Highway Safety Performance

Transportation Research Record: Journal of the Transportation Research Board Volume 2636 (2017)

ISBN: 978-1-5108-5439-0

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2017) by Transportation Research Board of the National Academies All rights reserved.

ISBN (Print) 978-1-5108-5439-0 ISBN 2017 Printed Set (All Issues) 978-1-5108-5406-2

Printed by Curran Associates, Inc. (2018)

For permission requests, please contact Transportation Research Board of the National Academies at the address below.

Transportation Research Board The National Academies of Sciences, Engineering, and Medicine 500 Fifth Street, NW Washington, DC 20001

Phone: (202) 334-2934 Fax: (202) 334-2519

trbsales@nas.edu

Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA

Phone: 845-758-0400 Fax: 845-758-2633

Email: curran@proceedings.com Web: www.proceedings.com

TABLE OF CONTENTS

Development of Crash Modification Factors for Uncontrolled Pedestrian Crossing Treatments	1
Zegeer, Charlie; Lyon, Craig; Srinivasan, Raghavan; Persaud, Bhagwant; Lan, Bo; Smith, Sarah; Carter, Daniel;	
Thirsk, Nathan J.; Zegeer, John; Ferguson, Erin; Van Houten, Ron; Sundstrom, Carl	
Investigation of Skew Angle and Other Factors Influencing Crash Frequency at High-Speed Rural	
Intersections	9
Nightingale, Ellen; Parvin, Niloo; Seiberlich, Cortney; Savolainen, Peter T.; Pawlovich, Michael	
Alternative Approach for Combining Multiple Crash Modification Factors Using Adjustment	
Function and Analytic Hierarchy Process	15
Park, Juneyoung; Abdel-Aty, Mohamed A.	
Implementing Highway Safety Manual Life-Cycle Benefit–Cost Analysis of Safety Improvements	23
Frustaci, Jordan B.; Saito, Mitsuru; Schultz, Grant G.	
Safety Performance of Flashing Yellow Arrow for Protected–Permissive Left-Turn Signal Control in	
Central Illinois	32
Schattler, Kerrie L.; Anderson, Eric P.; Hanson, Trevor	
Application of Highway Safety Manual Method for Ramp Crash Prediction to Loop and Diamond	
Ramps	43
Torbic, Darren J.; Harwood, Douglas W.; Bauer, Karin M.	
Developing Crash Modification Factors for Horizontal Curves on Rural Two-Lane Undivided	
Highways Using a Cross-Sectional Study	53
Wu, Lingtao; Lord, Dominique; Geedipally, Srinivas Reddy	
Evaluation of Safety Performance Functions Based on Experimental Design Using a Cross-Validation	
Method	62
Wang, Jung-Han; Abdel-Aty, Mohamed A.; Lee, Jaeyoung	
Exploring the Need for Region-Specific Calibration Factors	73
Geedipally, Srinivas Reddy; Shirazi, Mohammadalil; Lord, Dominique	
Safety Effects of Low-Cost Systemic Safety Improvements at Signalized and Stop-Controlled	
Intersections	80
Le, Thanh Q.; Gross, Frank; Harmon, Timothy	
Author Index	