Michigan Calibration Values for the Highway Safety Manual

Spring 2012

What are Highway Safety Manual (HSM) Calibration Values?

Background:

- The safety performance functions (SPFs) that appear in chapters 10, 11 and 12 of the HSM, were developed from many different data sets from across the United States. The data used was from 2002-2006 typically but can vary by a few years. To be more applicable to Michigan, calibration values were developed to enhance the SPFs in the HSM. In this first edition for Michigan 2005-2010 data was used to develop these calibration values.

Reason:

- SPFs in the HSM do not always reflect the actual conditions of a local jurisdiction. To solve this issue, a calibration value is calculated. The calculation is the ratio between the average actual observed crashes and average predicted crashes for a particular site-type as seen in the list below.

Understanding of Numbers:

- A calibration value of 1.0000 would mean that the numbers of average actual observed crashes are exactly the same as the number of average predicted crashes for a particular site-type from the SPF. Therefore, if the calibration value is less than 1.0000 then that site-type for the jurisdiction is experiencing less average actual observed crashes than the roadways used in the development of the SPF. The reverse would be true if the value is greater than 1.0000.

What is Available:

- Total crashes and fatal & all injury crashes calibration values for the years 2005 to 2010 are available in this edition for the following roadway configurations:

    - *Rural Intersections-*
        - 3-Leg with Minor Road Stop Control
        - 3-Leg Signalized
        - 4-Leg with Minor Road Stop Control
        - 4-Leg Signalized
    - *Urban Intersections-*
        - 3-Leg with Minor Road Stop Control
        - 3-Leg Signalized
        - 4-Leg with Minor Road Stop Control
        - 4-Leg Signalized
    - *Rural Segments-*
        - 2-Lane 2-way
        - Multilane UNDIVIDED
        - Multilane DIVIDED
        - Freeway 4-Lane
        - Freeway 6-Lane
        - Freeway Interchange Area 4-lane
        - Freeway Interchange Area 6-lane
    - *Urban Segments-*
        - 2-Lane 2-way
        - Multilane UNDIVIDED
        - Multilane DIVIDED
        - Urban One-Way
        - Freeway 4-Lane
        - Freeway 6-Lane
        - Freeway 8-Lane
        - Freeway Interchange Area 4-lane
        - Freeway Interchange Area 6-lane
        - Freeway Interchange Area 8-lane

Michigan Calibration Values
RURAL INTERSECTIONS

Rural 3-Leg with Minor Rd Stop Control				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
201	Int/Rur; 3-leg minor-rd STOP	Total Crashes	2005	2.0272
201	Int/Rur; 3-leg minor-rd STOP	Total Crashes	2006	1.8478
201	Int/Rur; 3-leg minor-rd STOP	Total Crashes	2007	1.8491
201	Int/Rur; 3-leg minor-rd STOP	Total Crashes	2008	1.9433
201	Int/Rur; 3-leg minor-rd STOP	Total Crashes	2009	1.8268
201	Int/Rur; 3-leg minor-rd STOP	Total Crashes	2010	1.7249
201	Int/Rur; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2005	0.8088
201	Int/Rur; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2006	0.6553
201	Int/Rur; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2007	0.7108
201	Int/Rur; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2008	0.6860
201	Int/Rur; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2009	0.6740
201	Int/Rur; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2010	0.6927

Rural 3-Leg Signalized				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
203	Int/Rur; 3-leg signalized	Total Crashes	2005	1.2733
203	Int/Rur; 3-leg signalized	Total Crashes	2006	1.3972
203	Int/Rur; 3-leg signalized	Total Crashes	2007	1.2045
203	Int/Rur; 3-leg signalized	Total Crashes	2008	1.2236
203	Int/Rur; 3-leg signalized	Total Crashes	2009	1.2152
203	Int/Rur; 3-leg signalized	Total Crashes	2010	1.1601
203	Int/Rur; 3-leg signalized	Fatal and All Injury Crashes	2005	0.6190
203	Int/Rur; 3-leg signalized	Fatal and All Injury Crashes	2006	0.7471
203	Int/Rur; 3-leg signalized	Fatal and All Injury Crashes	2007	0.5966
203	Int/Rur; 3-leg signalized	Fatal and All Injury Crashes	2008	0.5722
203	Int/Rur; 3-leg signalized	Fatal and All Injury Crashes	2009	0.4444
203	Int/Rur; 3-leg signalized	Fatal and All Injury Crashes	2010	0.5197

