Montana Department of Transportation	**Bridge Memo Number: 17-01**
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Bridge Design / Management Memo	**Date Revised:** Click here to enter a date.
Subject: Minimum Bridge Deck Thickness	

To: Bridge Bureau
Consultant Design Bureau

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☒ **In-House Design**	☒ **Consultant Design**
☐ **Bridge Management**	☐ **Condition Inspection**

Introduction

The temperature and shrinkage gradient between the top and bottom of a bridge deck can promote the onset of cracking. The effect is greater at early concrete age. Research shows that increasing the deck thickness reduces the gradients and the cracking tendency. Few states construct bridge decks thinner than 8 inches.

Policy / Guidelines

For new bridge construction, use 8 inches as the minimum bridge deck thickness. For bridge deck replacements, evaluate the 8 inch minimum deck thickness and any affects on the overall structural system. Use the thicker deck as appropriate for the situation.

Closing

This change should help reduce cracking in new bridge decks at a minimal initial cost to the project.

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