



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. Box 778
DOVER, DELAWARE 19903

JENNIFER COHAN
SECRETARY

February 6, 2015

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

RE: FHWA Docket No. FHWA-2014-0039
ET-Plus Guardrail End Terminal

AGENCY: Federal highway Administration (FHWA) Department of Transportation (DOT)
ACTION: Notice; Request for Information

This letter is in response to the Federal Highway Administration (FHWA) request for information on the above referenced federal register notice titled *ET-Plus Guardrail End Terminal*.

The Delaware Department of Transportation (DelDOT) is responsible for operating, maintaining and improving over 89 percent of the 13,500 lane miles of roads in Delaware, including both state and local roads, multiple toll facilities, over 1,000 traffic signals and over 250,000 signs. Delaware is one of only a few states with such a high percentage of public roads under the State Department of Transportation jurisdiction; the national average is approximately 20%.

DelDOT has reviewed FHWA's request for information related to the ET-Plus Guardrail End Terminal. DelDOT does not maintain the majority of detailed information that FHWA is requesting involving the ET-Plus. Crash reports in Delaware do not differentiate between the various styles of end terminals that are installed along our roadways. Therefore, we are unable to query only those crashes involving the ET-Plus and as such are not able to provide the specific crash narratives, crash diagrams, crash severity and other crash and vehicle related information that is requested in the Federal Notice. In addition, FHWA has requested "as installed" dimensions of the ET-Plus end terminal including the channel width, exit gap, guide chute exit height and outside guide channel length. Aside from the channel width dimension, DelDOT's guardrail inventory does not capture the other requested dimensions. A search of shop drawings from previously accepted construction projects would not yield credible results of this information as the guardrail end terminals may have been changed as part of maintenance contracts due to repairs and replacements.

While DelDOT is unable to provide the majority of detailed information requested by FHWA, we are able to provide the following information for your review and consideration:

1. Aggregate number of crashes in Delaware over the last five years that involve guardrail end treatments.
2. The channel width dimensions for the ET-Plus end treatments that DelDOT has in its inventory based upon a statewide inventory update conducted in November and December 2014.
3. A summary of DelDOT's ad-hoc in-service evaluation data of the ET-Plus guardrail end terminal.

Guardrail End Terminal Crashes:

Using the Department's *Crash Analysis Reporting System (CARS)*, aggregate numbers of crashes involving guardrail end terminals were queried. The data query covers the period between January 1, 2010 and December 31, 2014. In order to properly capture the total number of crashes involving a guardrail end terminal, we looked at both the "first harmful event" and "most harmful event" data entries and filtered out duplicate results. These two categories capture the first harmful and most harmful event of each individual crash. Table 1, below, depicts the number of crashes involving a guardrail end terminal by year and crash severity.

Table 1 Crashes Involving Guardrail End Terminals by Severity					
	Non-Reportable Crashes	Property Damage Only	Injury	Fatal	Totals
2010	9	68	27	0	104
2011	8	69	34	0	111
2012	9	62	34	0	105
2013	9	74	33	0	116
2014*	15	78	22	1	116
Totals	50	351	150	1	552

**Data up through 12/31/14 - Does not account crashes where the report has not yet been approved*

Table 2, on the next page, depicts the number of crashes involving a guardrail end terminal compared to the total number of reportable crashes statewide. As shown in Table 2, Delaware averages approximately 110 crashes per year involving a guardrail end terminal. The total number of crashes involving a guardrail end terminal constitutes half of a percent of all crashes that occur annually statewide.

Table 2 Crashes Involving Guardrail End Terminals Comparison to Statewide Crashes			
	Total Statewide Crashes ¹	# Crashes Guardrail End	% Crashes Guardrail End
2010	20,697	104	0.502%
2011	20,872	111	0.532%
2012	21,202	105	0.495%
2013	22,453	116	0.517%
2014*	22,825	116	0.508%
Totals	108,049	552	0.511%

*Data up through 12/31/14 - Does not account crashes where the report has not yet been approved

¹Total crashes represents all reportable crashes (excludes non-reportable crashes)

Delaware's ET-Plus Inventory and Channel Width:

As part of Delaware's efforts to assess the number of ET-Plus guardrail end terminals in its inventory, DelDOT conducted a field review of all Type 1 (tangent style) guardrail end terminals in November and December 2014. The goal of the field review was to document each style of Type 1 end terminal on Delaware roadways and collect the channel width dimension of those terminals. Table 3 below depicts the number of each type of Type 1 end terminal on Delaware's roadways.

Table 3 Delaware's Type 1 End Treatment Inventory	
End Treatment Type	Quantity
ET-Plus	769
ET-31	489
ET-2000	337
SKT-350	477
FLEAT 350	229
FLEAT MT	11
Quadtrend	1
Total	2313

As noted in the table, there are 769 ET-Plus guardrail end terminals in Delaware's inventory. Attachment A provides a listing that depicts the location of each of the ET-Plus guardrail end terminals in our inventory and the associated channel width dimension of each of those devices. Channel width dimensions of the remaining end terminals in Delaware can be provided upon request of FHWA.

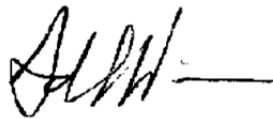
Ad-hoc In-Service Evaluation:

Due to the information being released regarding the ET-Plus guardrail end terminal, DelDOT began an in-service evaluation of its guardrail end terminals in September 2014. The in-service evaluation included the gathering of photographic information of end terminal strikes when our Maintenance and Operations (M&O) forces were called to inspect the devices after a crash. Our M&O forces were asked

to get photos of the device that was impacted, a measurement of the channel width of the device and a work order number for tracking purposes. From September 2014 to present, we gathered information on 12 end terminal impacts, 8 of which involved the ET-Plus. Table 4, in Attachment B, depicts the in-service evaluation information that DelDOT obtained regarding the ET-Plus end terminal. Included with this letter are photographs of each end terminal strike identified in Table 4 as well as the associated crash report if a crash report existed for that particular incident.

The Delaware Department of Transportation appreciates the opportunity to respond to FHWA's request for information related to the ET-Plus guardrail end terminal. Please feel free to contact me if you would like to discuss any of our comments in greater detail. I can be reached at (302) 659-4073.

Sincerely,

A handwritten signature in black ink, appearing to read 'ASW', followed by a horizontal line.

Adam S. Weiser, P.E., PTOE
Safety Programs Manager
Division of Transportation Solutions

