits through work zones on state highways is being slightly modified and the TCP Unit is taking on a greater role in the process.

Jan Gipson, Senior Traffic Investigator with the Traffic-Roadway Section, handled construction speed zoning investigations in the past, among other investigations duties, and has recently retired. The TCP Unit is taking over the construction speed zoning review duties Gipson previously handled.

The process to request a construction speed zone on a state highway will undergo minor changes, mostly internal to the Traffic-Roadway Section. All request submittals need to be sent to Kathi McConnell in the Traffic-Roadway Section. Kathi's contact information is included below.

The Worksheet to request a reduced construction speed is posted online at [http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/publications\\_traffic.shtml#Work\\_Zone\\_Related](http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/publications_traffic.shtml#Work_Zone_Related). The form is changed from time to time; be sure to use the link when applying and don't download the Worksheet for multiple requests.

## **What does the TCPU review and why?**

Temporarily reducing the posted speed limit on highways can be effective if drivers perceive a need to reduce their speed. The 2009 Manual on Uniform Traffic Control Devices states that "reduced speed zoning (lowering the regulatory speed limit) should be avoided as much as practical because drivers will reduce their speeds only if they clearly perceive a need to do so." (6C.01(14, 15)). Reducing the posted speed through work zones needs to be carefully considered before implementation.

ODOT's methodology to determine if a reduced construction speed zone is warranted is based on NCHRP Report 3-41(2), *Effectiveness and Implementability of Procedures for Setting Work Zone Speed Limits*. The 1998 report provides findings of driver speed trends through various work zones and guidance on several factors that may justify a temporary reduced speed limit. The report also

guides agencies on how to implement the report's findings in a work zone speed limit program.

## **Speeds through work zones—what do drivers really do?**

There are perceptions of how motorists behave as they travel through work zones, but what does the research say? How do motorists' speeds respond to the presence of a work zone? Do motorists reduce their speed without a posted speed reduction? What about speed limit compliance?

Speed studies in NCHRP Report 3-41(2) found that motorists reduce speeds in work zones, even those with no posted speed limit reduction. In work zones with no speed limit reduction, the mean speed decreased by an average of 4.3 miles per hour for all vehicle types. In work zones with a 10 mph speed limit reduction, the mean speed decreased by an average of 9.4 mph for all vehicle types.

In work zones with no speed limit reduction, speed limit compliance was generally greater than upstream of the work zone, whereas compliance was generally lower in work zones with a 10 mph speed limit reduction than upstream of the work zone.

Police enforcement in work zones also produced larger reductions in mean speed, reduced speed variance, and increased compliance than when police enforcement was not present. The study found the greatest compliance occurred in work zones where the speed limit was not reduced.

The report's literature review also found speed variance in work zones was generally higher than speed variance outside of work zones.

## **Safety Concerns—Workers and Motorists**

In general, an increased speed variance can result in an increased risk of crashes. As highlighted in Report 3-41(2)'s findings, this speed variance can be more prominent in work zones, particularly immediately adjacent to active work near the traveled way, where the

*(Continued on page 6)*



*Reduced construction speed limit signing on US 101 at the Astoria-Megler Bridge near Astoria. The temporary flagger signs (left) are mounted to rotating posts that are turned away from traffic when they are not needed. The base of the rotating posts are pinned to keep the signs properly aligned in high winds near the mouth of the Columbia.*

# Construction Speed Zoning—When to lower the speed limit and why?

(Continued from page 5)

“Gawk Factor” significantly reduces the highway’s capacity, and at lane closure transition zones.

This increased risk of crashes can be seen in work zone incident data. According to ODOT’s 2011 Work Zone Safety Fact Sheet, in Oregon during the last 10 years, there has been an average of 475 work zone related crashes each year, with an average of 8 work zone fatal crashes each year. In 2008, 2 percent of all roadway fatalities occurred in work zones. Some 42 percent of crashes occurred in the transition zone prior to the work area. While the risk of death is seven times higher for roadway workers than for an average worker, more drivers and their passengers are killed and injured in roadway work zones in comparison to workers. In 2008, roughly four out of every five work zone fatalities were motorists.

These are just a few reasons why it is important to limit the reduction of speed limits through work zones to locations where drivers will perceive an need to do so.

## Speed Reduction Factors—

### Where will drivers perceive a need to slow down?

Report 3-41(2) identified several different factors that may make a reduced speed limit beneficial. The factors are based on where work is located, if there are hazards close to passing motorists, if there are unprotected workers close to uninterrupted traffic flow, or if there is a condition that conflicts with normal driver expectancy, among others.

In general, speed reductions are not warranted when construction activities are more than 10 feet from the edge of the traveled way, and for activities that require an intermittent or mobile operation on the shoulder.



Reduced construction speed limit signing on Interstate 84 near Mosier in 2009. Construction speed reduction requests should be carefully investigated in order to ensure they are implemented safely and consistently throughout the state.

