



**Washington State
Department of Transportation**

Lynn Peterson
Secretary of Transportation

February 4, 2015

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FHWA

U.S. Department of Transportation,
Dockets Management Facility,
Room W12-140, 1200 New Jersey Avenue SE.,
Washington, DC 20590,

Re: [Docket No. FHWA-2014-0039]

Hello,

We are replying to the request published in the Federal Register (Docket No. FHWA-2014-0039) requesting information related to ET-Plus guardrail terminals.

WSDOT currently has no comprehensive source for obtaining all of the information requested. Different elements of the requested information are available from different sources, and to different levels of accuracy and completion. The data that we are able to provide is very limited, and it should be understood that it is incomplete.

Data sources and limitations

The primary sources of readily retrievable data related to the requested information are the WSDOT Highway Activity Tracking (HATS) System, Washington State Patrol Police Traffic Collision Reports (PTCR's), the Washington State Highway Photo Log, and the Washington State Highway Log. All of these data sources have limitations.

HATS records: the HATS system was implemented between 2008 and 2012. One-or two WSDOT regions started using the system in 2008 and the system was fully implemented by all regions by 2012. As such, data from 2012 and afterward can be considered fairly complete while data from prior to that date should be considered incomplete. HATS records may contain the following requested items:

- Terminal type (it may be possible to determine guardrail terminal type, such as ET-Plus, depending on the completeness of the record, and the number and quality of the attached photographs)
- Photographs of damaged guardrail terminals at crash scenes (occasionally included)
- Photographs of vehicles after collisions (occasionally included)

PTCR's: the PTCR's do not identify the type of guardrail terminal involved. PTCR's may contain the following requested items:

- Crash narratives
- Crash diagrams
- Severity of the crash as noted in the crash report (Killed, A injury, B injury ,etc.);
- The approximate mass, speed, and angle of impact of the vehicle (some items included in PTCR's)
- The orientation of the vehicle as it impacted the terminal (head-on, side impact, front corner, etc.) – if that level of detail was observed by the officer.
- The location of the crash (State, route, county, mile marker)
- The weather at the time of the crash

WSDOT State Highway Photo Log: the WSDOT State Highway Photo Log may contain the following requested items:

- The type of terminal involved with the crash
- Other aspects of the site.

WSDOT State Highway Log: the WSDOT State Highway Log may contain the following requested items:

- The type of road on which the crash occurred

Requested information not available in HATS, PTCR, Photo Log or Highway Log

There is no known readily retrievable source of information for the following requested items:

- The condition of the shoulder and/or roadside at the time of the crash
- The installation and maintenance history of the terminal
- The condition of the terminal prior to the impact
- data concerning the dimensions of the ET-Plus devices installed on highways: (channel width, exit gap, guide chute exit height, and outside guide channel length).
- any other dimensions that could be useful in determining the in-service performance of the ET-Plus.

Additional possible data sources

There is a chance that an event may have resulted in a WSP Major Accident Investigation Team (MAIT) Case Summary If a MAIT Case Study does exist, additional details regarding the event will be found in the report. The WSP MAIT website is listed below:

<http://www.wsp.wa.gov/crime/mait.htm>

What WSDOT is providing

Although the request was specific to ET-Plus terminals, we are sending material related to crashes involving all models of energy-absorbing terminals currently in use by WSDOT. The material includes terminal models in addition to ET-Plus. The material includes ET-2000, ET-Plus, ET-31, SKT, and FLEAT terminals.

Given the limitations of the data sources described earlier, *the material we are sending should in no way be considered a comprehensive catalog of all crashes involving ET-Plus terminals*. The material being sent represents some unknown percentage of all crashes that have occurred on WSDOT facilities involving energy-absorbing terminals.

We are sending material for those crashes that we could provide the greatest number of requested items. In order to best provide the requested information, it was felt that photographs were essential. Photographs only exist in the HATS records. As such, we developed a list of crashes that involved guardrail end terminals, most of which have associated HATS records with an associated PTRC. As a reminder, the HATS system had a phased implementation occurring between 2008 and 2012. The Photo Log and HATS records were used to determine terminal type.

Included you will find:

- List of crashes with associated PTRC's and/or HATS records
- Hard copies of PTRC's for the crashes listed
- Electronic copies (included flash-drive) of HATS records if available

You may also find it useful to access the following tools:

- The 2013 WSDOT State Highway Log may be accessed at:
<http://www.wsdot.wa.gov/mapsdata/roadway/pdf/HwyLog2013Statewide.pdf>
- The WSDOT State Highway Photo Log may be viewed at:
<http://www.wsdot.wa.gov/mapsdata/tools/srweb.htm>

We hope this information proves helpful in your investigation.

Sincerely,

John Donahue

JD: jkp

cc (cover letter & list only): Don Peterson, FHWA

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