

**Title: Barrier Design, Anthony Henday Drive & Cameron Heights Drive Interchange**

Memorandum Date: April 14, 2010

Design Exception Request Date: February 28, 2010

Region: North Central

Approval Status: Approved

Project Location					
Highway	Control Section	At km	From km	To km	Existing AADT
216	06				

Project Type (Mark all that apply with an X)			
Functional Planning:	New Construction: <b>X</b>	Reconstruction:	Paving/Surfacing:
Bridge:	Operations:	Geotechnical:	Environmental:
Other:			

Summary
A request to construct wrap around guardrail according to Ministry of Ontario Standards due to insufficient space to achieve guardrail length of need. The length of need for the approach ends at both the south and north side of the bridge structure over Anthony Henday Drive is on the order of 60 to 65 meters according to the AT Roadside Design Guide. Due to the limited space available on the north and south sides, in both cases a guardrail length of 35 to 40 meters can be achieved. The limited space is due to the current intersection locations. AT doesn't have any wrap around guardrail standards therefore the proposed alternative is to install guardrail as per Ontario Provincial Standard Drawing OPSD 912.531.
Rationale for Approval/Rejection
<ul style="list-style-type: none"> <li>The proposed OPSD standard is based on a FHWA Technical Advisory, which was crash tested with a large vehicle (over 4500 pounds) at 50 mph. This would meet NCHRP 350 Test Level 2 (TL-2). Given that 184<sup>th</sup> Street is designed for 70 km/h and posted at 60 km/h, TL-2 would be considered acceptable</li> </ul>

Additional Mitigation Required
No mitigation is required.

Key Words
Guardrail, Length of need

Photograph/Diagram (If Available)