## When to Submit the Request Form

Speed reduction requests are generally made twice for a project. The first request occurs during design and is usually completed by the TCP Designer and signed by the Region Traffic Manager and Project Manager. If the speed reduction is warranted, and the State Traffic Engineer approves, a letter of support is sent to the requestor documenting that the State Traffic Engineer supports the concept of a reduced speed limit.

The second request is typically submitted by the Project Manager after the project has been awarded. If the speed reduction is still warranted, and the State Traffic Engineer approves, a formal Speed Zone Order is issued.

To request a reduced construction speed limit on a state highway, submit the Worksheet for Determining the Need for Reduced Speed in a Work Zone and a copy of the Traffic Control Plan to the Traffic-Roadway Section. The worksheet can be downloaded at [http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/publications\\_traffic.shtml#Work\\_Zone\\_Related](http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/publications_traffic.shtml#Work_Zone_Related).



## References

- 2011 Work Zone Safety Fact Sheet & Safety Tips. Salem, Oregon: Oregon Department of Transportation Safety Division, 2011. <http://www.oregon.gov/ODOT/TS/workzonesafety.shtml> (accessed Sept 9, 2011).
- Migletz, James, Jerry L. Graham, Brian D. Hess, Ingrid B. Anderson, Douglas W. Harwood, and Karin M. Bauer. *Effectiveness and Implementability of Procedures for Setting Work Zone Speed Limits*. Washington, D.C.: Transportation Research Board, 1998.

## At-A-Glance: Construction Speed Zone Review Process

1. Submit a completed “Worksheet for Determining the Need for Reduced Speed in a Work Zone” and related Traffic Control Plans to Kathi McConnell in the Traffic-Roadway Section. The Worksheet must be approved and signed by the Region Traffic Manager and Project Manager prior to submittal.
2. Kathi logs the request in the Speed Zone Tracking System and sends it to the TCP Unit for review.
3. The TCP Unit completes a review and makes a recommendation to the State Traffic Engineer.
4. If approved by the State Traffic Engineer, a Letter of Support, or a Speed Zone Order if the project start is imminent, is sent to the Project Manager and the requestor.



Submit the Request Form and related Traffic Control Plans to:

**Kathi McConnell**  
Oregon Department of Transportation  
Traffic-Roadway Section MS#5  
4040 Fairview Industrial Drive SE  
Salem, Oregon 97302-1142

Or electronically to: [kathleen.e.mcconnell@odot.state.or.us](mailto:kathleen.e.mcconnell@odot.state.or.us)

## Work Zone Safety Power Workshop Featured *Roadway Safety+*, Other Clearinghouse Activities

The temporary traffic control industry is one of the more dynamic industries in highway construction, and actively communicating with other transportation agencies, groups, and device vendors is one way Oregon stays at the leading edge of temporary traffic control strategies. The TCP Unit recently took advantage of one of these communication opportunities by attending the Traffic Management and Work Zone Safety Power Workshop, hosted by [workzonesafety.org](http://workzonesafety.org), in Pittsburgh, Pennsylvania. Eric and Justin attended the two-day Workshop through a generous scholarship from AASHTO.

A part of the larger International Bridge Conference, the workshop covered a variety of topics ranging from Work Zone

Clearinghouse activities to the latest *Roadway Safety+* safety training tool.

The Work Zone Clearinghouse is an excellent source of work zone safety data, traffic control laws, work zone standards and practices, and much more. For TCP Designers, the Clearinghouse offers work zone crash data dating back as early as 1982, expert contact information, latest work zone-related research, and national regulations. The Clearinghouse is hosted and maintained by Texas Transportation Institute and can be accessed online at [www.workzonesafety.org](http://www.workzonesafety.org).

*Roadway Safety +* is a module-based training program that gives an overview of common hazards in highway construction and simple prevention measures. The content is available in English, Spanish,

and Portuguese, and was developed by a consortium of various groups, including the American Road and Transportation Builders Association (ARTBA), American Association of State Highway and Transportation Officials (AASHTO), and Texas Transportation Institute (TTI), among others. The content and presentation lend themselves to quick safety briefs in the field or more in-depth field safety training. The program can be downloaded online at [http://www.workzonesafety.org/training/courses\\_programs/rsa\\_program](http://www.workzonesafety.org/training/courses_programs/rsa_program).

Other events the TCP Unit participates in include the National ATTSA Convention, Statewide Traffic Control Conference, and other local temporary traffic control training classes.



Beam swing operation on Interstate 84 at 15 Mile Creek in The Dalles, June, 2011. Beam swing operations can cause significant “gawking” or “rubbernecking” by passing motorists, which can reduce a work zone’s free flow threshold. (Background: Mount Hood; Right: Columbia River)

## Updated Work Zone Traffic Analysis Web-Based Tool Includes Latest Data, New Staging Options

HDR completed the latest revision of the Work Zone Traffic Analysis web-based tool in August and users will have the benefit of the latest available traffic data and an improved staging layout, among other updated features.