Rural 4-Leg with Minor Road Stop Control				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
204	Int/Rur; 4-leg minor-rd STOP	Total Crashes	2005	1.8000
204	Int/Rur; 4-leg minor-rd STOP	Total Crashes	2006	1.6803
204	Int/Rur; 4-leg minor-rd STOP	Total Crashes	2007	1.6801
204	Int/Rur; 4-leg minor-rd STOP	Total Crashes	2008	1.7197
204	Int/Rur; 4-leg minor-rd STOP	Total Crashes	2009	1.6314
204	Int/Rur; 4-leg minor-rd STOP	Total Crashes	2010	1.5289
204	Int/Rur; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2005	0.8510
204	Int/Rur; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2006	0.7841
204	Int/Rur; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2007	0.7756
204	Int/Rur; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2008	0.7333
204	Int/Rur; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2009	0.7225
204	Int/Rur; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2010	0.7210

Michigan Calibration Values
RURAL INTERSECTIONS

Rural 4-Leg Signalized				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
206	Int/Rur; 4-leg signalized	Total Crashes	2005	2.0701
206	Int/Rur; 4-leg signalized	Total Crashes	2006	1.8491
206	Int/Rur; 4-leg signalized	Total Crashes	2007	1.8699
206	Int/Rur; 4-leg signalized	Total Crashes	2008	1.7617
206	Int/Rur; 4-leg signalized	Total Crashes	2009	1.7831
206	Int/Rur; 4-leg signalized	Total Crashes	2010	1.6284
206	Int/Rur; 4-leg signalized	Fatal and All Injury Crashes	2005	1.2092
206	Int/Rur; 4-leg signalized	Fatal and All Injury Crashes	2006	1.0002
206	Int/Rur; 4-leg signalized	Fatal and All Injury Crashes	2007	0.9912
206	Int/Rur; 4-leg signalized	Fatal and All Injury Crashes	2008	1.0172
206	Int/Rur; 4-leg signalized	Fatal and All Injury Crashes	2009	1.1433
206	Int/Rur; 4-leg signalized	Fatal and All Injury Crashes	2010	1.0004

Michigan Calibration Values
URBAN INTERSECTIONS

Urban 3-Leg with Minor Rd Stop Control				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
251	Int/Urb; 3-leg minor-rd STOP	Total Crashes	2005	1.5436
251	Int/Urb; 3-leg minor-rd STOP	Total Crashes	2006	1.3918
251	Int/Urb; 3-leg minor-rd STOP	Total Crashes	2007	1.4178
251	Int/Urb; 3-leg minor-rd STOP	Total Crashes	2008	1.4497
251	Int/Urb; 3-leg minor-rd STOP	Total Crashes	2009	1.3479
251	Int/Urb; 3-leg minor-rd STOP	Total Crashes	2010	1.3021
251	Int/Urb; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2005	0.7206
251	Int/Urb; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2006	0.6739
251	Int/Urb; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2007	0.6569
251	Int/Urb; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2008	0.6540
251	Int/Urb; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2009	0.6354
251	Int/Urb; 3-leg minor-rd STOP	Fatal and All Injury Crashes	2010	0.6335