ASW

Cc: Rob McCleary, Chief Engineer

Mark Luszcz, Chief Traffic Engineer

Maureen Kelley, Guardrail Working Group Co-Chair

LaTonya Gilliam, NPDES Engineer

Patrick Kennedy, Operations and Safety Engineer, FHWA Delaware Division

DelDOT_EndTreatment Inventory_ Trinity_ ET Plus

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
2012092	Newport Rd	NB	Right	North District	Tangent - Type 1	4
2012023	Concord Rd	WB	Right	South District	Tangent - Type 1	4
2012002	Greenhurst Farm Rd	SB	Right	South District	Tangent - Type 1	4
2012115	Bay Rd	SB	Right	Central District	Tangent - Type 1	4
2079	Brenford Rd	NB	Right	Central District	Tangent - Type 1	4
2080	Brenford Rd	SB	Right	Central District	Tangent - Type 1	4
2012080	Summit Bridge Rd	NB	Right	Canal District	Tangent - Type 1	4
2039	Stein Hwy	EB	Right	South District	Tangent - Type 1	4
2040	Stein Hwy	EB	Right	South District	Tangent - Type 1	4
2041	Stein Hwy	WB	Right	South District	Tangent - Type 1	4
5078	Alms House Rd	WB	Right	South District	Tangent - Type 1	4
1925	Coastal Hwy	NB	Right	South District	Tangent - Type 1	4
1944	Hillyard Rd	NB	Right	Central District	Tangent - Type 1	4
5299	Baker Mill Rd	EB	Right	South District	Tangent - Type 1	4
5345	Rementer Rd	SB	Right	South District	Tangent - Type 1	4
5268	Rifle Range Rd	WB	Right	South District	Tangent - Type 1	4
5289	Clendaniel Pond Rd	SB	Right	South District	Tangent - Type 1	4
5289	Clendaniel Pond Rd	SB	Right	South District	Tangent - Type 1	4
5298	Baker Mill Rd	WB	Right	South District	Tangent - Type 1	4
5191	Nassau Commans Blvd	SB	Right	South District	Tangent - Type 1	4
5210	Whitesville Rd	WB	Right	South District	Tangent - Type 1	4
5211	Millsboro Hwy	EB	Right	South District	Tangent - Type 1	4
5214	Millsboro Hwy	WB	Right	South District	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
5229	Millsboro Hwy	NB	Right	South District	Tangent - Type 1	4
115	Concord Rd	WB	Right	South District	Tangent - Type 1	4
5386	Woodland Rd	NB	Right	South District	Tangent - Type 1	4
5383	Woodland Rd	SB	Right	South District	Tangent - Type 1	4
5420	Poplar St	SB	Right	South District	Tangent - Type 1	4
5447	Sharptown Rd	WB	Right	South District	Tangent - Type 1	4
5451	Branch School Rd	NB	Right	South District	Tangent - Type 1	4
1044	John J Williams Hwy	EB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
1054	Coastal Hwy	SB	Right	South District	Tangent - Type 1	4
5674	Bay Rd	SB	Right	Central District	Tangent - Type 1	4
5677	Bay Rd	NB	Left	Central District	Tangent - Type 1	4
5683	North Dupont Blvd	NB	Left	Central District	Tangent - Type 1	4
122	Seaford Rd	NB	Right	South District	Tangent - Type 1	4
5838	Veale Rd	EB	Right	Central District	Tangent - Type 1	4
164	Central Ave	NB	Right	South District	Tangent - Type 1	4
111	Hardscrabble Rd	EB	Right	South District	Tangent - Type 1	4
13	Shawnee Rd	EB	Right	South District	Tangent - Type 1	4
5800	Coastal Hwy	SB	Right	South District	Tangent - Type 1	4
1144	New Rd	SB	Right	South District	Tangent - Type 1	4
1144	New Rd	SB	Right	South District	Tangent - Type 1	4
1154	John J Williams Hwy	SB	Right	South District	Tangent - Type 1	4
5936	Fast Landing Rd	WB	Right	Central District	Tangent - Type 1	4
5989	Little Creek Rd	EB	Right	Central District	Tangent - Type 1	4
5991	S Little Creek Rd	WB	Right	Central District	Tangent - Type 1	4
5894	McCauley Pond Rd	NB	Right	Central District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
6270	River Rd	NB	Right	Canal District	Tangent - Type 1	4
6254	Wrangle Hill Rd	WB	Right	Canal District	Tangent - Type 1	4
6563	Summit Bridge Rd	NB	Right	Canal District	Tangent - Type 1	4
6650	Vet Mem Hwy	SB	Right	North District	Tangent - Type 1	4
6854	JFK Memorial Hwy	SB	Right	Canal District	Tangent - Type 1	4
1405	Salem Church Rd	SB	Right	Canal District	Tangent - Type 1	4
7078	I-95	NB	Left	North District	Tangent - Type 1	4
1434	Old Chooches Brdg Rd	EB	Right	Canal District	Tangent - Type 1	4
1370	Basin Rd	NB	Right	Canal District	Tangent - Type 1	4
1386	I-95	SB	Right	North District	Tangent - Type 1	4
1582	New Linden Hill Rd	NB	Right	North District	Tangent - Type 1	4
1599	Stoney Batter Rd	WB	Right	North District	Tangent - Type 1	4
7138	Martin Luther King B	WB	Left	North District	Tangent - Type 1	4
7152	Centerville Rd	NB	Right	North District	Tangent - Type 1	4
3046	Fox Hunters Rd	NB	Right	Central District	Tangent - Type 1	4
<null>	<null>	<null>	<null>	<null>	Tangent - Type 1	4
1716	Vietnam Vet Hwy	NB	Right	North District	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
3077	Centre Rd	SB	Right	North District	Tangent - Type 1	4
3079	Centre Rd	NB	Right	North District	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
2013019	Victory Chapel Rd	SB	Right	Central District	Tangent - Type 1	4
7513	Old Kennett Rd	SB	Right	North District	Tangent - Type 1	4
7514	Old Kennett Rd	SB	Right	North District	Tangent - Type 1	4
2014039	US 13	NB	Left	Canal District	Tangent - Type 1	4
2014028	Canterbury Rd	NB	Right	Central District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
	1763 Dupont Hwy	SB	Right	Canal District	Tangent - Type 1	4
2014022	Todds Mill Rd	NB	Right	Central District	Tangent - Type 1	4
111214	<null>	<null>	<null>	<null>	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
	9010 Shady Bridge Rd	NB	Right	Central District	Tangent - Type 1	4
0					Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
	7537 Concord Pike	NB	Right	North District	Tangent - Type 1	4
	<null><null>	<null>	<null>	<null>	Tangent - Type 1	4
112014	<null>	<null>	<null>	<null>	Tangent - Type 1	4
2012096	Old Kennett Rd	NB	Right	North District	Tangent - Type 1	4
2012023	Concord Rd	WB	Right	South District	Tangent - Type 1	4
2012021	Edwardsville Rd	NB	Right	Central District	Tangent - Type 1	4
2012108	Mount Olive Cemetary	NB	Right	Central District	Tangent - Type 1	4
2012108	Mount Olive Cemetary	NB	Right	Central District	Tangent - Type 1	4
	2071 Fork Landing Rd	WB	Right	Central District	Tangent - Type 1	4
	2074 Sudlersville Rd	WB	Right	Central District	Tangent - Type 1	4
	2077 Sudlersville Rd	EB	Right	Central District	Tangent - Type 1	4
	2031 Wesley Church Rd	SB	Right	South District	Tangent - Type 1	4
	2016 Federalsburg Rd	SB	Right	South District	Tangent - Type 1	4
	4029 Blackbird Landing Rd	SB	Right	Canal District	Tangent - Type 1	4
	1017 Seashore Hwy	NB	Right	South District	Tangent - Type 1	4
	5017 Sussex Hwy	SB	Right	South District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
5232	Millsboro Hwy	SB	Right	South District	Tangent - Type 1	4
5243	Armory Rd	SB	Right	South District	Tangent - Type 1	4
5245	Omar Rd	SB	Right	South District	Tangent - Type 1	4
5245	Omar Rd	SB	Right	South District	Tangent - Type 1	4
5299	Baker Mill Rd	EB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
5267	Rifle Range Rd	WB	Right	South District	Tangent - Type 1	4
5276	Bowdens Garage Rd	WB	Right	South District	Tangent - Type 1	4
5277	Bowdens Garage Rd	WB	Right	South District	Tangent - Type 1	4
5278	Federalsburg Rd	WB	Right	South District	Tangent - Type 1	4
5293	Asbury Rd	NB	Right	South District	Tangent - Type 1	4
5293	Asbury Rd	NB	Right	South District	Tangent - Type 1	4
5210	Whitesville Rd	WB	Right	South District	Tangent - Type 1	4
5220	Daisey Rd	WB	Right	South District	Tangent - Type 1	4
5473	Park Ave	SB	Right	South District	Tangent - Type 1	4
5474	Park Ave	NB	Right	South District	Tangent - Type 1	4
5475	Donovans Rd	NB	Right	South District	Tangent - Type 1	4
5384	Woodland Rd	NB	Right	South District	Tangent - Type 1	4
5384	Woodland Rd	NB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
5452	Branch School Rd	SB	Right	South District	Tangent - Type 1	4
5453	Sharptown Rd	EB	Right	South District	Tangent - Type 1	4
1044	John J Williams Hwy	EB	Right	South District	Tangent - Type 1	4
5742	Still Rd	WB	Right	Central District	Tangent - Type 1	4
12	Shawnee Rd	WB	Right	South District	Tangent - Type 1	4
5837	Veale Rd	WB	Right	Central District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
	5838 Veale Rd	EB	Right	Central District	Tangent - Type 1	4
	0				Tangent - Type 1	4
	5843 Veale Rd	EB	Right	Central District	Tangent - Type 1	4
	1098 Patriot's Way	SB	Right	South District	Tangent - Type 1	4
	13 Shawnee Rd	EB	Right	South District	Tangent - Type 1	4
	5769 Killens Pond Rd	SB	Right	Central District	Tangent - Type 1	4
	5794 Sudlersville Rd	SB	Right	Central District	Tangent - Type 1	4
	5795 Sudlersville Rd	SB	Right	Central District	Tangent - Type 1	4
	1120 Wintien Rd	NB	Right	South District	Tangent - Type 1	4
	1122 Wintien Rd	NB	Right	South District	Tangent - Type 1	4
	6001 Trap Shooters Rd	SB	Right	Central District	Tangent - Type 1	4
	5935 Fast Landing Rd	EB	Right	Central District	Tangent - Type 1	4
	5989 Little Creek Rd	EB	Right	Central District	Tangent - Type 1	4
	6155 Sudlersville Rd	EB	Right	Central District	Tangent - Type 1	4
	6157 Sudlersville Rd	WB	Right	Central District	Tangent - Type 1	4
	6183 Dupont Hwy	NB	Right	Canal District	Tangent - Type 1	4
	1166 Walther Rd	SB	Right	Canal District	Tangent - Type 1	4
	1166 Walther Rd	SB	Right	Canal District	Tangent - Type 1	4
	6102 Korean War Vet. Hwy	SB	Left	Central District	Tangent - Type 1	4
	6310 Woodland Beach Rd	WB	Right	Central District	Tangent - Type 1	4
	6338 Chesapeake City Rd	EB	Right	Canal District	Tangent - Type 1	4
	6276 River Rd	SB	Right	Canal District	Tangent - Type 1	4
	6308 Woodland Beach Rd	EB	Right	Central District	Tangent - Type 1	4
	6247 Bayview Rd	EB	Right	Canal District	Tangent - Type 1	4
	6511 Christina Pkwy	EB	Right	Canal District	Tangent - Type 1	4
	6448 Korean War Vet. Hwy	NB	Right	Central District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
6722	Del City Port Penn	NB	Right	Canal District	Tangent - Type 1	4
0					Tangent - Type 1	4
6689	Vietnam Vet Hwy	NB	Right	North District	Tangent - Type 1	4
0					Tangent - Type 1	4
6575	College Ave	NB	Left	Canal District	Tangent - Type 1	4
0					Tangent - Type 1	4
6954	Limestone Rd	NB	Right	North District	Tangent - Type 1	4
6813	Paddock Rd	EB	Right	Canal District	Tangent - Type 1	4
0					Tangent - Type 1	4
0					Tangent - Type 1	4
0					Tangent - Type 1	4
1433	Old Cooches Rd	EB	Right	Canal District	Tangent - Type 1	4
1598	Stoney Batter Rd	EB	Right	North District	Tangent - Type 1	4
1602	Stoney Batter Rd	EB	Right	North District	Tangent - Type 1	4
1612	JFK Memorial Hwy	NB	Median	Canal District	Tangent - Type 1	4
7086	Philadelphia Pike	WB	Right	North District	Tangent - Type 1	4
7152	Centerville Rd	NB	Right	North District	Tangent - Type 1	4
112214	<null>	<null>	<null>	<null>	Tangent - Type 1	4
<null>	<null>	<null>	<null>	<null>	Tangent - Type 1	4
3094	Bay Rd	NB	Right	Central District	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
2013026	Mahan Corner Rd	NB	Right	Central District	Tangent - Type 1	4
2013017	Victory Chapel Rd	NB	Right	Central District	Tangent - Type 1	4
0					Tangent - Type 1	4
7510	Yorklyn Rd	NB	Right	North District	Tangent - Type 1	4
2014027	Canterbury Rd	SB	Right	Central District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
2014030	Canterbury Rd	SB	Right	Central District	Tangent - Type 1	4
2014021	Todds Mill Rd	SB	Right	Central District	Tangent - Type 1	4
2014022	Todds Mill Rd	NB	Right	Central District	Tangent - Type 1	4
7590 13 SB to 295 SB		SB	Right	Canal District	Tangent - Type 1	4
7613 295 NB to 9 SB		NB	Left	Canal District	Tangent - Type 1	4
24.999<null>		<null>	<null>	<null>	Tangent - Type 1	4
111314<null>		<null>	<null>	<null>	Tangent - Type 1	4
111314<null>		<null>	<null>	<null>	Tangent - Type 1	4
111314<null>		<null>	<null>	<null>	Tangent - Type 1	4
24.999<null>		<null>	<null>	<null>	Tangent - Type 1	4
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112114<null>		<null>	<null>	<null>	Tangent - Type 1	4
2012041	O'Neals Rd	NB	Right	South District	Tangent - Type 1	4
2012064	I-95	SB	Right	Canal District	Tangent - Type 1	4
2052	Dupont Blvd	NB	Right	South District	Tangent - Type 1	4
2069	Fork Landing Rd	EB	Right	Central District	Tangent - Type 1	4
2078	Brenford Rd	NB	Right	Central District	Tangent - Type 1	4
2029	Craigs Mill Rd	WB	Right	South District	Tangent - Type 1	4
2030	Craigs Mill Rd	EB	Right	South District	Tangent - Type 1	4
2030	Craigs Mill Rd	EB	Right	South District	Tangent - Type 1	4
2016	Federalburg Rd	SB	Right	South District	Tangent - Type 1	4
2021	Sussex Hwy	NB	Right	South District	Tangent - Type 1	4
4028	Blackbird Landing Rd	NB	Right	Canal District	Tangent - Type 1	4
1828	Old Newark Rd	EB	Right	Canal District	Tangent - Type 1	4
0					Tangent - Type 1	4
1006	Hickman Rd	WB	Right	Central District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
1009	Seashore Hwy	WB	Right	South District	Tangent - Type 1	4
5018	Sussex Hwy	SB	Right	South District	Tangent - Type 1	4
5135	Middleford Rd	SB	Right	South District	Tangent - Type 1	4
1922	Sunnyside Rd	NB	Right	Central District	Tangent - Type 1	4
1923	Sunnyside Rd	SB	Right	Central District	Tangent - Type 1	4
1003	Hickman Rd	EB	Right	Central District	Tangent - Type 1	4
1005	Hickman Rd	WB	Right	Central District	Tangent - Type 1	4
5233	Millsboro Hwy	SB	Right	South District	Tangent - Type 1	4
5246	Omar Rd	NB	Right	South District	Tangent - Type 1	4
5358	River Rd	NB	Right	South District	Tangent - Type 1	4
5178	Coastal Hwy	NB	Right	South District	Tangent - Type 1	4
5188	Coastal Hwy	NB	Right	South District	Tangent - Type 1	4
5190	Coastal Hwy	SB	Right	South District	Tangent - Type 1	4
5209	Whitesville Rd	EB	Right	South District	Tangent - Type 1	4
5473	Park Ave	SB	Right	South District	Tangent - Type 1	4
5476	Lavinia St	SB	Right	South District	Tangent - Type 1	4
5513	Laurel Rd	WB	Right	South District	Tangent - Type 1	4
5515	Laurel Rd	EB	Right	South District	Tangent - Type 1	4
5387	Woodland Rd	SB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
5383	Woodland Rd	SB	Right	South District	Tangent - Type 1	4
5455	Sharptown Rd	WB	Right	South District	Tangent - Type 1	4
1045	John J Williams Hwy	WB	Right	South District	Tangent - Type 1	4
5639	Mud Mill Rd	WB	Right	Central District	Tangent - Type 1	4
5706	Fenwick Rd	EB	Right	South District	Tangent - Type 1	4
321	Lewes Georgetown	EB	Right	South District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
321	Lewes Georgetown	EB	Right	South District	Tangent - Type 1	4
312	Cave Neck Rd	EB	Right	South District	Tangent - Type 1	4
5831	Dupont Hwy	NB	Right	Central District	Tangent - Type 1	4
5842	Veale Rd	WB	Right	Central District	Tangent - Type 1	4
113	County Seat Hwy	WB	Right	South District	Tangent - Type 1	4
5867	Halltown Rd	EB	Right	Central District	Tangent - Type 1	4
1098	Patriot's Way	SB	Right	South District	Tangent - Type 1	4
5750	Little Mastens Cnr	NB	Right	Central District	Tangent - Type 1	4
1122	Wintien Rd	NB	Right	South District	Tangent - Type 1	4
1123	Wintien Rd	SB	Right	South District	Tangent - Type 1	4
1143	New Rd	SB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
0					Tangent - Type 1	4
6146	Clayton Delaney Rd	WB	Right	Canal District	Tangent - Type 1	4
6186	Korean War Vet. Hwy	SB	Right	Canal District	Tangent - Type 1	4
6200	Korean War Vet. Hwy	NB	Right	Canal District	Tangent - Type 1	4
1163	Walther Rd	SB	Right	Canal District	Tangent - Type 1	4
6347	Summit Bridge Rd	SB	Right	Canal District	Tangent - Type 1	4
6271	River Rd	NB	Right	Canal District	Tangent - Type 1	4
1311	13 SB to Basin Rd	NB	Left	Canal District	Tangent - Type 1	4
6253	Wrangle Hill Rd	EB	Right	Canal District	Tangent - Type 1	4
6407	Dupont Pkwy	SB	Left	Canal District	Tangent - Type 1	4
6445	Korean War Vet. Hwy	NB	Left	Central District	Tangent - Type 1	4
0					Tangent - Type 1	4
0					Tangent - Type 1	4
6576	College Ave	SB	Left	Canal District	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
6948	Limestone Rd	SB	Right	North District	Tangent - Type 1	4
0					Tangent - Type 1	4
0					Tangent - Type 1	4
7064	I-95	NB	Left	North District	Tangent - Type 1	4
0					Tangent - Type 1	4
7079	I-95	NB	Left	North District	Tangent - Type 1	4
1424	Pike Creek Rd	EB	Right	North District	Tangent - Type 1	4
1605	Stoney Batter Rd	WB	Right	North District	Tangent - Type 1	4
1637	JFK Memorial Hwy	NB	Right	Canal District	Tangent - Type 1	4
1656	95 NB to 273 WB	WB	Left	Canal District	Tangent - Type 1	4
7099	Concord Pike	NB	Right	North District	Tangent - Type 1	4
1493	Lancaster Pike	NB	Right	North District	Tangent - Type 1	4
7147	Centerville Rd	SB	Right	North District	Tangent - Type 1	4
3044	Fox Hunters Rd	SB	Right	Central District	Tangent - Type 1	4
3060	Cabbage Pond Rd	EB	Right	South District	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112414	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112414	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
3552	Middleford Rd	EB	Right	South District	Tangent - Type 1	4
3553	Middleford Rd	EB	Right	South District	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
2013014	Jamison Corner Rd	NB	Right	Canal District	Tangent - Type 1	4
2013015	Jamison Corner Rd	NB	Right	Canal District	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
7512	Yorklyn Rd	NB	Right	North District	Tangent - Type 1	4
2013003	Christiana Mall Rd	EB	Right	Canal District	Tangent - Type 1	4
7602	JFK Memorial Hwy	SB	Right	Canal District	Tangent - Type 1	4
7377	295 NB to NewCas Ave	NB	Right	Canal District	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
9007	Shady Bridge rd	SB	Right	Central District	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
8764	Dupont Hwy	SB	Right	Canal District	Tangent - Type 1	4
111514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
2012095	Old Kennett Rd	NB	Right	North District	Tangent - Type 1	4
2055	Dupont Blvd	SB	Right	South District	Tangent - Type 1	4
2070	Fork Landing Rd	EB	Right	Central District	Tangent - Type 1	4
2033	Wesley Church Rd	SB	Right	South District	Tangent - Type 1	4
2042	Woodyard Rd	EB	Right	South District	Tangent - Type 1	4
2019	Sussex Hwy	NB	Right	South District	Tangent - Type 1	4
4049	N Little Creek Rd	WB	Right	Central District	Tangent - Type 1	4
4050	N Little Creek Rd	WB	Right	Central District	Tangent - Type 1	4
1016	Seashore Hwy	SB	Right	South District	Tangent - Type 1	4
1007	Seashore Hwy	WB	Right	South District	Tangent - Type 1	4
5147	Nine Foot Rd	EB	Right	South District	Tangent - Type 1	4
5149	Nine Foot Rd	WB	Right	South District	Tangent - Type 1	4
5149	Nine Foot Rd	WB	Right	South District	Tangent - Type 1	4
1943	Hilyatd Rd	SB	Right	Central District	Tangent - Type 1	4
5246	Omar Rd	NB	Right	South District	Tangent - Type 1	4
5269	Rifle Range Rd	EB	Right	South District	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
5292	Asbury Rd	SB	Right	South District	Tangent - Type 1	4
5292	Asbury Rd	SB	Right	South District	Tangent - Type 1	4
5150	Nine Foot Rd	EB	Right	South District	Tangent - Type 1	4
5198	Coastal Hwy	NB	Left	South District	Tangent - Type 1	4
5213	Millsboro Hwy	WB	Right	South District	Tangent - Type 1	4
5219	Daisey Rd	EB	Right	South District	Tangent - Type 1	4
5229	Millsboro Hwy	NB	Right	South District	Tangent - Type 1	4
5476	Lavinia St	SB	Right	South District	Tangent - Type 1	4
5524	Laurel Rd	EB	Right	South District	Tangent - Type 1	4
115	Concord Rd	WB	Right	South District	Tangent - Type 1	4
5389	Woodland Rd	NB	Right	South District	Tangent - Type 1	4
1039	John J. Williams hwy	SB	Right	South District	Tangent - Type 1	4
5446	Sharptown Rd	EB	Right	South District	Tangent - Type 1	4
5451	Branch School Rd	NB	Right	South District	Tangent - Type 1	4
5454	Sharptown Rd	EB	Right	South District	Tangent - Type 1	4
320	Lewes Georgetown	WB	Right	South District	Tangent - Type 1	4
320	Lewes Georgetown	WB	Right	South District	Tangent - Type 1	4
123	Seaford Rd	SB	Right	South District	Tangent - Type 1	4
123	Seaford Rd	SB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
5858	Veale Rd	WB	Right	Central District	Tangent - Type 1	4
5762	Carpenter Bridge Rd	NB	Right	Central District	Tangent - Type 1	4
5776	Dupont Hwy	NB	Right	Central District	Tangent - Type 1	4
5790	Sudlersville Rd	NB	Right	Central District	Tangent - Type 1	4
1153	John J Williams Hwy	NB	Right	South District	Tangent - Type 1	4
1153	John J Williams Hwy	NB	Right	South District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
1131	Beaver Dam Rd	NB	Right	South District	Tangent - Type 1	4
5986	Little Creek Rd	EB	Right	Central District	Tangent - Type 1	4
5918	Frederica Rd	SB	Right	Central District	Tangent - Type 1	4
5921	Bay Rd	SB	Right	Central District	Tangent - Type 1	4
1229	Pulaski Hwy	EB	Right	Canal District	Tangent - Type 1	4
6195	Korean War Vet. Hwy	SB	Right	Canal District	Tangent - Type 1	4
1160	Walther Rd	SB	Right	Canal District	Tangent - Type 1	4
1191	Pulaski Hwy	EB	Right	Canal District	Tangent - Type 1	4
1206	Pulaski Hwy	WB	Right	Canal District	Tangent - Type 1	4
6268	River Rd	SB	Right	Canal District	Tangent - Type 1	4
6342	Chesapeake City Rd	WB	Right	Canal District	Tangent - Type 1	4
0					Tangent - Type 1	4
1239	Christiana Rd	WB	Right	Canal District	Tangent - Type 1	4
6562	Summit Bridge Rd	SB	Right	Canal District	Tangent - Type 1	4
0					Tangent - Type 1	4
6632	Montchanin Rd	NB	Right	North District	Tangent - Type 1	4
1669	JFK Memorial Hwy	SB	Right	Canal District	Tangent - Type 1	4
1679	I-95	SB	Right	North District	Tangent - Type 1	4
1498	Old Wilington Rd	EB	Right	North District	Tangent - Type 1	4
1518	Lancaster Pike	WB	Right	North District	Tangent - Type 1	4
1521	Neport Gap Pike	WB	Right	North District	Tangent - Type 1	4
3047	Fox Hunters Rd	NB	Right	Central District	Tangent - Type 1	4
1697	Vietnam Vet Hwy	NB	Right	North District	Tangent - Type 1	4
112414	<null>	<null>	<null>	<null>	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
3555	Middleford Rd	WB	Right	South District	Tangent - Type 1	4
2013016	Victory Chapel Rd	NB	Right	Central District	Tangent - Type 1	4
7508	Yorklyn Rd	NB	Right	North District	Tangent - Type 1	4
7509	Yorklyn Rd	SB	Right	North District	Tangent - Type 1	4
7513	Old Kennett Rd	SB	Right	North District	Tangent - Type 1	4
2014001	Augustine Rd	EB	Right	North District	Tangent - Type 1	4
2014013	S. Carters Rd	WB	Right	Central District	Tangent - Type 1	4
7373	NewCas Ave to 295 NB	NB	Right	Canal District	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
8558	JFK Memorial Hwy	EB	Left	Canal District	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111414	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111614	<null>	<null>	<null>	<null>	Tangent - Type 1	4
7568	Grubb Rd	EB	Right	North District	Tangent - Type 1	4
<null>	<null>	<null>	<null>	<null>	Tangent - Type 1	4
<null>	<null>	<null>	<null>	<null>	Tangent - Type 1	4
2012003	Greenhurst Farm Rd	NB	Right	South District	Tangent - Type 1	4
2012022	Edwardsville Rd	SB	Right	Central District	Tangent - Type 1	4
2012019	Greenville Rd	WB	Right	Central District	Tangent - Type 1	4
2056	Dupont Blvd	NB	Right	South District	Tangent - Type 1	4
2072	Fork Landing Rd	WB	Right	Central District	Tangent - Type 1	4
2033	Wesley Church Rd	SB	Right	South District	Tangent - Type 1	4
2088	Milltown Rd	NB	Right	North District	Tangent - Type 1	4
2041	Stein Hwy	WB	Right	South District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
2119	Sussex Hwy	NB	Right	South District	Tangent - Type 1	4
2024	Sussex Hwy	NB	Right	South District	Tangent - Type 1	4
2028	Redden Rd	WB	Right	South District	Tangent - Type 1	4
2050	Shortly Rd	NB	Right	South District	Tangent - Type 1	4
1836	Kirkwood-St.Georges	EB	Right	Canal District	Tangent - Type 1	4
4030	Blackbird Landing Rd	SB	Right	Canal District	Tangent - Type 1	4
1835	Howell School Rd	EB	Right	Canal District	Tangent - Type 1	4
5100	Columbia Rd	NB	Right	South District	Tangent - Type 1	4
5100	Columbia Rd	NB	Right	South District	Tangent - Type 1	4
5103	Saint George Rd	WB	Right	South District	Tangent - Type 1	4
1931	Coastal Hwy	NB	Left	South District	Tangent - Type 1	4
1004	Hickman Rd	EB	Right	Central District	Tangent - Type 1	4
5357	River Rd	SB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
5268	Rifle Range Rd	WB	Right	South District	Tangent - Type 1	4
5279	Federalsburg Rd	EB	Right	South District	Tangent - Type 1	4
5280	Federalsburg Rd	WB	Right	South District	Tangent - Type 1	4
5288	Clendaniel Pond Rd	NB	Right	South District	Tangent - Type 1	4
5294	Asbury Rd	SB	Right	South District	Tangent - Type 1	4
5295	Asbury Rd	NB	Right	South District	Tangent - Type 1	4
5200	Nassan Commans Blvd	EB	Right	South District	Tangent - Type 1	4
5465	Conaway Rd	NB	Right	South District	Tangent - Type 1	4
5466	Conaway Rd	SB	Right	South District	Tangent - Type 1	4
5466	Conaway Rd	SB	Right	South District	Tangent - Type 1	4
5475	Donovans Rd	NB	Right	South District	Tangent - Type 1	4
5507	Trap Pond Rd	EB	Right	South District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
5519	Laurel Rd	EB	Right	South District	Tangent - Type 1	4
5521	Laurel Rd	WB	Right	South District	Tangent - Type 1	4
5385	Woodland Rd	NB	Right	South District	Tangent - Type 1	4
5378	Seashore Hwy	EB	Right	South District	Tangent - Type 1	4
5379	Seashore Hwy	WB	Right	South District	Tangent - Type 1	4
1040	John J. Williams hwy	NB	Right	South District	Tangent - Type 1	4
5446	Sharptown Rd	EB	Right	South District	Tangent - Type 1	4
5461	Sussex Hwy	NB	Right	South District	Tangent - Type 1	4
33	Fleatown Rd	EB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
0					Tangent - Type 1	4
5826	Dupont Hwy	SB	Right	Central District	Tangent - Type 1	4
5837	Veale Rd	WB	Right	Central District	Tangent - Type 1	4
5839	Veale Rd	EB	Right	Central District	Tangent - Type 1	4
5840	Veale Rd	WB	Right	Central District	Tangent - Type 1	4
0					Tangent - Type 1	4
5842	Veale Rd	WB	Right	Central District	Tangent - Type 1	4
5843	Veale Rd	EB	Right	Central District	Tangent - Type 1	4
5857	Veale Rd	EB	Right	Central District	Tangent - Type 1	4
5877	Upper King Rd	NB	Right	Central District	Tangent - Type 1	4
5	Dupont Blvd	NB	Right	South District	Tangent - Type 1	4
5791	Sudlersville Rd	NB	Right	Central District	Tangent - Type 1	4
5796	Sudlersville Rd	NB	Right	Central District	Tangent - Type 1	4
5797	Sudlersville Rd	NB	Right	Central District	Tangent - Type 1	4
310	Sweet Briar Rd	NB	Right	South District	Tangent - Type 1	4
1123	Wintien Rd	SB	Right	South District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
	1143 New Rd	SB	Right	South District	Tangent - Type 1	4
	1130 Beaver Dam Rd	SB	Right	South District	Tangent - Type 1	4
	6000 Trap Shooters Rd	NB	Right	Central District	Tangent - Type 1	4
	5920 Bay Rd	NB	Right	Central District	Tangent - Type 1	4
	1104 Cedar Beach Rd	EB	Right	South District	Tangent - Type 1	4
	1162 Walther Rd	SB	Right	Canal District	Tangent - Type 1	4
	0				Tangent - Type 1	4
	6249 Wrangle Hill Rd	WB	Right	Canal District	Tangent - Type 1	4
	6418 Dupont Pkwy	SB	Right	Canal District	Tangent - Type 1	4
	6702 I-95	SB	Right	North District	Tangent - Type 1	4
	6946 Limestone Rd	NB	Right	North District	Tangent - Type 1	4
	6765 Korean War Vet. Hwy	SB	Right	Canal District	Tangent - Type 1	4
	6801 Wrangle Hill Rd	WB	Right	Canal District	Tangent - Type 1	4
	0				Tangent - Type 1	4
	7076 I-95	NB	Left	North District	Tangent - Type 1	4
	0				Tangent - Type 1	4
	1385 I-95	SB	Right	North District	Tangent - Type 1	4
	1495 Yorklyn Rd	NB	Right	North District	Tangent - Type 1	4
	7119 Lancaster Pike	EB	Right	North District	Tangent - Type 1	4
	1514 Lancaster Pike	EB	Right	North District	<null>	4
	0				Tangent - Type 1	4
	3060 Cabbage Pond Rd	EB	Right	South District	Tangent - Type 1	4
	<null><null>	<null>	<null>	<null>	Tangent - Type 1	4
	<null><null>	<null>	<null>	<null>	Tangent - Type 1	4
	1719 Vietnam Vet Hwy	NB	Right	North District	Tangent - Type 1	4
	3061 Cabbage Pond Rd	WB	Right	South District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
3061	Cabbage Pond Rd	WB	Right	South District	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
5100	Columbia Rd	NB	Right	South District	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
7265	Eagles Nest Landing	WB	Right	Canal District	Tangent - Type 1	4
3078	Centre Rd	SB	Right	North District	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
<null>	<null>	<null>	<null>	<null>	Tangent - Type 1	4
<null>	<null>	<null>	<null>	<null>	Tangent - Type 1	4
2013012	Jamison Corner Rd	SB	Right	Canal District	Tangent - Type 1	4
2014004	Augustine Rd	EB	Right	North District	Tangent - Type 1	4
2014015	S. Carters Rd	EB	Right	Central District	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111214	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111414	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111614	<null>	<null>	<null>	<null>	Tangent - Type 1	4
<null>	<null>	<null>	<null>	<null>	Tangent - Type 1	4
3850	Old Furnace Rd	WB	Right	South District	Tangent - Type 1	4
3851	Old Furnace Rd	EB	Right	South District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
112114	<null>	<null>	<null>	<null>	Tangent - Type 1	4
2012001	Greenhurst Farm Rd	SB	Right	South District	Tangent - Type 1	4
2053	Dupont Blvd	SB	Right	South District	Tangent - Type 1	4
2089	Dupont Blvd	SB	Right	South District	Tangent - Type 1	4
2034	Wesley Church Rd	NB	Right	South District	Tangent - Type 1	4
2042	Woodyard Rd	EB	Right	South District	Tangent - Type 1	4
2022	Sussex Hwy	SB	Right	South District	Tangent - Type 1	4
4065	Korean War Vet. Hwy	NB	Right	Central District	Tangent - Type 1	4
4086	Korean War Vet. Hwy	SB	Right	Central District	Tangent - Type 1	4
1015	Trinity Church Rd	WB	Right	South District	Tangent - Type 1	4
1017	Seashore Hwy	NB	Right	South District	Tangent - Type 1	4
1008	Seashore Hwy	EB	Right	South District	Tangent - Type 1	4
1009	Seashore Hwy	WB	Right	South District	Tangent - Type 1	4
1010	Seashore Hwy	EB	Right	South District	Tangent - Type 1	4
5077	Alms House Rd	EB	Right	South District	Tangent - Type 1	4
5147	Nine Foot Rd	EB	Right	South District	Tangent - Type 1	4
5148	Nine Foot Rd	WB	Right	South District	Tangent - Type 1	4
5148	Nine Foot Rd	WB	Right	South District	Tangent - Type 1	4
1868	Clark's Corner Rd	SB	Right	Canal District	Tangent - Type 1	4
1922	Sunnyside Rd	NB	Right	Central District	Tangent - Type 1	4
1944	Hillyard Rd	NB	Right	Central District	Tangent - Type 1	4
5231	MillsBoro Hwy	NB	Right	South District	Tangent - Type 1	4
5301	Concord Rd	SB	Right	South District	Tangent - Type 1	4
5278	Federalburg Rd	WB	Right	South District	Tangent - Type 1	4
5212	Millsboro Hwy	EB	Right	South District	Tangent - Type 1	4
5465	Conaway Rd	NB	Right	South District	Tangent - Type 1	4