Highlights of the tool’s update include:

- Latest available traffic data (2009), including updated AADT volumes, truck percentages, and growth rates;
- Location data now includes functional classification;
- Work zone length now available in feet or miles;
- Improved staging layout for complex staging plans;
- New staging options for 3-to-1 lane closures and no work;
- Map now zooms to the nearest manual count on the selected highway; and
- Changes to user-selected Analysis Trend Data

A default analysis ATR is no longer provided for a selected location. Analysts now choose ATR data, Seasonal Data, or Custom Data for Analysis Trend Data (seasonal trends). Use TPAU’s Analysis Procedures Manual for guidance on selecting appropriate seasonal trend data.

This revision was part of routine maintenance by HDR, Inc. in order to meet users’ needs and update the tool with the latest available traffic data for analysis.

The tool is a web-based, deterministic program designed to quickly determine lane closure restrictions and delay estimates for construction projects across Oregon.

To use a limited version of the tool, go to <http://wzta.obdp.org>. The full version is available to analysts who complete the Work Zone Traffic Analysis Theory and Application Workshop, next available October 18-19, 2011 in Salem. Sign up for the class online at [www.oregon.gov/ODOT/HWY/TECHSERV/training.shtml](http://www.oregon.gov/ODOT/HWY/TECHSERV/training.shtml).

# Upcoming Opportunities

## Temporary Traffic Control Plans Design Workshop

This class provides Traffic Control Plan Designers, inspectors, and their leaders with the principles and practices of Traffic Control Plans (TCP) Design. Topics to be covered include TCP design standards and practices; standard drawings; traffic control devices and measures; and specifications, special provisions, and cost estimates. A background in roadway or traffic is desirable.

October 4-5, 2011 | Chemeketa Winema Conference Center, Room 201, Salem | \$125 | 15 PDH

Register Online: <http://www.oregon.gov/ODOT/HWY/TECHSERV/training.shtml>

## Work Zone Traffic Analysis Theory and Application Workshop

This class introduces staff responsible for designing, planning, or managing road construction and maintenance to ODOT's Web-Based Work Zone Traffic Analysis (WZTA) tool and methodology. The tool is designed to quickly analyze traffic trends and road characteristics for all Oregon State Highways to estimate when lane closures can occur without significant delay to the public, and estimate the magnitude of delay caused by a work zone. Background in traffic analysis and/or roadway design is desirable, but not required.

October 18-19, 2011 | ODOT Human Resources Building, Salem | \$100 | 10 PDH

Register Online: <http://www.oregon.gov/ODOT/HWY/TECHSERV/training.shtml>

## Work Zone Traffic Control—Internal ODOT Staff

This class is recommended for employees who work in areas exposed to traffic by providing the fundamental skills for traffic control and flagging in short-term work zones. Topics will include flagging, fundamental principles of traffic control, the five parts of a temporary traffic control zone, and primary traffic control devices and proper placement of devices.

November 17, 2011 | ODOT Region 1 Headquarters Building, Portland | Free

Register Online: <http://intranet.odot.state.or.us/ODOTHR/index.htm>

### Staff Notes:

**Scott McCanna** will be working as the Interim Region 2 Traffic Engineer beginning October 3, temporarily filling the vacancy left by Dorothy Upton's transition back to ODOT's Transportation Planning Analysis Unit.

**Don Wence** is currently working as the Interim ODOT Traffic Operations Engineer in the Traffic Operations Unit of the Traffic-Roadway Section, temporarily filling the vacancy left by Gary Obery's transition to Alternate Mode Traffic Engineer.

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## Oregon Department of Transportation Traffic Control Plans Unit

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4040 Fairview Industrial Drive SE  
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[http://www.oregon.gov/ODOT/HWY/TS/traffic\\_control\\_plans.shtml](http://www.oregon.gov/ODOT/HWY/TS/traffic_control_plans.shtml)



If you know of any TCP-related classes, conferences, or learning opportunities, please let the TCP Unit know! We'll do our best to include it in the *Upcoming Opportunities* section of *IN THE ZONE*!



Your work zone photos are welcome to be included in future editions! Some photos used in *IN THE ZONE* and many others are available on the ODOT Flickr site at [www.flickr.com/photos/oregondot/](http://www.flickr.com/photos/oregondot/).



To subscribe to future editions of *IN THE ZONE*, email Eric Leaming at [eric.s.leaming@odot.state.or.us](mailto:eric.s.leaming@odot.state.or.us).



## IN THE ZONE

VOLUME 1 | ISSUE 3 | SEPTEMBER 2011



Lane closure on Southbound Interstate 5 near Talent in 2004.