

MOUNTAIN-PLAINS CONSORTIUM

RESEARCH BRIEF | MPC 22-464 (project 520) | July 2022

Financial Benefits of Proposed Access Management Treatments

F	G	J	
		69th St and Cliff Ave	69th St
		Sioux Falls SD	
		no-build	
Costs:		no-build option	
	Project Cost	no-build option	
Benefits:		no-build option	
	Traffic Operations	no-build option	
	Environmental	no-build option	
	Traffic Safety	no-build option	
Benefit/Cost:			
	Total Benefits:	no-build option	\$
	Total Costs:	no-build option	\$
	Benefit/Cost (B/C):	no-build option	
	Incremental B/C:	no-build option	

the ISSUE

No locally calibrated tool is available to capture the complexity of the current and future public benefits of proposed access management for estimating financial and other benefits and comparing them with the associated financial costs.

the RESEARCH

Researchers have determined needs and available resources through a literature review and interview process. They developed a benefits estimation methodology focused on benefits related to traffic operations, traffic safety, environmental impacts, and project costs, and subsequently developed spreadsheet software tools that implement the benefits estimation and calculation of traffic safety benefits, using Synchro/SimTraffic for estimating traffic operations and environmental impacts.



A University Transportation Center sponsored by the U.S. Department of Transportation serving the Mountain-Plains Region. Consortium members:

Colorado State University
 North Dakota State University
 South Dakota State University

University of Colorado Denver
 University of Denver
 University of Utah

Utah State University
 University of Wyoming



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Project Title

Financial Benefits
of Proposed Access
Management Treatments

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South Dakota Department
of Transportation

USDOT, Research and
Innovative Technology
Administration

the FINDINGS

The result is a simple, straightforward benefits estimation methodology focused on benefits related to traffic operations, traffic safety, environmental impacts, and project costs. The methodology is facilitated by the two spreadsheet software tools that implement the benefits estimation and the calculation of traffic safety benefits, utilizing Synchro/SimTraffic for estimation of traffic operations and environmental impacts.

the IMPACT

With a straightforward methodology, SDDOT can more effectively communicate with the public and concerned citizens regarding potential access management projects. Using the software, analysts will follow a consistent analytical procedure with related calculations and results generated by the software rather than manually, therefore saving time. These results will be consistent from project to project, supporting design and access management decisions. Additionally, consideration of the traffic operations, traffic safety, and environmental impact measures are key to an improved and sustainable transportation network.

For more information on this project, download the Main report at <https://www.ugpti.org/resources/reports/details.php?id=1115>

For more information or additional copies, visit the Web site at www.mountain-plains.org, call (701) 231-7767 or write to Mountain-Plains Consortium, Upper Great Plains Transportation Institute, North Dakota State University, Dept. 2880, PO Box 6050, Fargo, ND 58108-6050.



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