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REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
5477	Lavinia St	NB	Right	South District	Tangent - Type 1	4
5514	Laurel Rd	WB	Right	South District	Tangent - Type 1	4
5517	Laurel Rd	WB	Right	South District	Tangent - Type 1	4
5520	Laurel Rd	EB	Right	South District	Tangent - Type 1	4
116	Concord Rd	EB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
1038	Robinsville Rd	NB	Right	South District	Tangent - Type 1	4
1039	John J. Williams hwy	SB	Right	South District	Tangent - Type 1	4
1043	Phillips Branch Rd	EB	Right	South District	Tangent - Type 1	4
5456	Sharptown Rd	WB	Right	South District	Tangent - Type 1	4
5638	Brenford Rd	NB	Right	Central District	Tangent - Type 1	4
5617	Henry Cowgill Rd	EB	Right	Central District	Tangent - Type 1	4
1053	Coastal Hwy	SB	Right	South District	Tangent - Type 1	4
5743	Still Rd	EB	Right	Central District	Tangent - Type 1	4
5676	Bay Rd	SB	Right	Central District	Tangent - Type 1	4
311	Cave Neck Rd	WB	Right	South District	Tangent - Type 1	4
5832	Dupont Hwy	SB	Right	Central District	Tangent - Type 1	4
113	County Seat Hwy	WB	Right	South District	Tangent - Type 1	4
114	County Seat Hwy	EB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
7	Dupont Blvd	SB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
5784	Mount Friendship Rd	NB	Right	Central District	Tangent - Type 1	4
5792	Sudlersville Rd	SB	Right	Central District	Tangent - Type 1	4
5801	Coastal Hwy	NB	Right	South District	Tangent - Type 1	4
1124	Wintien Rd	SB	Right	South District	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
6000	Trap Shooters Rd	NB	Right	Central District	Tangent - Type 1	4
5934	Fast Landing Rd	EB	Right	Central District	Tangent - Type 1	4
5987	Little Creek Rd	WB	Right	Central District	Tangent - Type 1	4
5987	Little Creek Rd	WB	Right	Central District	Tangent - Type 1	4
6154	Sudlersville Rd	EB	Right	Central District	Tangent - Type 1	4
1163	Walther Rd	SB	Right	Canal District	Tangent - Type 1	4
1201	Pulaski Hwy	WB	Left	Canal District	Tangent - Type 1	4
6348	Summit Bridge Rd	SB	Right	Canal District	Tangent - Type 1	4
6353	Red Lion Rd	NB	Right	Canal District	Tangent - Type 1	4
1315	95/295 N to Basin Rd	NB	Left	Canal District	Tangent - Type 1	4
0					Tangent - Type 1	4
1284	Sunset Lake Rd	NB	Right	Canal District	Tangent - Type 1	4
1341	Possum Park Rd	SB	Right	Canal District	Tangent - Type 1	4
6652	Vet Mem Hwy	SB	Right	North District	Tangent - Type 1	4
0					Tangent - Type 1	4
6719	Del City Port Penn	SB	Right	Canal District	Tangent - Type 1	4
0					Tangent - Type 1	4
6628	Montchanin Rd	NB	Right	North District	Tangent - Type 1	4
7180	JFK Memorial Hwy	SB	Left	Canal District	Tangent - Type 1	4
7100	Concord Pike	NB	Right	North District	Tangent - Type 1	4
0					Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112214	<null>	<null>	<null>	<null>	Tangent - Type 1	4
<null>	<null>	<null>	<null>	<null>	Tangent - Type 1	4
<null>	<null>	<null>	<null>	<null>	Tangent - Type 1	4
5100	Columbia Rd	NB	Right	South District	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
7511	Yorklyn Rd	NB	Right	North District	Tangent - Type 1	4
7511	Yorklyn Rd	NB	Right	North District	Tangent - Type 1	4
2014002	Augustine Rd	WB	Right	North District	Tangent - Type 1	4
2014014	S. Carters Rd	WB	Right	Central District	Tangent - Type 1	4
2014064	Griffith Lake Dr	SB	Right	Central District	Tangent - Type 1	4
7630	Kirkwood Hwy to 141	SB	Left	North District	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
6370	Sunset Lake Rd	NB	Right	Canal District	Tangent - Type 1	4
111614	<null>	<null>	<null>	<null>	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
3820	Dupont Pkwy	NB	Right	Canal District	Tangent - Type 1	4
2012097	Old Kennett Rd	SB	Right	North District	Tangent - Type 1	4
2012040	O'Neals Rd	SB	Right	South District	Tangent - Type 1	4
2012004	Greenhurst Farm Rd	NB	Right	South District	Tangent - Type 1	4
2012019	Greenville Rd	WB	Right	Central District	Tangent - Type 1	4
2051	Shortly Rd	NB	Right	South District	Tangent - Type 1	4
2075	Sudlersville Rd	WB	Right	Central District	Tangent - Type 1	4
2076	Sudlersville Rd	EB	Right	Central District	Tangent - Type 1	4
2012020	Greenville Rd	EB	Right	Central District	<null>	4
2023	Sussex Hwy	SB	Right	South District	Tangent - Type 1	4
2049	Shortly Rd	SB	Right	South District	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
7492	Gov. Printz Blvd	SB	Right	North District	Tangent - Type 1	4
1008	Seashore Hwy	EB	Right	South District	Tangent - Type 1	4
1010	Seashore Hwy	EB	Right	South District	Tangent - Type 1	4
5015	Sussex Hwy	SB	Right	South District	Tangent - Type 1	4
5019	Sussex Hwy	NB	Right	South District	Tangent - Type 1	4
5136	Middleford Rd	SB	Right	South District	Tangent - Type 1	4
5150	Nine Foot Rd	EB	Right	South District	Tangent - Type 1	4
1923	Sunnyside Rd	SB	Right	Central District	Tangent - Type 1	4
1924	Coastal Hwy	NB	Left	South District	Tangent - Type 1	4
1931	Coastal Hwy	NB	Left	South District	Tangent - Type 1	4
5275	Bowdens Garage Rd	EB	Right	South District	Tangent - Type 1	4
5200	Nassan Commans Blvd	EB	Right	South District	Tangent - Type 1	4
5220	Daisey Rd	WB	Right	South District	Tangent - Type 1	4
5474	Park Ave	NB	Right	South District	Tangent - Type 1	4
5510	Laurel Rd	EB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
130	Holly Hill Rd	SB	Right	Central District	Tangent - Type 1	4
5388	Woodland Rd	SB	Right	South District	Tangent - Type 1	4
5390	Woodland Rd	NB	Left	South District	Tangent - Type 1	4
1038	Robinsville Rd	NB	Right	South District	Tangent - Type 1	4
1040	John J. Williams hwy	NB	Right	South District	Tangent - Type 1	4
5424	Woodland Church Rd	NB	Right	South District	Tangent - Type 1	4
5425	Ellis Mill Rd	NB	Right	South District	Tangent - Type 1	4
5448	Sharptown Rd	WB	Right	South District	Tangent - Type 1	4
5452	Branch School Rd	SB	Right	South District	Tangent - Type 1	4
5462	Sussex Hwy	SB	Right	South District	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
	311 Cave Neck Rd	WB	Right	South District	Tangent - Type 1	4
	5825 Dupont Hwy	NB	Right	Central District	Tangent - Type 1	4
	114 County Seat Hwy	EB	Right	South District	Tangent - Type 1	4
	0				Tangent - Type 1	4
	0				Tangent - Type 1	4
	5887 Dupont Hwy	SB	Left	Central District	Tangent - Type 1	4
	5761 Carpenter Bridge Rd	SB	Right	Central District	Tangent - Type 1	4
	173 Coastal Hwy	NB	Right	South District	Tangent - Type 1	4
	1121 Wintien Rd	NB	Right	South District	Tangent - Type 1	4
	6188 Korean War Vet. Hwy	SB	Left	Canal District	Tangent - Type 1	4
	6145 Clayton Delaney Rd	EB	Right	Canal District	Tangent - Type 1	4
	1309 Basin Rd to 13 SB	SB	Right	Canal District	Tangent - Type 1	4
	6515 Nottingham Rd	WB	Right	Canal District	Tangent - Type 1	4
	0				Tangent - Type 1	4
	6682 I-95	NB	Right	North District	Tangent - Type 1	4
	6632 Montchanin Rd	NB	Right	North District	Tangent - Type 1	4
	6633 Montchanin Rd	SB	Right	North District	Tangent - Type 1	4
	6865 Korean War Vet. Hwy	SB	Left	Canal District	Tangent - Type 1	4
	0				Tangent - Type 1	4
	7072 I-95	SB	Left	North District	Tangent - Type 1	4
	7077 I-95	SB	Left	North District	Tangent - Type 1	4
	0				Tangent - Type 1	4
	1604 Stoney Batter Rd	WB	Right	North District	Tangent - Type 1	4
	1677 JFK Memorial Hwy	SB	Right	Canal District	Tangent - Type 1	4
	3045 Fox Hunters Rd	SB	Right	Central District	Tangent - Type 1	4
112114	<null>	<null>	<null>	<null>	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
	1717 Vietnam Vet Hwy	NB	Right	North District	Tangent - Type 1	4
112414	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4
<null>	<null>	<null>	<null>	<null>	Tangent - Type 1	4
2013026	Mahan Corner Rd	NB	Right	Central District	Tangent - Type 1	4
7509	Yorklyn Rd	SB	Right	North District	Tangent - Type 1	4
7512	Yorklyn Rd	NB	Right	North District	Tangent - Type 1	4
1759	Dupont Hwy	NB	Right	Canal District	Tangent - Type 1	4
1764	Dupont Hwy	SB	Left	Canal District	Tangent - Type 1	4
2014021	Todds Mill Rd	SB	Right	Central District	Tangent - Type 1	4
111214	<null>	<null>	<null>	<null>	Tangent - Type 1	4
9009	Shady Bridge Rd	NB	Right	Central District	Tangent - Type 1	4
111314	<null>	<null>	<null>	<null>	Tangent - Type 1	4
6375	Sunset Lake Rd	SB	Right	Canal District	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
111814	<null>	<null>	<null>	<null>	Tangent - Type 1	4
24.999	<null>	<null>	<null>	<null>	Tangent - Type 1	4
112014	<null>	<null>	<null>	<null>	Tangent - Type 1	4
3822	Choptank Rd	SB	Right	Canal District	Tangent - Type 1	4
3824	Choptank Rd	NB	Right	Canal District	Tangent - Type 1	4
112114	<null>	<null>	<null>	<null>	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
2012065 I-95		SB	Right	Canal District	Tangent - Type 1	4
2012041 O'Neals Rd		NB	Right	South District	Tangent - Type 1	4
2012021 Edwardsville Rd		NB	Right	Central District	Tangent - Type 1	4
2012022 Edwardsville Rd		SB	Right	Central District	Tangent - Type 1	4
2012114 Bay Rd		NB	Right	Central District	Tangent - Type 1	4
7433 Hillside Mill Rd		EB	Right	North District	Tangent - Type 1	4
2012020 Greenville Rd		EB	Right	Central District	Tangent - Type 1	4
2032 Wesley Church Rd		NB	Right	South District	Tangent - Type 1	4
2027 Redden Rd		EB	Right	South District	Tangent - Type 1	4
4027 Blackbird Landing Rd		NB	Right	Canal District	Tangent - Type 1	4
4049 N Little Creek Rd		WB	Right	Central District	Tangent - Type 1	4
4050 N Little Creek Rd		WB	Right	Central District	Tangent - Type 1	4
1015 Trinity Church Rd		WB	Right	South District	Tangent - Type 1	4
1007 Seashore Hwy		WB	Right	South District	Tangent - Type 1	4
5016 Sussex Hwy		NB	Right	South District	Tangent - Type 1	4
5135 Middleford Rd		SB	Right	South District	Tangent - Type 1	4
1950 Dupont Blvd		SB	Right	Canal District	Tangent - Type 1	4
5230 Millsboro Hwy		NB	Right	South District	Tangent - Type 1	4
5234 Millsboro Hwy		SB	Right	South District	Tangent - Type 1	4
5234 Millsboro Hwy		SB	Right	South District	Tangent - Type 1	4
5298 Baker Mill Rd		WB	Right	South District	Tangent - Type 1	4
5301 Concord Rd		SB	Right	South District	Tangent - Type 1	4
5288 Clendaniel Pond Rd		NB	Right	South District	Tangent - Type 1	4
5295 Asbury Rd		NB	Right	South District	Tangent - Type 1	4
5179 Coastal Hwy		SB	Right	South District	Tangent - Type 1	4
5219 Daisey Rd		EB	Right	South District	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
5477	Lavinia St	NB	Right	South District	Tangent - Type 1	4
5516	Laurel Rd	EB	Right	South District	Tangent - Type 1	4
5518	Laurel Rd	WB	Right	South District	Tangent - Type 1	4
5522	Laurel Rd	WB	Right	South District	Tangent - Type 1	4
130	Holly Hill Rd	SB	Right	Central District	Tangent - Type 1	4
5392	Woodland Rd	SB	Right	South District	Tangent - Type 1	4
1045	John J Williams Hwy	WB	Right	South District	Tangent - Type 1	4
34	Fleatown Rd	WB	Right	South District	Tangent - Type 1	4
5695	Fenwick Rd	EB	Right	South District	Tangent - Type 1	4
0					Tangent - Type 1	4
5785	Mount Friendship Rd	SB	Right	Central District	Tangent - Type 1	4
5793	Sudlersville Rd	SB	Right	Central District	Tangent - Type 1	4
1124	Wintien Rd	SB	Right	South District	Tangent - Type 1	4
1154	John J Williams Hwy	SB	Right	South District	Tangent - Type 1	4
5937	Fast Landing Rd	WB	Right	Central District	Tangent - Type 1	4
1131	Beaver Dam Rd	NB	Right	South District	Tangent - Type 1	4
1103	Cedar Beach Rd	WB	Right	South District	Tangent - Type 1	4
6146	Clayton Delaney Rd	WB	Right	Canal District	Tangent - Type 1	4
6156	Sudlersville Rd	WB	Right	Central District	Tangent - Type 1	4
0					Tangent - Type 1	4
6050	Dupont Hwy	SB	Left	Central District	Tangent - Type 1	4
1164	Walther Rd	NB	Right	Canal District	Tangent - Type 1	4
0					Tangent - Type 1	4
6309	Woodland Beach Rd	WB	Right	Central District	Tangent - Type 1	4
6271	River Rd	NB	Right	Canal District	Tangent - Type 1	4
1274	Churchmans Rd	NB	Right	North District	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
6254	Wrangle Hill Rd	WB	Right	Canal District	Tangent - Type 1	4
6549	Summit Bridge Rd	NB	Right	Canal District	Tangent - Type 1	4
6446	Korean War Vet. Hwy	SB	Right	Central District	Tangent - Type 1	4
6685	I-95	NB	Right	North District	Tangent - Type 1	4
6926	Korean War Vet. Hwy	SB	Right	Canal District	Tangent - Type 1	4
6949	Limestone Rd	SB	Right	North District	Tangent - Type 1	4
0					Tangent - Type 1	4
0					Tangent - Type 1	4
6776	Korean War Vet. Hwy	SB	Right	Canal District	Tangent - Type 1	4
7067	I-95	NB	Left	North District	Tangent - Type 1	4
7075	I-95	NB	Left	North District	Tangent - Type 1	4
0					Tangent - Type 1	4
1419	Polly Drummond Hill	NB	Right	North District	Tangent - Type 1	4
0					Tangent - Type 1	4
1463	Lancaster Pike	SB	Right	North District	Tangent - Type 1	4
1464	Lancaster Pike	NB	Right	North District	Tangent - Type 1	4
6996	River Rd	NB	Right	Canal District	Tangent - Type 1	4
1378	Basin Rd	SB	Left	North District	Tangent - Type 1	4
1382	Basin Rd to 95	NB	Left	North District	Tangent - Type 1	4
1586	New Linden Hill Rd	NB	Right	North District	Tangent - Type 1	4
7232	I-95	NB	Left	North District	Tangent - Type 1	4
1554	Centerville Rd	SB	Right	North District	Tangent - Type 1	4
1580	New Linden Hill Rd	NB	Right	North District	Tangent - Type 1	4
112414	<null>	<null>	<null>	<null>	Tangent - Type 1	4
1699	495 NB to 13 Bus	NB	Left	Canal District	Tangent - Type 1	4
112514	<null>	<null>	<null>	<null>	Tangent - Type 1	4

