

Title: Parson's Creek Aggregate Intersection Improvements

Memorandum Date: April 15, 2010
 Design Exception Request Date: April 8, 2010
 Region: North Central
 Approval Status: Approved

Project Location					
Highway	Control Section	At km	From km	To km	Existing AADT
63	12		6.500	6.900	2820

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

Summary

An intersection design exception due to existing elevation differences between the northbound and southbound lanes of divided highway 63. The elevation differences between the north and southbound lanes results in a ~4.5% grade in the median of the intersection which does not meet Alberta Transportation's 2% maximum median grade.

Rationale for Approval/Rejection

- The median southbound acceleration lane has been designed based on a mass power ratio design vehicle of 160g/W which represents the 85th percentile of the vehicles that will likely be coming to and from the gravel pit (survey conducted by the consultant in 2010). The southbound acceleration length (approx. 1700m) has been designed based on a design vehicle merging at the desirable speed of 85 km/h at the merge point.
- The length of the median southbound deceleration lane is adequate to allow loaded trucks to brake comfortably to a stop condition in the median area of the intersection treatment.

Additional Mitigation Required

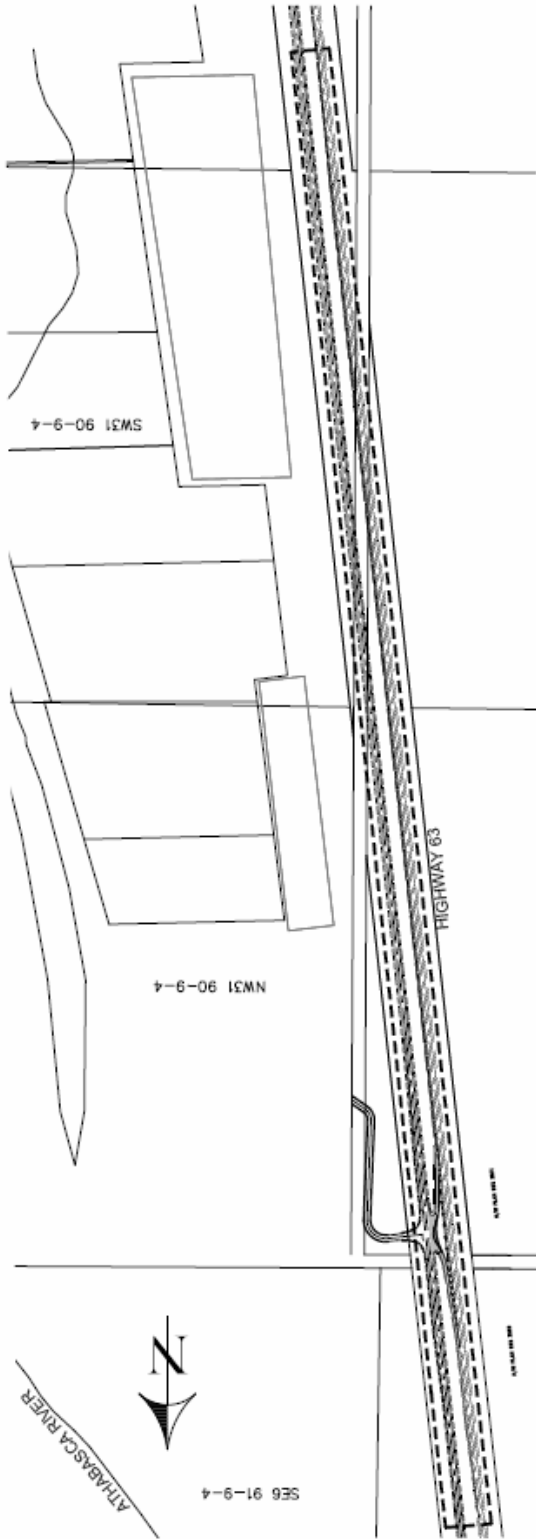
No mitigation is required.

Key Words

Acceleration lane, Intersection, Median grade, Mass power ration, Design vehicle

Photograph/Diagram (If Available)

PARSONS CREEK AGGREGATES INTERSECTION IMPROVEMENTS



DRAWING NO.	DESCRIPTION
F-1	88 ACCESS DECELERATION LANE AND ALL TURNING INTERSECTION PLAN
F-2	88 DECELERATION LANE AND INTERSECTION PROFILES
F-3	88 DECELERATION LANE AND INTERSECTION PROFILES
F-4	88 ACCELERATION LANE PROFILE
F-5	88 DECELERATION LANE AND INTERSECTION SECTIONS
F-6	88 DECELERATION LANE AND INTERSECTION SECTIONS
F-7	88 ACCELERATION LANE SECTIONS
F-8	INTERSECTION SIGHT LINES
F-9	INTERSECTION GRADING PLAN
F-10	INTERSECTION SIGHTING AND PAINTING PLAN
F-11	ACCELERATION LANE SIGHTING AND PAINTING PLAN
F-12	INTERSECTION TURNING TEMPLATES
F-13	INTERSECTION TURNING TEMPLATES

ISSUED FOR FINAL APPROVAL

NOT FOR CONSTRUCTION

SEP 91-9-4