

DATE: November 4, 2014

TO: County Highway Commissioners
WisDOT Regional Highway Operations Managers
WisDOT Maintenance Supervisors
WisDOT Regional Maintenance Staff

FROM: Todd Matheson, State Maintenance Engineer

SUBJECT: ET-Plus Beam Guard End Terminals Maintenance Guidance

In light of the recent legal developments and questions being raised about the Trinity Highway Products ET-Plus Beam Guard End Terminals, WisDOT is temporarily suspending new installations beginning with the November 2014 letting until the safety of this product is confirmed. As such, we are asking you to immediately stop any new orders for the ET-Plus end terminals intended for use on the state truck highway system. New installations or replacement of beam guard end terminals should utilize the SKT-350 end terminal unit manufactured by Road Systems, Incorporated.

WisDOT has no known information that current installations of the ET-Plus in Wisconsin are unsafe. WisDOT's number one priority is the safety of the traveling public, and we feel this is an appropriate precautionary measure.

Maintenance

Manufacturer recommendations regarding maintenance of end treatments should be followed. More information about the end terminal can be found at <http://roadwaystandards.dot.wi.gov/standards/cmm/cm-06-26.pdf>.



(photo source : Trinity ET Plus Website)

Full Replacement

Damage requiring full replacement of an ET-Plus Energy Absorbing Terminal includes:

- Head shows any visible signs of damage or vehicle contact.
 - Broken welds

- Steel plates scraped, bent, damaged or kinked
- Rail cannot be extracted from head with the use of limited force or by the use of hand tools.
- Impact causes head to flatten the rail.

Partial Repair

Damage leading to partial replacement of ET-Plus hardware:

- Head is not damaged or shows no signs of contact.
- Head can be removed, if needed, from rail by the use of limited force or by the use of hand tools.
- Some rails may be flattened or bent (see below)
- Post may be shifted/leaning away from roadway (see below)
- One or two post may be damaged



Additional Reporting

WisDOT is interested in gathering any information which may be helpful in determining or evaluating the field performance of the ET-Plus system. Regional maintenance staff are asked to provide crash photos and copies of police reports when an ET-Plus terminal is impacted. Information should be forwarded to the Erik Emerson erik.emerson@dot.wi.gov in the Bureau of Project Development. In some cases, the department may ask counties to save hardware for additional analysis. WisDOT maintenance staff should also be made aware of shortages or difficulty in obtaining SKT-350 terminals from suppliers.

Guidance provided above is not all inclusive. Specific situations may require additional engineering analysis and/or judgment on the part of WisDOT maintenance engineers. Regional staff may contact Erik Emerson erik.emerson@dot.wi.gov in the Bureau of Project Development for assistance in conducting additional engineering analysis or if additional guidance is necessary. However, the final decision of full or partial replacement of the ET-Plus is the responsibility of WisDOT Regional maintenance staff.