ATTACHMENT A

REFERENCE	ROAD_NAME	DIRECTION	SIDE_OF_RD	DISTRICT_N	ET_Type	Channel_Wi
	7290 Mill Creek Rd	NB	Right	North District	Tangent - Type 1	4
	3554 Middleford Rd	WB	Right	South District	Tangent - Type 1	4
	24.999 <null>	<null>	<null>	<null>	Tangent - Type 1	4
	2013018 Victory Chapel Rd	SB	Right	Central District	Tangent - Type 1	4
	7507 Yorklyn Rd	NB	Right	North District	Tangent - Type 1	4
	8505 Churchmans Rd	WB	Right	Canal District	Tangent - Type 1	4
	8553 I-95	SB	Left	Canal District	Tangent - Type 1	4
	111314 <null>	<null>	<null>	<null>	Tangent - Type 1	4
	111314 <null>	<null>	<null>	<null>	Tangent - Type 1	4
	111514 <null>	<null>	<null>	<null>	Tangent - Type 1	4
	6374 Sunset Lake Rd	SB	Right	Canal District	Tangent - Type 1	4
	<null> <null>	<null>	<null>	<null>	Tangent - Type 1	4
	3809 Kirkwood Hwy	SB	Right	North District	Tangent - Type 1	4
	<null> <null>	<null>	<null>	<null>	Tangent - Type 1	4
	<null> <null>	<null>	<null>	<null>	Tangent - Type 1	4

Count 766
REFERENCE

ATTACHMENT B
FHWA Request for Information
ET-Plus Guardrail End Terminal
Ad-Hoc In-Service Evaluation – Supporting Documentation

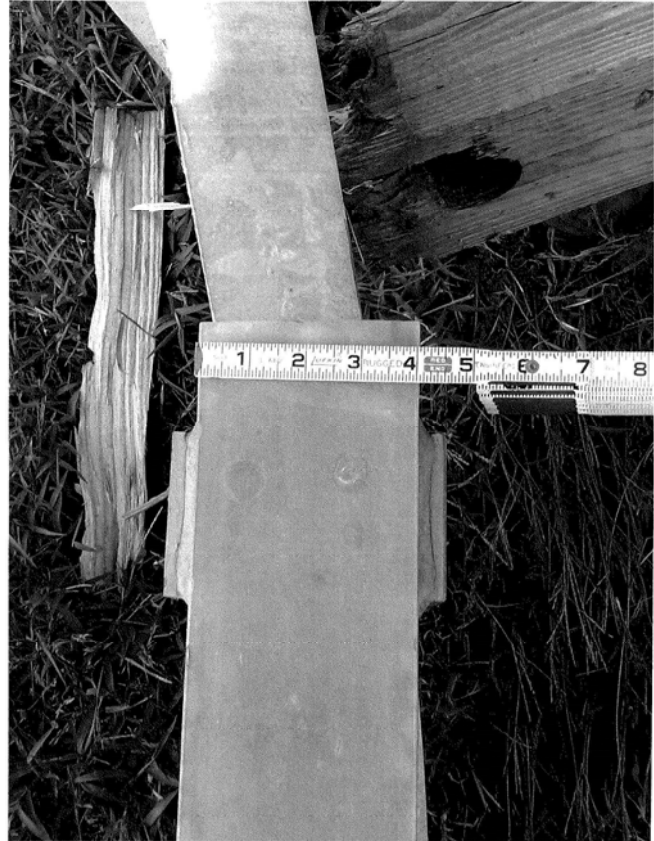
Table 4
In-Service Evaluation Data

Location Identifier	Maximo	Date of Crash	Location	Maintenance District	Complaint #	End Terminal Type	Channel Width (in.)	Crash Report
1	657554	9/22/2014	I-495 NB / Rt 13 NB Off-Ramp	North	01-14-075783	ET-Plus	4	Yes
2	664619	N/A	DE Route 1 NB @ Exit 119	Canal	N/A	ET-Plus	4	No
3	N/A	11/6/2014	DE Route 273 EB @ DE Route 1 Ramps	Canal	02-14-088753	ET-Plus	4	Yes
4	666448	11/6/2014	I-95 SB Ramp to DE Route 141	North	06-14-088824	ET-Plus	4	Yes
5	N/A	11/18/2014	US Route 13 @ Rifle Range Road	South	N/A	ET-Plus	4	No
6	N/A	12/29/2014	I-495 NB, 3/4 Mile North of 12th Street	North	01-14-103817	ET-Plus	4	Yes
7	N/A	12/24/2014	I-495 NB, median, 200' south of Rogers Road	North	01-14-102708	ET-Plus	4	Yes
8	667047	11/11/2014	I-95 SB at Naamans Road	North	01-14-090170	ET-2000	5	Yes
9	N/A	N/A	DE Route 41, 1000' south of DE Route 34	North	N/A	ET-2000	5	No
10	N/A	11/26/2014	DE Route 1 NB @ DE Route 273	Canal	02-14-094638	ET-2000	5	Yes
11	N/A	10/18/2014	I-95 SB, south of DE Route 141	North	06-14-083415	ET-Plus	4	Yes
12	N/A	N/A	DE Route 1 NB, north of DE Route 299	Canal	N/A	ET-2000	5	No

NOTE: The following pictures and crash reports cover the ET-Plus devices shown above only (Locations 1-7 and 11.

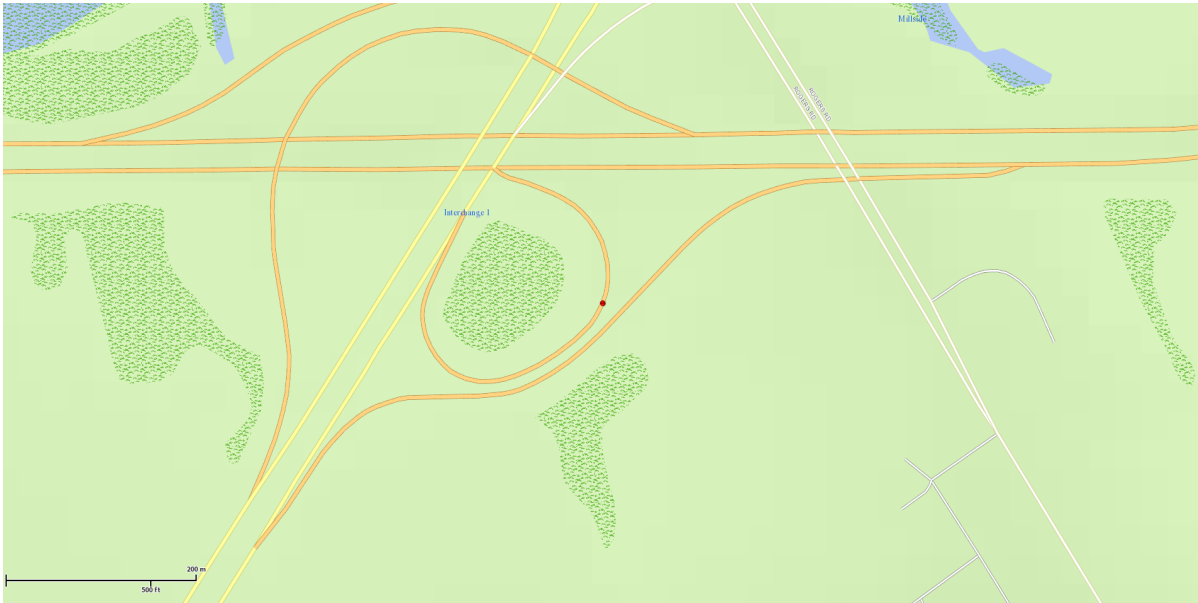
ATTACHMENT B
FHWA Request for Information
ET-Plus Guardrail End Terminal
Ad-Hoc In-Service Evaluation – Supporting Documentation

Location #1 – I-495 NB at the US Route 13 NB off-ramp



Delaware Department of Transportation Crash Analysis Reporting System Crash Report

Crash Study Time Period: 09/22/2014 to 09/22/2014
Query Type:
Description:
Study Requested By:
Study Generated By: TDTSASW
Number of Crashes: 1
Includes Non-Reportable Crashes: N
Study Code:



**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Property Damage Only

Complaint No.: 01-14-075783 - 000		Agency: 01 (TROOP 1 STATE POLICE)	
Date of Crash: 09/22/2014		Time of Crash: 17:21	County: New Castle
Grid: 106350	Sector: 18	Latitude: 39.71575	Longitude: -75.55603
Reporting Officer: CPL/3 HUBER		Badge No.: 00168	

Crash Location

Officer Defined Location: On Westbound EXIT 1 664.53 Feet South East From DUPONT PARKWAY US13 0.68 Miles from Wilmington Municipality			
Roadway ID: 212	Maintenance Road: 006215	Intersection Maintenance Road:	
Milepoint: 0.21	Functional Code: Interstate	Direction: West	Road Junction: Non-Junction

Crash Circumstances

Injuries Involved: None Involved		No. of Fatalities: 0	No. Injuries: 0
Manner of Impact: Not a collision between two vehicles		Location of First Unstable Situation: Shoulder	
First Harmful Event: Guardrail End (Collision With Fixed Object)			
Location of First Harmful Event: Shoulder			
Primary Contributing Circumstance: Unknown			
Environment Contributing Circumstance: None		Roadway Contributing Circumstance: None	
Lighting Condition: Daylight		Surface Condition: Dry	
Weather Condition: Clear			
School Bus Involved: No	Work Zone Involved: No		State Property Damage: Yes

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Property Damage Only

Vehicle - 001

Vehicle: 001	Vehicle Style: Passenger Car	Total Occupants: 0
Commercial Vehicle: No	Trailer Attached: No	
Registration: HIDDEN	State/Country: Pennsylvania	Expires: 07/31/2015
VIN: HIDDEN		
Model Year: 2002	Make: VOLK	Model: Jetta
Vehicle Configuration:	Cargo Body Type:	Gross Vehicle Weight Rating: 10,000 lbs or less
Most Damaged Area: Front Center	1st Point of Impact: Front Center	
Extent of Damage/Removal: Disabling Damage	Direction of Force to Vehicle: Right Side Front	
Equipment Failure 1:	Equipment Failure 2:	
Insurance Status: Unknown		
Insurance Company: HIDDEN		
Insurance Policy No.: HIDDEN		
Owner Name: HIDDEN		
Owner Business Name: HIDDEN		
Owner Address: HIDDEN		
City: Philadelphia	State/Country: Pennsylvania	Zip Code: 19142
First Event: Guardrail End		
Most Harmful Event: Guardrail End		
Posted/Statutory Speed Limit: 35	Hit and Run: Driver or Car and Driver Left Scene	
Manuever/Action Taken: Other	Traffic Control Device: Lane Markings	
Inoperative/Missing: No		
Trafficway: One-Way Trafficway	Direction Travelled: Northeast	

Driver of Vehicle - 001

Full Name: HIDDEN		
License No.: HIDDEN		
Gender:	Birth Date:	
Address: HIDDEN		
City:	State/Country:	Zip Code:
Seating Position:	Motorcycle Crash: No	
Driver Distraction:		
Condition at Time of Crash:		
Alcohol Suspected/Confirmed:	Drugs Suspected/Confirmed:	
Alcohol Test Status:	Alcohol Test Type:	Alcohol Test Results:

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Property Damage Only

Drug Test Status:		Drug Test Type:	Drug Test Results:
Injury Status:		Primary Area of Body Injury:	
Airbag:	Occupant Protection:		Ejection:
Description of Injuries:			
Driver Action:			

State Property Damage - 001

Type of Property: State Property	Description: (Safety Feature) - Guardrail	
Owner Business Name: State Of Delaware Owner Name:		Was Owner Notified: Yes
Owner Address: 169 Brick Store Landing RD		
City: Smyrna	State/Country: Delaware	Zip Code: 19977

Witness

Full Name: HIDDEN		
License No.: HIDDEN	Gender: Male	Birth Date: 11/07/1982 - 31 years old
City: Middletown	State/Country: Delaware	Zip Code: 19709

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Property Damage Only

Narrative -000

FROM THE SCENE OF THE ACCIDENT. V-1 WAS TRAVELING 495 N/B GETTING OFF AT US RT 13 DUPONT HIGHWAY S/B RAMP. UNKNOWN OP-1 COULD NOT NEGOTIATE THE RAMP CURB. V-1 LEFT THE ROAD AND STRUCK THE END OF THE GUARD RAIL FOR POI-1 10' NE/O SW/EOR ON THE RAMP. V-1 CONTINUED ACROSS THE GRASS ACROSS THE ON RAMP TO 495 N/B FROM DUPONT HIGHWAY S/B. V-1 THEN WITH ITS FRONT BUMPER STRUCK A TREE FOR POI-2 AND FRP APPROX; 100' NE/O PO-1. W-1 WAS INTERVIEWED AT THE SCENE. W-1 STATED HE WAS ON THE ON RAMP TO 495 N/B FROM DUPONT HIGHWAY. W-1 STATED HE LOOKED OVER TO THE RIGHT AND OBSERVED A BLACK VEHICLE IN THE DITCH WITH ITS DOOR OPEN. W-1 STATED HE PULLED ONTO THE SHOULDER AND CHECKED THE VEHICLE. W-1 STATED HE DID NOT SEE ANYONE IN THE VEHICLE AND THE WINDSHIELD WIPERS WERE ON. I CHECKED THE WOODS FOR ANYONE WITH NEGATIVE RESULTS. A COMPUTER CHECK ON PA JYL4884 REVEALED THE VEHICLE IS NOT STOLEN AND COMES BACK TO A 2002 VOLKSWAGEN JETTA. THE VEHICLE IS REGISTERED TO A [REDACTED] OUT OF [REDACTED] [REDACTED] THE VEHICLE WAS TOWED BY CPG TOWING. I CONTACTED HQ COMMUNICATIONS AND SPOKE WITH DISPATCHER REYNOLDS AND HAD THE VEHICLE ENTERED INTO THE SYSTEM AS STORED. I WAS ABLE TO LOCATE A TELEPHONE NUMBER OF [REDACTED] FOR THE OWNER OF THE VEHICLE. I CONTACTED THE OWNER OF THE VEHICLE VIA PUBLIC SERVICE. [REDACTED] STATED HE DOES OWN THE VEHICLE, BUT IT IS CURRENTLY NOT IN HIS POSSESSION. [REDACTED] STATED HE HAD ALLOWED A FRIEND BY THE NAME OF [REDACTED] TO BORROW THE VEHICLE TO GO TO THE AUTO PARTS STORE. [REDACTED] ADVISED THE SUBJECT WAS ONLY SUPPOSED TO BE IN PHILLY. [REDACTED] STATED HE DOES NOT KNOW THE SUBJECTS LAST NAME BUT WILL GET TO THE BOTTOM OF IT. I ADVISED [REDACTED] THAT HE HAD TO BRING THE OPERATOR TO DSP TROOP 1 PRIOR TO ME RELEASING THE VEHICLE. SEE SUPPLEMENT TO FOLLOW REFERENCE WHO THE OPERATOR OF THE VEHICLE WAS.

