

**Title: Left Turn Lane for Southbound Traffic, Non-standard Left Turn Lane Length vs New Construction Design Standards**

Memorandum Date: May 9, 2011

Design Exception Request Date: April 28, 2011

Region: North Central

Approval Status: Approved

Project Location					
Highway	Control Section	At km	From km	To km	Existing AADT
779	02		7.300	8.760	14530

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

Summary
A modified left turn lane was requested for the southbound traffic at the intersection of Hwy 779 and 49 Avenue in Stony Plain. There was not enough room for the 50m taper and 40m minimum left turn bay as specified by Alberta Transportation's Urban Supplement Design Guide's normal new construction standards. Due to physical constraints, the design was modified to a 33m taper and 30m left turn bay.
Rationale for Approval/Rejection
<ul style="list-style-type: none"> <li>A CN rail line is located just north of the intersection, which limits the available space for building standard left turn storage length</li> <li>The traffic analysis results prove the modified left turn lane can provide enough storage length for the left turning vehicles at an acceptable Level of Services</li> <li>The traffic signals are coordinated with the railway crossing, which provides adequate traffic operations at this intersection</li> <li>The historical collision analysis shows that the additional left turn lane should reduce the potential collisions by removing left turning vehicles from the exiting through and left turn lanes</li> </ul>

Additional Mitigation Required
No mitigation is required.

Key Words
Turn bay, Left turn lane, New construction standards, Urban intersection

Photograph/Diagram (If Available)