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Property Damage Only



Attachments

ATTACHMENT B
FHWA Request for Information
ET-Plus Guardrail End Terminal
Ad-Hoc In-Service Evaluation – Supporting Documentation

Location #2 – DE Route 1 NB @ Exit 119, Median



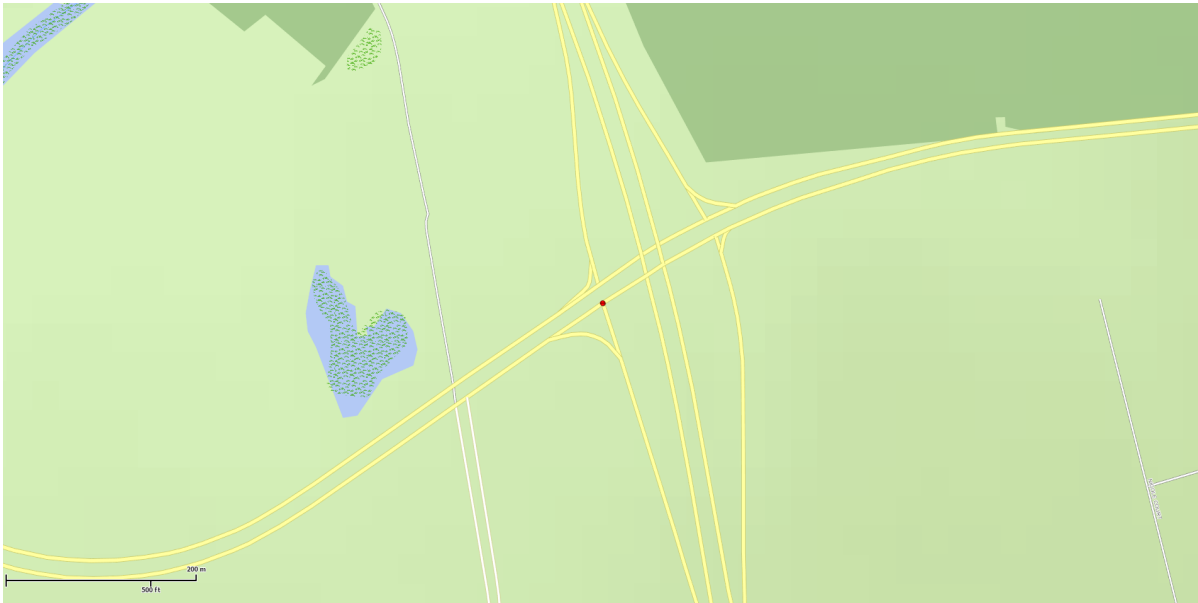
ATTACHMENT B
FHWA Request for Information
ET-Plus Guardrail End Terminal
Ad-Hoc In-Service Evaluation – Supporting Documentation

Location #3 – DE Route 273 WB @ DE Route 1 Ramp



Delaware Department of Transportation Crash Analysis Reporting System Crash Report

Crash Study Time Period: 11/06/2014 to 11/06/2014
Query Type:
Description:
Study Requested By:
Study Generated By: TDTSASW
Number of Crashes: 1
Includes Non-Reportable Crashes: N
Study Code:



**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Complaint No.: 02-14-088753 - 000		Agency: 02 (TROOP 2 STATE POLICE)	
Date of Crash: 11/06/2014		Time of Crash: 06:34	County: New Castle
Grid: 084336	Sector: 23	Latitude: 39.66083	Longitude: -75.65325
Reporting Officer: CPL CALIO		Badge No.: 01378	

Crash Location

Officer Defined Location: On Eastbound CHRISTIANA ROAD SR273 At the intersection of 2.57 Miles from New Castle Municipality			
Roadway ID: 101	Maintenance Road: 006328	Intersection Maintenance Road:	
Milepoint: 0	Functional Code: Other Expressways/ Freeways	Direction: East	Road Junction: Intersection

Crash Circumstances

Injuries Involved: Injuries Involved		No. of Fatalities: 0	No. Injuries: 1
Manner of Impact: Angle		Location of First Unstable Situation: On Roadway	
First Harmful Event: Motor Vehicle in Transport (Collision With Person, Motor Vehicle, or Non-Fixed)			
Location of First Harmful Event: On Roadway			
Primary Contributing Circumstance: Disregard Traffic Signal			
Environment Contributing Circumstance: None		Roadway Contributing Circumstance: None	
Lighting Condition: Dark-Lighted		Surface Condition: Wet	
Weather Condition: Rain			
School Bus Involved: No	Work Zone Involved: No		State Property Damage: Yes

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Vehicle - 001

Vehicle: 001	Vehicle Style: SUV	Total Occupants: 1
Commercial Vehicle: No	Trailer Attached: No	
Registration: HIDDEN	State/Country: Delaware	Expires: 04/30/2015
VIN: HIDDEN		
Model Year: 2007	Make: HYUN	Model: Veracruz
Vehicle Configuration:	Cargo Body Type:	Gross Vehicle Weight Rating: 10,000 lbs or less
Most Damaged Area: Front Center	1st Point of Impact: Front Center	
Extent of Damage/Removal: Disabling Damage	Direction of Force to Vehicle: Right Side Rear	
Equipment Failure 1:	Equipment Failure 2:	
Insurance Status: Insured		
Insurance Company: HIDDEN		
Insurance Policy No.: HIDDEN		
Owner Name: HIDDEN		
Owner Business Name: HIDDEN		
Owner Address: HIDDEN		
City: NEWARK	State/Country: Delaware	Zip Code: 19711
First Event: Motor Vehicle In Transport		
Most Harmful Event: Motor Vehicle in Transport		
Posted/Statutory Speed Limit: 45	Hit and Run:	
Manuever/Action Taken: Turning Left	Traffic Control Device: Traffic Control Signal	
Inoperative/Missing: No		
Trafficway: Two-Way, Not Divided	Direction Travelled: Southbound	

Driver of Vehicle - 001

Full Name: HIDDEN		
License No.: HIDDEN		
Gender: Female	Birth Date: 08/16/1990 - 24 years old	
Address: HIDDEN		
City: Newark	State/Country: Delaware	Zip Code: 19711
Seating Position: Front Seat – Left Side (Driver's Side)	Motorcycle Crash: No	
Driver Distraction: None		
Condition at Time of Crash: Apparently Normal		
Alcohol Suspected/Confirmed: No	Drugs Suspected/Confirmed: No	
Alcohol Test Status:	Alcohol Test Type:	Alcohol Test Results:

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Drug Test Status:		Drug Test Type:	Drug Test Results:
Injury Status: No injury		Primary Area of Body Injury:	
Airbag:	Occupant Protection:		Ejection:
Description of Injuries:			
Driver Action: No Contributing Action			

State Property Damage - 001

Type of Property: State Property		Description: (Safety Feature) - Guardrail	
Owner Business Name: State Of Delaware Owner Name:			Was Owner Notified: Yes
Owner Address: 169 Brick Store Landing RD			
City: Smyrna	State/Country: Delaware		Zip Code: 19977

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Vehicle - 002

Vehicle: 002	Vehicle Style: Minivan/Passenger Van	Total Occupants: 1
Commercial Vehicle: No	Trailer Attached: No	
Registration: HIDDEN	State/Country: New Jersey	Expires: 01/30/2015
VIN: HIDDEN		
Model Year: 2003	Make: FORD03	Model: E350
Vehicle Configuration:	Cargo Body Type:	Gross Vehicle Weight Rating: 10,000 lbs or less
Most Damaged Area: Left Side Front	1st Point of Impact: Left Side	
Extent of Damage/Removal: Disabling Damage	Direction of Force to Vehicle: Rear Left	
Equipment Failure 1:	Equipment Failure 2:	
Insurance Status: Insured		
Insurance Company: HIDDEN		
Insurance Policy No.: HIDDEN		
Owner Name: HIDDEN		
Owner Business Name: HIDDEN		
Owner Address: HIDDEN		
City: PENNS GROVE	State/Country: New Jersey	Zip Code: 08069
First Event: Motor Vehicle In Transport		
Most Harmful Event: Motor Vehicle in Transport		
Posted/Statutory Speed Limit: 45	Hit and Run:	
Manuever/Action Taken: Movements Essentially Straight Ahead	Traffic Control Device: Traffic Control Signal	
Inoperative/Missing: No		
Trafficway: Two-Way, Not Divided	Direction Travelled: Eastbound	

Driver of Vehicle - 002

Full Name: HIDDEN		
License No.: HIDDEN		
Gender: Female	Birth Date: 04/26/1977 - 37 years old	
Address: HIDDEN		
City: PENNS GROVE	State/Country: New Jersey	Zip Code: 08069
Seating Position: Front Seat – Left Side (Driver's Side)	Motorcycle Crash: No	
Driver Distraction: None		
Condition at Time of Crash: Apparently Normal		
Alcohol Suspected/Confirmed: No	Drugs Suspected/Confirmed: No	

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Alcohol Test Status:	Alcohol Test Type:	Alcohol Test Results:
Drug Test Status:	Drug Test Type:	Drug Test Results:
Injury Status: Nonfatal Injury - Non-incapacitating	Primary Area of Body Injury: Head	
Airbag: Deployed - Front	Occupant Protection: Shoulder and Lap Belt Used	Ejection: Not Ejected
Description of Injuries:		
Driver Action: Ran Red Light		
Violation 1 - FAILURE TO STOP AT A RED LIGHT		

Witness

Full Name: HIDDEN		
License No.: HIDDEN	Gender: Male	Birth Date: 01/05/1979 - 35 years old
City: New Castle	State/Country: Delaware	Zip Code: 19720

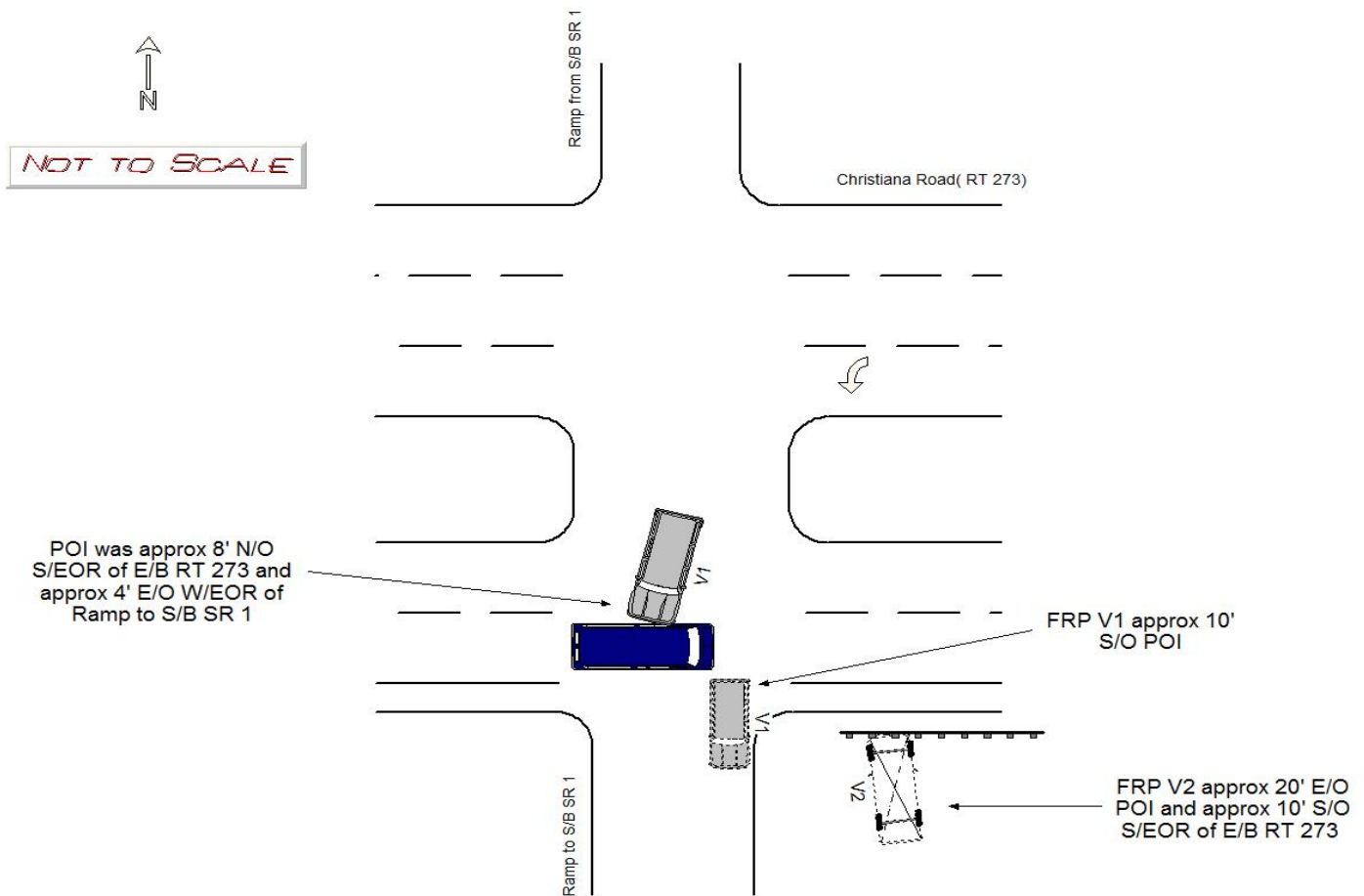
**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report
Personal Injury Crash**

Narrative -000

V1 was traveling on W/B Christiana Road(RT 273) and had entered the left turn lane for S/B SR 1. V2 was traveling E/B on RT 273 in the right lane. V1 turned left towards the ramp to S/B SR 1 and V2 proceeded E/B through the intersection. The front right corner of V1 struck the left side of V2 for POI. POI was located approximately 8' N/O S/EOR of E/B RT 273 and approximately 4' E/O W/EOr of ramp to S/B SR 1. V1 came to an FRP approximately 10' S/O POI. V2 spun in a counter clockwise direction approximately 90 degrees. V2 struck a guardrail and rolled over onto its passenger side and ultimately onto its roof. V2's FRP was approximately 20' E/O POI and approximately 10' S/O S/EOR of Rt 273. OP1 stated that she was traveling W/B on RT 273. OP1 stated that she had entered the left turn lane for S/B SR 1. OP1 stated that she was the first car stopped at the red light. OP1 stated that the left turn signal then changed to green and she proceeded to turn left into the intersection. OP1 stated that while she was turning she observed V2 enter the intersection in the right lane and collide with her vehicle. OP1 stated that V2 was traveling E/B on RT 273. OP1 stated that she was unable to avoid the collision. OP1 sustained an injury to her left forearm possibly from the airbag but she declined going to the hospital in an ambulance. OP1 stated that she will seek medical attention on her own. OP2 stated that she is from New Jersey and that she had just left a warehouse in the area. OP2 stated that she was traveling E/B on RT 273 in the right lane. OP2 stated that she observed a light to be green. OP2 later stated she may have seen a the light at the next intersection turn green and mistakenly think it was for her intersection. W1 stated that he was on W/B RT 273 and had entered the left turn lane for S/B SR 1. W1 stated that he was the second vehicle at the red light and that he was directly behind V1. W1 stated that he observed their left turn signal to turn green and V1 proceeded to turn left. W1 stated that he observed V2 traveling E/B on RT 273 in the right lane and he observed the collision between the two vehicles. W1 stated that he assisted OP2 in exited the overturned van. OP2 was transported to Christiana Hospital by EMS. DELDOT responded to the scene in reference to damage to the guardrail. A section approximately 30' in length had been damaged. I observed several cycles of the traffic control signal and I observed it to be functioning properly. Reynolds Towing responded to the scene and removed both vehicles. OP1 was provided with a copy of the Driver Information Exchange Report and a copy of the Tow Slip. I responded to Christiana Hospital and made contact with OP2. I provided OP2 with a copy of the Driver Information Exchange Report and a copy of the Tow Slip. OP2 was issued a citation for failing to stop at a red light.

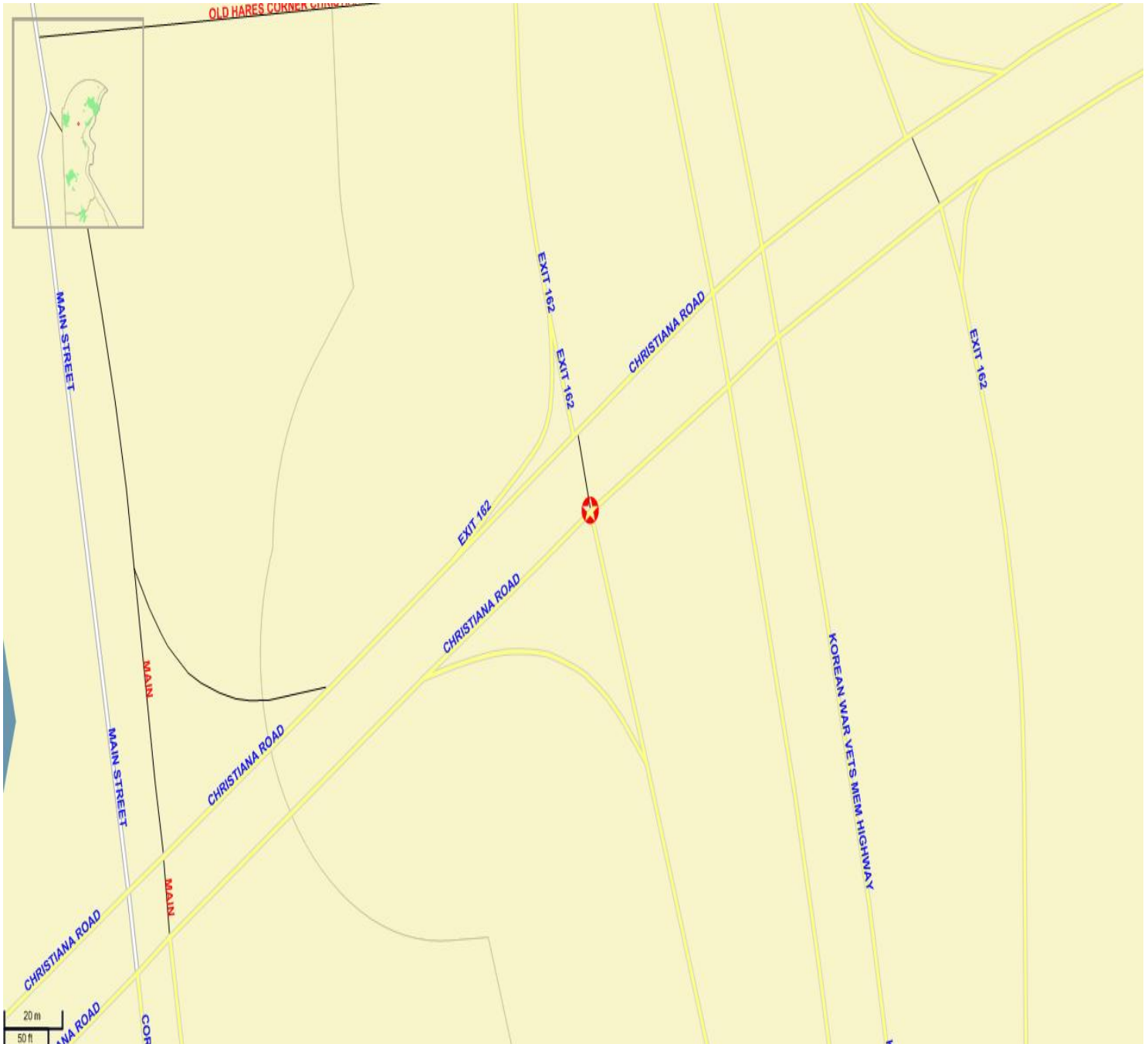
**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash



**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash



Attachments

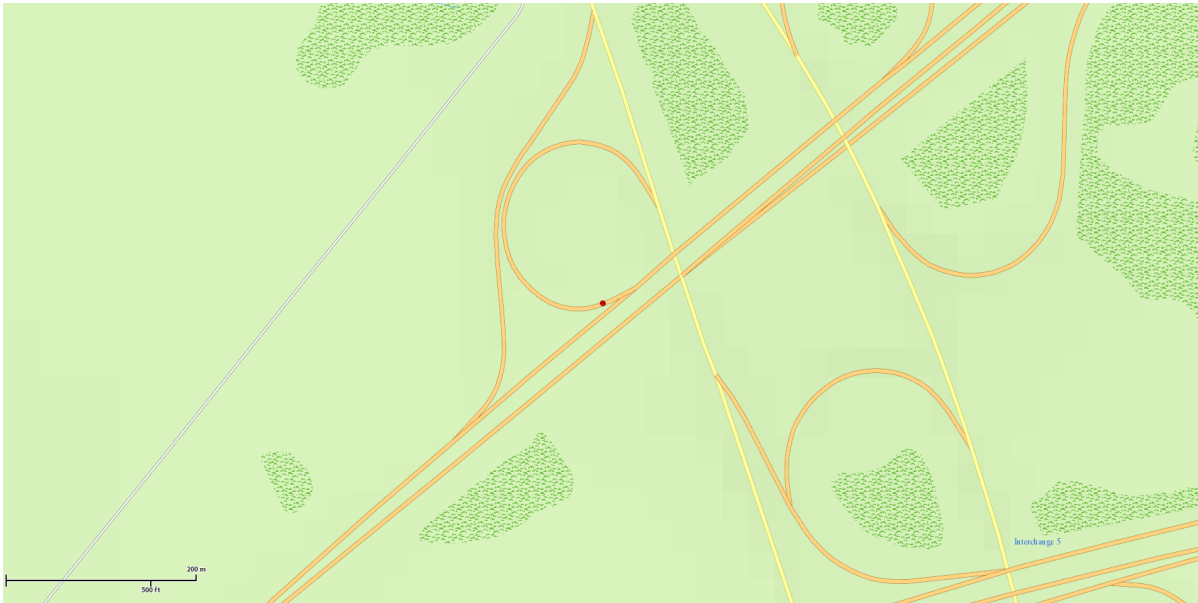
ATTACHMENT B
FHWA Request for Information
ET-Plus Guardrail End Terminal
Ad-Hoc In-Service Evaluation – Supporting Documentation

Location #4 – I-95 SB Ramp to DE Route 141



**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Crash Study Time Period: 11/06/2014 to 11/06/2014
Query Type:
Description:
Study Requested By:
Study Generated By: TDTSASW
Number of Crashes: 1
Includes Non-Reportable Crashes: N
Study Code:



**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Non-Reportable

Complaint No.: 06-14-088824 - 000		Agency: 06 (TROOP 6 STATE POLICE)	
Date of Crash: 11/06/2014		Time of Crash: 11:15	County: New Castle
Grid: 090346	Sector: 68	Latitude: 39.70275	Longitude: -75.60636
Reporting Officer: CPL MILLER		Badge No.: 01345	

Crash Location

Officer Defined Location: On Southbound US202 123.58 Feet South West From I-95 - RAMP US202 0.50 Miles from Newport Municipality			
Roadway ID: 204	Maintenance Road: 006088	Intersection Maintenance Road:	
Milepoint: 0.02	Functional Code: Interstate	Direction: South	Road Junction: Non-Junction

Crash Circumstances

Injuries Involved: None Involved	No. of Fatalities: 0	No. Injuries: 0
Manner of Impact: Not a collision between two vehicles	Location of First Unstable Situation: On Roadway	
First Harmful Event: Motor Vehicle in Transport (Collision With Person, Motor Vehicle, or Non-Fixed)		
Location of First Harmful Event: Shoulder		
Primary Contributing Circumstance: Mechanical defects		
Environment Contributing Circumstance: Weather Conditions	Roadway Contributing Circumstance: Road Surface Condition (wet, icy, snow, slush, etc	
Lighting Condition: Daylight	Surface Condition: Wet	
Weather Condition: Cloudy		
School Bus Involved: No	Work Zone Involved: No	State Property Damage: Yes

Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report
Non-Reportable

Vehicle - 001

Vehicle: 001	Vehicle Style: Passenger Car	Total Occupants: 1
Commercial Vehicle: No	Trailer Attached: No	
Registration: HIDDEN	State/Country: Pennsylvania	Expires: 07/31/2015
VIN: HIDDEN		
Model Year: 2006	Make: CHEV	Model: Impala
Vehicle Configuration:	Cargo Body Type:	Gross Vehicle Weight Rating: 10,000 lbs or less
Most Damaged Area: Rear Right	1st Point of Impact: Right Side	
Extent of Damage/Removal: Minor Damage	Direction of Force to Vehicle: Right Side Rear	
Equipment Failure 1:	Equipment Failure 2:	
Insurance Status: Insured		
Insurance Company: HIDDEN		
Insurance Policy No.: HIDDEN		
Owner Name: HIDDEN		
Owner Business Name: HIDDEN		
Owner Address: HIDDEN		
City: Philadelphia	State/Country: Pennsylvania	Zip Code: 19144
First Event: Guardrail End		
Most Harmful Event: Motor Vehicle in Transport		
Posted/Statutory Speed Limit: 25	Hit and Run:	
Manuever/Action Taken: Negotiating a Curve	Traffic Control Device: No Controls	
Inoperative/Missing:		
Trafficway: Two-Way, Divided, Positive Median Barrier	Direction Travelled: Southbound	

Driver of Vehicle - 001

Full Name: HIDDEN		
License No.: HIDDEN		
Gender: Male	Birth Date: 08/13/1992 - 22 years old	
Address: HIDDEN		
City: Philadelphia	State/Country: Pennsylvania	Zip Code: 19144
Seating Position: Front Seat – Left Side (Driver's Side)	Motorcycle Crash: No	
Driver Distraction: None		
Condition at Time of Crash: Apparently Normal		
Alcohol Suspected/Confirmed: No	Drugs Suspected/Confirmed: No	
Alcohol Test Status:	Alcohol Test Type:	Alcohol Test Results:

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report
Non-Reportable**

Drug Test Status:		Drug Test Type:	Drug Test Results:
Injury Status: No injury		Primary Area of Body Injury:	
Airbag:	Occupant Protection:		Ejection:
Description of Injuries:			
Driver Action: Other Contributing Action			

State Property Damage - 001

Type of Property: State Property	Description: (Safety Feature) - Guardrail	
Owner Business Name: State Of Delaware Owner Name:		Was Owner Notified: No
Owner Address: 169 Brick Store Landing RD		
City: Smyrna	State/Country: Delaware	Zip Code: 19977

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report
Non-Reportable**

Narrative -000

V1 WAS TRAVELING S/B ON I95 ATTEMPTING TO EXIT ONTO SR141 N/B RAMP, V1 WAS NEGOTIATING THE TURN WHEN HIS STEERING LOCKED, CAUSING HIM TO STRIKE THE END OF THE GUARDRAIL FOR POI#1 APPROX. 4FT S/O SEOR. FRP WAS APPROXIMATELY 20 FT S/O POI#1. OP1 ADVISED HE WAS TRAVELLING S/B ON I95 S/B ATTEMPTING TO TURN ONTO SR141 N/B RAMP. OP1 ADVISED HIS STEERING "LOCKED." OP1 ADVISED HE STRUCK THE END OF THE GUARDRAIL CAUSING MINOR DAMAGE TO SAME. OP1 WAS ISSUED AN ACCIDENT EXCHANGED FORM, NOTHING FURTHER.

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report
Non-Reportable**



Attachments

ATTACHMENT B
FHWA Request for Information
ET-Plus Guardrail End Terminal
Ad-Hoc In-Service Evaluation – Supporting Documentation

Location #5 – US Route 13 @ Rifle Range Road



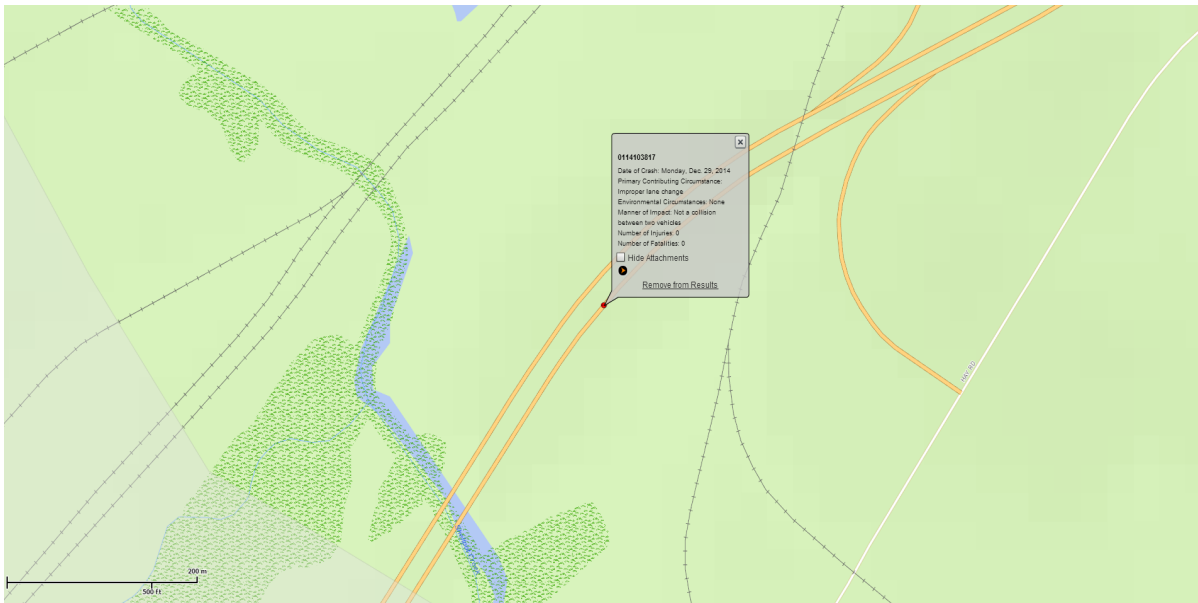
ATTACHMENT B
FHWA Request for Information
ET-Plus Guardrail End Terminal
Ad-Hoc In-Service Evaluation – Supporting Documentation

Location #6 – I-495 NB, ¾ Mile North of 12th Street



Delaware Department of Transportation Crash Analysis Reporting System Crash Report

Crash Study Time Period: 12/29/2014 to 12/29/2014
Query Type:
Description:
Study Requested By:
Study Generated By: TDTASW
Number of Crashes: 1
Includes Non-Reportable Crashes: N
Study Code:



**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Property Damage Only

Complaint No.: 01-14-103817 - 000		Agency: 01 (TROOP 1 STATE POLICE)	
Date of Crash: 12/29/2014		Time of Crash: 06:46	County: New Castle
Grid: 116358	Sector: 18	Latitude: 39.74745	Longitude: -75.51074
Reporting Officer: CPL/1 JOANNIDES		Badge No.: 00977	

Crash Location

Officer Defined Location: On Northbound I-495, VIETNAM VETERANS MEM. HIGHWAY I495 0.26 Miles South West From RAMP 629-1 0.21 Miles from Wilmington Municipality			
Roadway ID: 89	Maintenance Road: 00060	Intersection Maintenance Road:	
Milepoint: 5.42	Functional Code: Interstate	Direction: North	Road Junction: Non-Junction

Crash Circumstances

Injuries Involved: None Involved	No. of Fatalities: 0	No. Injuries: 0
Manner of Impact: Not a collision between two vehicles	Location of First Unstable Situation: On Roadway	
First Harmful Event: Motor Vehicle in Transport (Collision With Person, Motor Vehicle, or Non-Fixed)		
Location of First Harmful Event: Shoulder		
Primary Contributing Circumstance: Improper lane change		
Environment Contributing Circumstance: None	Roadway Contributing Circumstance: None	
Lighting Condition: Dark-Not Lighted	Surface Condition: Dry	
Weather Condition: Cloudy		
School Bus Involved: No	Work Zone Involved: No	State Property Damage: Yes

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Property Damage Only

Vehicle - 001

Vehicle: 001	Vehicle Style: Passenger Car	Total Occupants: 1
Commercial Vehicle: No	Trailer Attached: No	
Registration: HIDDEN	State/Country: Delaware	Expires: 05/16/2015
VIN: HIDDEN		
Model Year: 2000	Make: TOYT	Model: Solara
Vehicle Configuration:	Cargo Body Type:	Gross Vehicle Weight Rating: 10,000 lbs or less
Most Damaged Area: Right Side	1st Point of Impact: Right Side	
Extent of Damage/Removal: Disabling Damage	Direction of Force to Vehicle: Front Right	
Equipment Failure 1:	Equipment Failure 2:	
Insurance Status: Insured		
Insurance Company: HIDDEN		
Insurance Policy No.: HIDDEN		
Owner Name: HIDDEN		
Owner Business Name: HIDDEN		
Owner Address: HIDDEN		
City: WILMINGTON	State/Country: Delaware	Zip Code: 19810
First Event: Guardrail End		
Most Harmful Event: Guardrail End		
Posted/Statutory Speed Limit: 65	Hit and Run:	
Manuever/Action Taken: Movements Essentially Straight Ahead	Traffic Control Device: Lane Markings	
Inoperative/Missing: No		
Trafficway: Two-Way, Divided, Positive Median Barrier	Direction Travelled: Northbound	

Driver of Vehicle - 001

Full Name: HIDDEN		
License No.: HIDDEN		
Gender: Male	Birth Date: 12/09/1986 - 28 years old	
Address: HIDDEN		
City: Wilmington	State/Country: Delaware	Zip Code: 19810
Seating Position: Front Seat – Left Side (Driver's Side)	Motorcycle Crash: No	
Driver Distraction: None		
Condition at Time of Crash: Apparently Normal		
Alcohol Suspected/Confirmed: No	Drugs Suspected/Confirmed: No	

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Property Damage Only

Alcohol Test Status:		Alcohol Test Type:	Alcohol Test Results:
Drug Test Status:		Drug Test Type:	Drug Test Results:
Injury Status: No injury		Primary Area of Body Injury:	
Airbag:	Occupant Protection:		Ejection:
Description of Injuries:			
Driver Action: No Contributing Action			

State Property Damage - 001

Type of Property: State Property	Description: (Safety Feature) - Guardrail	
Owner Business Name: State Of Delaware	Owner Name:	Was Owner Notified: Yes
Owner Address: 169 Brick Store Landing RD		
City: Smyrna	State/Country: Delaware	Zip Code: 19977

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

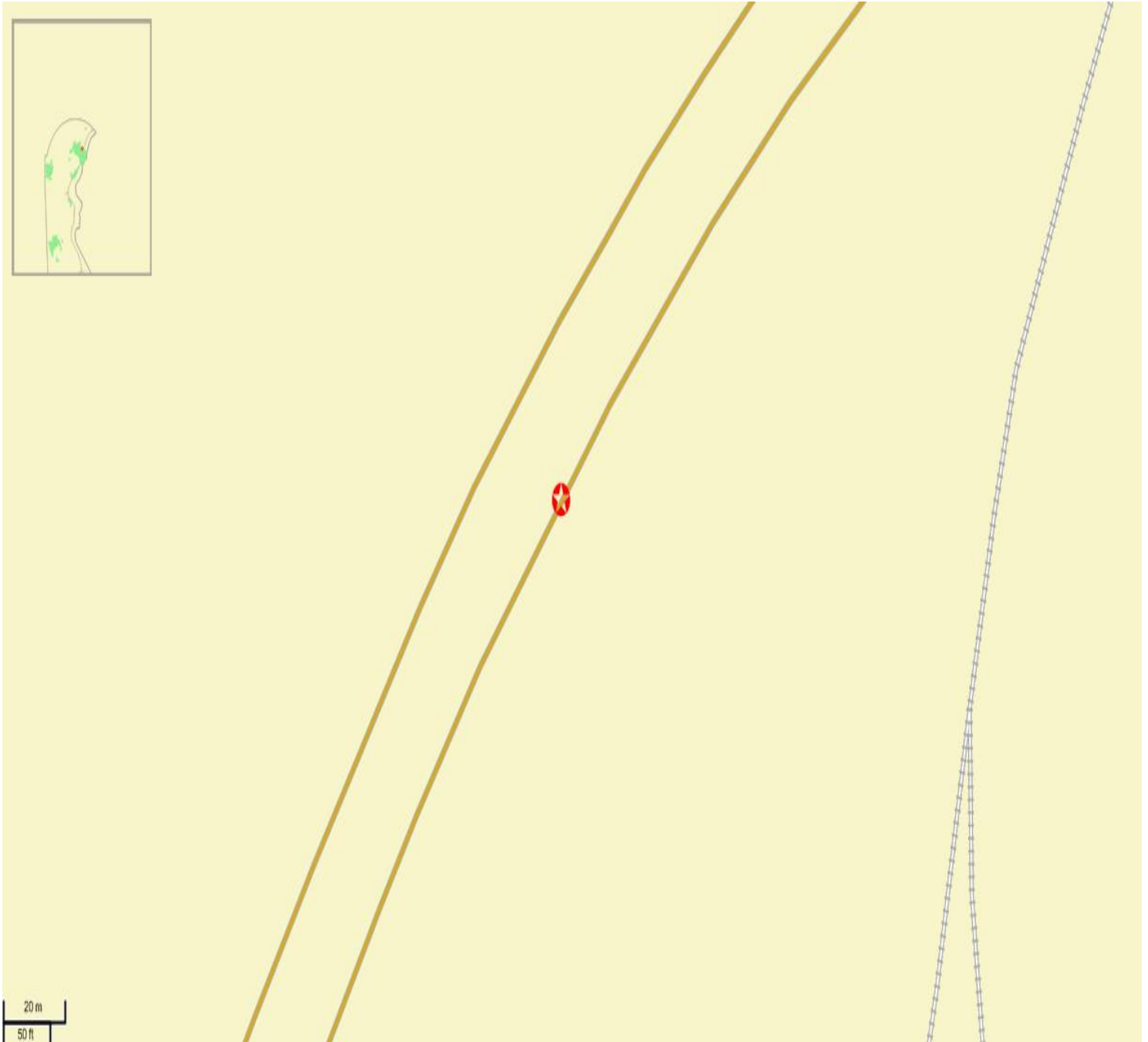
Property Damage Only

Narrative -000

V-1 WAS TRAVELING N/B ON I-495 IN THE RIGHT TRAVEL LANE N/O 12TH ST. NCV-1, AN UNKNOWN BOX TRUCK, WAS TRAVELING N/B IN THE CENTER TRAVEL LANE TO THE LEFT OF V-1. NCV-1 MADE AN UNSAFE LANE CHANGE TO THE RIGHT PUSHING V-1 OFF OF THE ROADWAY FOR POI 1 WITH A GUARDRAIL END APPROXIMATELY 12' E/O THE EEOR N/B I-495, .2 MILES N/O THE NEOR W/B 12TH ST. V-1 CAME TO A CONTROLLED STOP N/B ON THE RIGHT SHOULDER OF I-495, APPROXIMATELY 100' N/O POI FOR FRP V-1. NCV-1 CONTINUED N/B ON I-495. OP1 ADVISED HE WAS TRAVELING N/B ON I-495 IN THE RIGHT TRAVEL LANE N/O 12TH ST. OP1 ADVISED AN UNKNOWN WHITE BOX TRUCK (NCV-1) WAS TRAVELING N/B ON I-495 IN THE CENTER TRAVEL LANE. OP1 STATED V-1 MADE A LANE CHANGE INTO THE RIGHT LANE CAUSING OP1 TO VEER TO THE RIGHT TO AVOID COLLIDING WITH THE TRUCK. OP1 ADVISED THE TRUCK FORCED V-1 OFF OF THE ROADWAY AND INTO A GUARDRAIL END ALONG THE EEOR N/ B I-495. OP1 STATED THERE WAS NO CONTACT BETWEEN V-1 AND NCV-1. OP1 WAS UNABLE TO PROVIDE ANY FURTHER INFORMATION ON THE UNKNOWN BOX TRUCK.

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Property Damage Only



Attachments

ATTACHMENT B

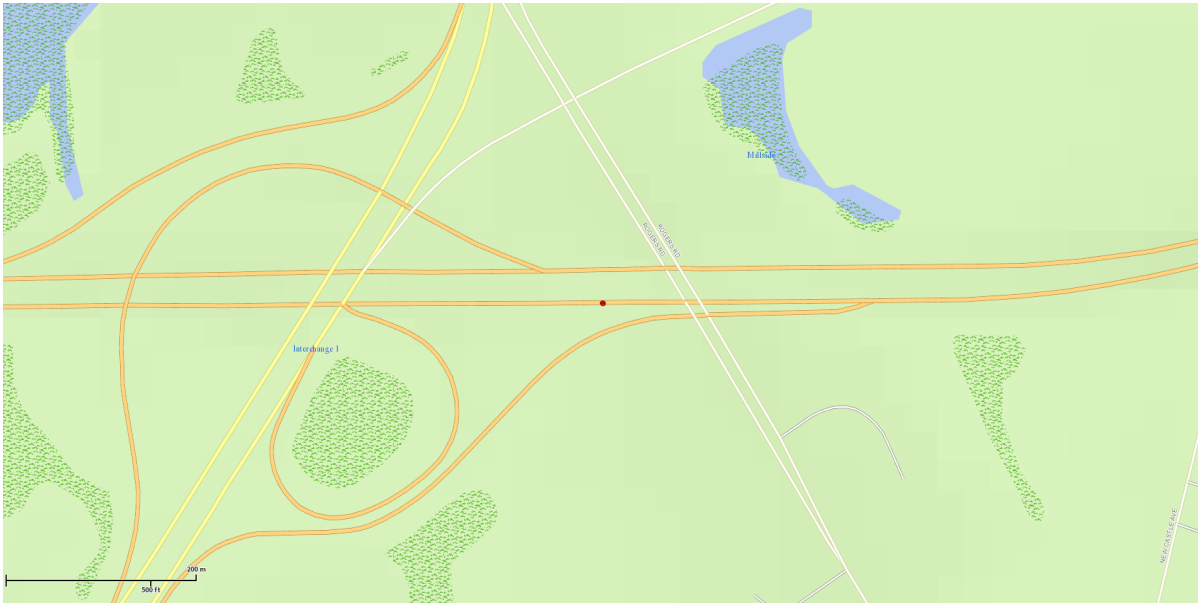
**FHWA Request for Information
ET-Plus Guardrail End Terminal
Ad-Hoc In-Service Evaluation – Supporting Documentation**

Location #7 – I-495 NB, median, 200' south of Rogers Road



Delaware Department of Transportation Crash Analysis Reporting System Crash Report

Crash Study Time Period: 12/24/2014 to 12/24/2014
Query Type:
Description:
Study Requested By:
Study Generated By: TDTASW
Number of Crashes: 1
Includes Non-Reportable Crashes: N
Study Code:



**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Complaint No.: 01-14-102708 - 000		Agency: 01 (TROOP 1 STATE POLICE)	
Date of Crash: 12/24/2014		Time of Crash: 16:10	County: New Castle
Grid: 106350	Sector: 18	Latitude: 39.71693	Longitude: -75.55418
Reporting Officer: CPL/1 KUKAN		Badge No.: 01194	

Crash Location

Officer Defined Location: On Northbound I-495, VIETNAM VETERANS MEM. HIGHWAY I495 281.92 Feet West From ROGERS ROAD 0.56 Miles from Wilmington Municipality			
Roadway ID: 89	Maintenance Road: 00060	Intersection Maintenance Road:	
Milepoint: 2.18	Functional Code: Interstate	Direction: North	Road Junction: Non-Junction

Crash Circumstances

Injuries Involved: Injuries Involved		No. of Fatalities: 0	No. Injuries: 1
Manner of Impact: Not a collision between two vehicles		Location of First Unstable Situation: On Roadway	
First Harmful Event: Guardrail End (Collision With Fixed Object)			
Location of First Harmful Event: On Roadway			
Primary Contributing Circumstance: Driving in a careless or reckless manner			
Environment Contributing Circumstance: None		Roadway Contributing Circumstance: None	
Lighting Condition: Daylight		Surface Condition: Wet	
Weather Condition: Cloudy			
School Bus Involved: No	Work Zone Involved: No		State Property Damage:

Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report
Personal Injury Crash

Vehicle - 001

Vehicle: 001	Vehicle Style: Passenger Car	Total Occupants: 1
Commercial Vehicle: No	Trailer Attached: No	
Registration: HIDDEN	State/Country: Delaware	Expires: 12/05/2015
VIN: HIDDEN		
Model Year: 2004	Make: FORD	Model: Mustang
Vehicle Configuration:	Cargo Body Type:	Gross Vehicle Weight Rating: 10,000 lbs or less
Most Damaged Area: Front Left	1st Point of Impact: Front Left	
Extent of Damage/Removal: Disabling Damage	Direction of Force to Vehicle: Front Right	
Equipment Failure 1:	Equipment Failure 2:	
Insurance Status: No Proof of Insurance		
Insurance Company: HIDDEN		
Insurance Policy No.: HIDDEN		
Owner Name: HIDDEN		
Owner Business Name: HIDDEN		
Owner Address: HIDDEN		
City: WILMINGTON	State/Country: Delaware	Zip Code: 19805
First Event: Guardrail End		
Most Harmful Event: Guardrail End		
Posted/Statutory Speed Limit: 65	Hit and Run:	
Manuever/Action Taken: Movements Essentially Straight Ahead	Traffic Control Device: Lane Markings	
Inoperative/Missing: No		
Trafficway: Two-Way, Divided, Positive Median Barrier	Direction Travelled: Northbound	

Driver of Vehicle - 001

Full Name: HIDDEN		
License No.: HIDDEN		
Gender: Male	Birth Date: 03/03/1988 - 26 years old	
Address: HIDDEN		
City: Newark	State/Country: Delaware	Zip Code: 19713
Seating Position: Front Seat – Left Side (Driver's Side)	Motorcycle Crash: No	
Driver Distraction: None		
Condition at Time of Crash: Apparently Normal		
Alcohol Suspected/Confirmed: No	Drugs Suspected/Confirmed: No	

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Alcohol Test Status:		Alcohol Test Type:	Alcohol Test Results:
Drug Test Status:		Drug Test Type:	Drug Test Results:
Injury Status: Nonfatal Injury - Non-incapacitating		Primary Area of Body Injury: Neck	
Airbag: Deployed - Front	Occupant Protection: Shoulder and Lap Belt Used		Ejection: Not Ejected
Description of Injuries:			
Driver Action: Operating vehicle in erratic, reckless, careless, negligent or aggressive manner			
Violation 1 - CARELESS DRIVING- Violation 2 - Driving While Suspended or Revoked Violation 3 - FAILURE TO HAVE INSURANCE IDENTIFICATION IN POSSES Violation 4 - FAILURE TO HAVE REGISTRATION CARD IN POSSESSION Violation 5 - FAILURE TO ANSWER SUMMONS- Violation 6 - DRIVING WITH EXPIRED LICENSE			

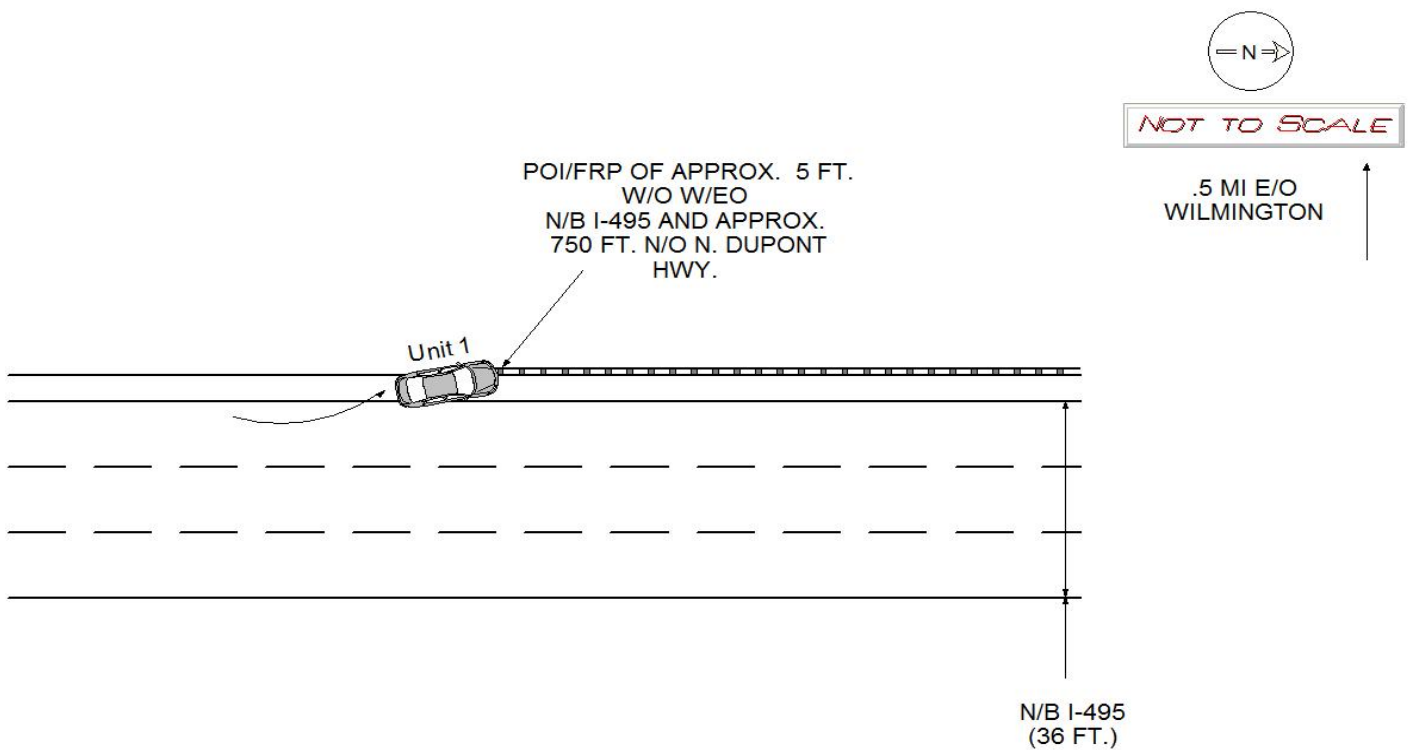
**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Narrative -000

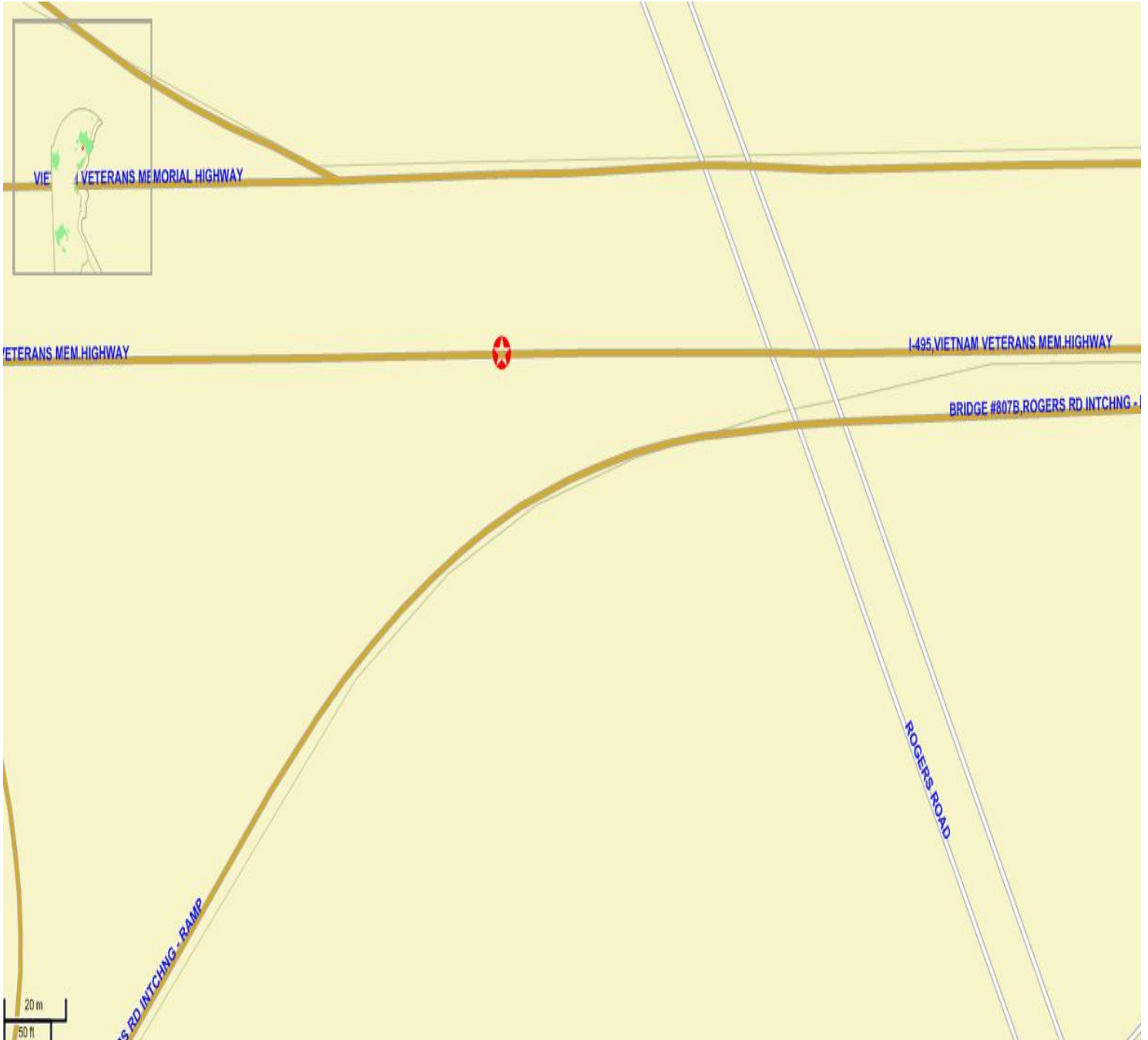
V1 WAS TRAVELING N/B IN THE LEFT LANE OF I-495. AS V1 CONTINUED TO TRAVEL, V1 LEFT THE ROADWAY TO THE LEFT FOR A MOMENT. WHEN DOING SO, V1'S LEFT TIRES WENT INTO THE GRASS MEDIAN. OP1 THEN TRIED TO CORRECT THIS AND STEER BACK ONTO THE ROADWAY. OP1 THEN LOST CONTROL OF HIS VEHICLE AND STRUCK THE GUARDRAIL END FOR A POI/FRP OF APPROX. 5 FT. W/O W/EO N/B I-495 AND APPROX. 750 FT. N/O N. DUPONT HWY. OP1'S STATEMENT CONCURRED WITH THE ABOVE SUMMARY. HE ADVISED THAT HE WAS SUFFERING FROM NECK AND BACK PAINS. HE WAS SUBSEQUENTLY TRANSPORTED TO CHRISTIANA EMERGENCY ROOM, VIA EMS. A COMPUTER CHECK REVEALED THAT OP1 WAS DRIVING WITH AN EXPIRED AND SUSPENDED LICENSE. HE WAS SUBSEQUENTLY CITED FOR THIS AS WELL AS CARELESS DRIVING AND FAILURE TO HAVE INSURANCE IDENTIFICATION IN POSSESSION. OP1 WAS PROVIDED WITH A COPY OF THE DRIVER'S INFORMATION EXCHANGE REPORT.

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report
Personal Injury Crash**



**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash



Attachments

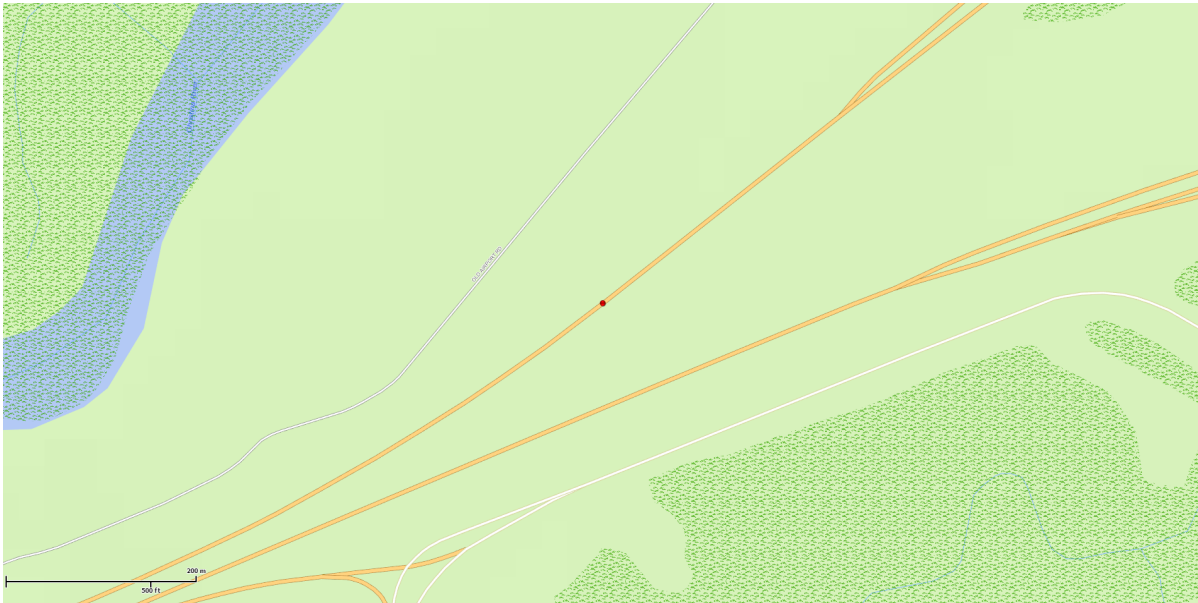
ATTACHMENT B
FHWA Request for Information
ET-Plus Guardrail End Terminal
Ad-Hoc In-Service Evaluation – Supporting Documentation

Location #11 – I-95 SB, south of DE Route 141, right shoulder



Delaware Department of Transportation Crash Analysis Reporting System Crash Report

Crash Study Time Period: 10/18/2014 to 10/18/2014
Query Type:
Description:
Study Requested By:
Study Generated By: TDTSASW
Number of Crashes: 1
Includes Non-Reportable Crashes: N
Study Code:



**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Complaint No.: 06-14-083415 - 000		Agency: 06 (TROOP 6 STATE POLICE)	
Date of Crash: 10/18/2014		Time of Crash: 23:53	County: New Castle
Grid: 092346	Sector: 68	Latitude: 39.69812	Longitude: -75.61375
Reporting Officer: TPR KING		Badge No.: 01119	

Crash Location

Officer Defined Location: On Westbound JOHN F KENNEDY MEMORIAL HIGHWAY I95 0.56 Miles South West From BASIN ROAD SR141 0.45 Miles from Newport Municipality			
Roadway ID: 100	Maintenance Road: 00056	Intersection Maintenance Road:	
Milepoint: 6.27	Functional Code: Interstate	Direction: West	Road Junction: Non-Junction

Crash Circumstances

Injuries Involved: Injuries Involved		No. of Fatalities: 0	No. Injuries: 1
Manner of Impact: Sideswipe, same direction		Location of First Unstable Situation: On Roadway	
First Harmful Event: Motor Vehicle in Transport (Collision With Person, Motor Vehicle, or Non-Fixed)			
Location of First Harmful Event: On Roadway			
Primary Contributing Circumstance: Unknown			
Environment Contributing Circumstance: None		Roadway Contributing Circumstance: None	
Lighting Condition: Dark-Lighted		Surface Condition: Dry	
Weather Condition: Clear			
School Bus Involved: No	Work Zone Involved: No		State Property Damage: Yes

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report
Personal Injury Crash**

Vehicle - 001

Vehicle: 001	Vehicle Style: Passenger Car	Total Occupants: 3
Commercial Vehicle: No	Trailer Attached: No	
Registration: HIDDEN	State/Country: Delaware	Expires: 05/03/2017
VIN: HIDDEN		
Model Year: 2012	Make: HYUN	Model: Elantra
Vehicle Configuration:	Cargo Body Type:	Gross Vehicle Weight Rating: 10,000 lbs or less
Most Damaged Area: Right Side	1st Point of Impact: Left Side Rear	
Extent of Damage/Removal: Disabling Damage	Direction of Force to Vehicle: Right Side Rear	
Equipment Failure 1:	Equipment Failure 2:	
Insurance Status: Insured		
Insurance Company: HIDDEN		
Insurance Policy No.: HIDDEN		
Owner Name: HIDDEN		
Owner Business Name: HIDDEN		
Owner Address: HIDDEN		
City: NEW CASTLE	State/Country: Delaware	Zip Code: 19720
First Event: Motor Vehicle In Transport		
Most Harmful Event: Motor Vehicle in Transport		
Posted/Statutory Speed Limit: 55	Hit and Run:	
Manuever/Action Taken: Movements Essentially Straight Ahead	Traffic Control Device: Lane Markings	
Inoperative/Missing: No		
Trafficway: Two-Way, Divided, Positive Median Barrier	Direction Travelled: Southbound	

Driver of Vehicle - 001

Full Name: HIDDEN		
License No.: HIDDEN		
Gender: Female	Birth Date: 03/08/1972 - 42 years old	
Address: HIDDEN		
City: New Castle	State/Country: Delaware	Zip Code: 19720
Seating Position: Front Seat – Left Side (Driver's Side)	Motorcycle Crash: No	
Driver Distraction: None		
Condition at Time of Crash: Apparently Normal		
Alcohol Suspected/Confirmed: No	Drugs Suspected/Confirmed: No	

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Alcohol Test Status:		Alcohol Test Type:	Alcohol Test Results:
Drug Test Status:		Drug Test Type:	Drug Test Results:
Injury Status: No injury		Primary Area of Body Injury:	
Airbag:	Occupant Protection:		Ejection:
Description of Injuries:			
Driver Action: No Contributing Action			

Passenger of Vehicle - 001

Full Name: HIDDEN		
License Number:	License Class:	
Gender: F	Birth Date: 02/02/2000 - 14 years old	
Address: HIDDEN		
City: New Castle	State/Country: Delaware	Zip Code: 19720
Seating Position: Second Seat – Right Side	Motorcycle Crash: No	
Injury Status: No injury		
Injury Description:	Primary Area of Body Injury:	
Airbag:	Occupant Protection:	Ejection:
Type of Transport	Transport Location:	

Passenger of Vehicle - 001

Full Name: HIDDEN		
License Number:	License Class:	
Gender: M	Birth Date: 05/14/1997 - 17 years old	
Address: HIDDEN		
City: New Castle	State/Country: Delaware	Zip Code: 19720
Seating Position: Front Seat – Right Side	Motorcycle Crash: No	
Injury Status: No injury		
Injury Description:	Primary Area of Body Injury:	
Airbag:	Occupant Protection:	Ejection:
Type of Transport	Transport Location:	

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report
Personal Injury Crash**

State Property Damage - 001

Type of Property: State Property	Description: (Safety Feature) - Guardrail
Owner Business Name: State Of Delaware Owner Name:	Was Owner Notified: Yes
Owner Address: 169 Brick Store Landing RD	
City: Smyrna	State/Country: Delaware Zip Code: 19977

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Vehicle - 002

Vehicle: 002	Vehicle Style: Passenger Car	Total Occupants: 2
Commercial Vehicle: No	Trailer Attached: No	
Registration: HIDDEN	State/Country: Delaware	Expires: 12/15/2014
VIN: HIDDEN		
Model Year: 1999	Make: HOND	Model: Accord
Vehicle Configuration:	Cargo Body Type:	Gross Vehicle Weight Rating: 10,000 lbs or less
Most Damaged Area: Front Right	1st Point of Impact: Front Center	
Extent of Damage/Removal: Disabling Damage	Direction of Force to Vehicle: Right Side Rear	
Equipment Failure 1:	Equipment Failure 2:	
Insurance Status: Unknown		
Insurance Company: HIDDEN		
Insurance Policy No.: HIDDEN		
Owner Name: HIDDEN		
Owner Business Name: HIDDEN		
Owner Address: HIDDEN		
City: NEW CASTLE	State/Country: Delaware	Zip Code: 19720
First Event: Motor Vehicle In Transport		
Most Harmful Event: Motor Vehicle in Transport		
Posted/Statutory Speed Limit: 55	Hit and Run:	
Manuever/Action Taken: Unknown	Traffic Control Device: Lane Markings	
Inoperative/Missing: No		
Trafficway: Two-Way, Divided, Positive Median Barrier	Direction Travelled: Southbound	

Driver of Vehicle - 002

Full Name: HIDDEN		
License No.: HIDDEN		
Gender: Male	Birth Date: 02/13/1994 - 20 years old	
Address: HIDDEN		
City: Wilmington	State/Country: Delaware	Zip Code: 19805
Seating Position: Front Seat – Left Side (Driver's Side)	Motorcycle Crash: No	
Driver Distraction: Unknown		
Condition at Time of Crash: Unknown		
Alcohol Suspected/Confirmed: No	Drugs Suspected/Confirmed: No	
Alcohol Test Status:	Alcohol Test Type:	Alcohol Test Results:

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

Drug Test Status:		Drug Test Type:	Drug Test Results:
Injury Status: Unknown		Primary Area of Body Injury:	
Airbag:	Occupant Protection:		Ejection:
Description of Injuries:			
Driver Action: Unknown			

Passenger of Vehicle - 002

Full Name: HIDDEN		
License Number: 1601412	License Class:	
Gender: M	Birth Date: 03/04/1992 - 22 years old	
Address: HIDDEN		
City: Wilmington	State/Country: Delaware	Zip Code: 19809
Seating Position: Front Seat – Right Side	Motorcycle Crash: No	
Injury Status: Nonfatal Injury - Incapacitating		
Injury Description:	Primary Area of Body Injury: Upper Extremity	
Airbag: Not Deployed	Occupant Protection: Unknown	Ejection: Not Ejected
Type of Transport: EMS	Transport Location: Christiana Hospital	

**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report
Personal Injury Crash**

Narrative -000

ON SATURDAY OCTOBER 18, 2014 DSP TROOP 6 UNITS WERE DISPATCHED TO THE AREA OF I95 S/B JUST S/O OF RT. 141. UPON ARRIVAL EMS CREWS WERE ATTEMPTING TO TAKE THE PASSENGER OF V2 OUT OF THE VEH. SAID PASSENGER WAS IN THE FRONT PASSENGER'S SEAT, AND DUE TO HIS INJURIES IT WAS CLEAR HE WAS NOT DRIVING V2. THE OPERATOR OF V2 WAS NOT ON SCENE. THE STATE POLICE HELICOPTER RESPONDED TO THE AREA TO SEARCH FOR OP2 WITH NEGATIVE RESULTS. I THEN CONTACTED AND INTERVIEWED THE OPERATOR OF V1 OP1 STATED THAT SHE HAD RECENTLY ENTERED ONTO I95 S/B FROM N/B RT. 141. OP1 STATED THAT SHE WAS SUDDENLY REAR ENDED WHICH SENT HER VEH INTO THE GUARDRAIL. OP1 STATED SHE DID NOT SEE WHERE THE VEH CAME FROM. OP1 STATED THAT SHE JUST NOTICED A DARK COLORED VEH PASSING HER VEH AFTER THE INITIAL IMPACT. EXAMINATION OF THE CRASH SCENE REVEALED THAT V1 SUFFERED INITIAL IMPACT FROM THE LEFT SIDE REAR. BASED ON THE TESTIMONY OF OP1 ALONG WITH THE EVIDENCE ON THE SCENE, I CAN STATE THAT V1 WAS TRAVELING S/B ON I95 IN THE RIGHT LANE. V2'S RIGHT SIDE FRONT COLLIDED WITH V1'S LEFT SIDE REAR FOR A 1ST POI OF S/B I95 APPROX .25 MI S/O OF RT. 141 AND APPROX 10' E/O THE W/E.O.R. V1 SPUN INTO THE GUARDRAIL FOR A 2ND POI OF S/B I95 APPROX 20' S/O POI 1, AND APPROX 10' W/O THE W/E.O.R. V1 THEN CONTINUED INTO THE DITCH FOR A FRP OF S/B I95 APPROX 10' S/O POI 2 AND APPROX 25' W/O THE W/E.O.R. V2'S FRP IS UNK AS IT APPEARED THAT THE OPERATOR OF SAME PARKED THE VEH ON THE SHOULDER PRIOR TO FLEEING THE SCENE. ON 10-28-14 I CONTACTED AND INTERVIEWED THE PASSENGER OF V2 (HEREIN AFTER REFERRED TO AS P3). P3 WAS STILL HOSPITALIZED ON THIS DATE. P3 STATED THAT HE AND OP2 WERE DRINKING AT A PARTY EARLIER IN THE DAY, ON THE DATE OF THIS COLLISION. P3 STATED THAT HE RIDING ALL DAY WITH OP2 IN V2. P3 STATED THAT AFTER THE PARTY BOTH HE AND OP2 WENT TO THE HOME OF THE REGISTERED OWNER OF V2 (DANA MURREY LUCAS). P3 STATED THAT LUCAS'S SON SUFFERED A INJURY AT HOME AND LUCAS TRANSPORTED HER SON TO CHRISTIANA HOSPITAL IN A NON-RELATED VEH. P3 STATED THAT HE AND OP2 WERE RESPONDING TO THE HOSPITAL ALSO, WHEN THIS CRASH TOOK PLACE. P3 STATED THAT HE DOESN'T REMEMBER THE COLLISION BUT IS CLEAR ON THE EVENTS JUST PRIOR. AT CER LUCAS AND HER SON CHECKED INTO THE HOSPITAL JUST MINUTES AFTER THE COLLISION OCCURRED WITCH ELIMINATED THEM AS SUSPECTS. LUCAS ADVISED THAT OP2 WAS OPERATING HER VEHICLE. I WILL ATTEMPT TO SECURE AN ARREST WARRANT FOR OP2 VIA A LEISS REPORT. AN PRE-ARREST INTAKE HAS BEEN SCHEDULED WITH THE ATTORNEY GENERAL'S OFFICE



**Delaware Department of Transportation
Crash Analysis Reporting System
Crash Report**

Personal Injury Crash