Urban 3-Leg Signalized				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
253	Int/Urb; 3-leg signalized	Total Crashes	2005	1.4832
253	Int/Urb; 3-leg signalized	Total Crashes	2006	1.4234
253	Int/Urb; 3-leg signalized	Total Crashes	2007	1.3327
253	Int/Urb; 3-leg signalized	Total Crashes	2008	1.3831
253	Int/Urb; 3-leg signalized	Total Crashes	2009	1.3394
253	Int/Urb; 3-leg signalized	Total Crashes	2010	1.3459
253	Int/Urb; 3-leg signalized	Fatal and All Injury Crashes	2005	0.7047
253	Int/Urb; 3-leg signalized	Fatal and All Injury Crashes	2006	0.7009
253	Int/Urb; 3-leg signalized	Fatal and All Injury Crashes	2007	0.6302
253	Int/Urb; 3-leg signalized	Fatal and All Injury Crashes	2008	0.6245
253	Int/Urb; 3-leg signalized	Fatal and All Injury Crashes	2009	0.5808
253	Int/Urb; 3-leg signalized	Fatal and All Injury Crashes	2010	0.5987

Urban 4-Leg with Minor Rd Stop Control				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
254	Int/Urb; 4-leg minor-rd STOP	Total Crashes	2005	1.6576
254	Int/Urb; 4-leg minor-rd STOP	Total Crashes	2006	1.5819
254	Int/Urb; 4-leg minor-rd STOP	Total Crashes	2007	1.5532
254	Int/Urb; 4-leg minor-rd STOP	Total Crashes	2008	1.5108
254	Int/Urb; 4-leg minor-rd STOP	Total Crashes	2009	1.4454
254	Int/Urb; 4-leg minor-rd STOP	Total Crashes	2010	1.4249
254	Int/Urb; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2005	0.8398
254	Int/Urb; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2006	0.8129
254	Int/Urb; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2007	0.7736
254	Int/Urb; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2008	0.7327
254	Int/Urb; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2009	0.7031
254	Int/Urb; 4-leg minor-rd STOP	Fatal and All Injury Crashes	2010	0.7076

Michigan Calibration Values
URBAN INTERSECTIONS

Urban 4-Leg Signalized				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
256	Int/Urb; 4-leg signalized	Total Crashes	2005	1.9378
256	Int/Urb; 4-leg signalized	Total Crashes	2006	1.7919
256	Int/Urb; 4-leg signalized	Total Crashes	2007	1.7711
256	Int/Urb; 4-leg signalized	Total Crashes	2008	1.7345
256	Int/Urb; 4-leg signalized	Total Crashes	2009	1.6672
256	Int/Urb; 4-leg signalized	Total Crashes	2010	1.6981
256	Int/Urb; 4-leg signalized	Fatal and All Injury Crashes	2005	0.9366
256	Int/Urb; 4-leg signalized	Fatal and All Injury Crashes	2006	0.8785
256	Int/Urb; 4-leg signalized	Fatal and All Injury Crashes	2007	0.8171
256	Int/Urb; 4-leg signalized	Fatal and All Injury Crashes	2008	0.7712
256	Int/Urb; 4-leg signalized	Fatal and All Injury Crashes	2009	0.8019
256	Int/Urb; 4-leg signalized	Fatal and All Injury Crashes	2010	0.7874

Michigan Calibration Values
RURAL SEGMENTS

Rural 2-Lane				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
101	Seg/Rur; 2-lane	Total Crashes	2005	1.3944
101	Seg/Rur; 2-lane	Total Crashes	2006	1.3584
101	Seg/Rur; 2-lane	Total Crashes	2007	1.4424
101	Seg/Rur; 2-lane	Total Crashes	2008	1.4928
101	Seg/Rur; 2-lane	Total Crashes	2009	1.4195
101	Seg/Rur; 2-lane	Total Crashes	2010	1.2780
101	Seg/Rur; 2-lane	Fatal and All Injury Crashes	2005	0.5691
101	Seg/Rur; 2-lane	Fatal and All Injury Crashes	2006	0.5278
101	Seg/Rur; 2-lane	Fatal and All Injury Crashes	2007	0.5460
101	Seg/Rur; 2-lane	Fatal and All Injury Crashes	2008	0.5402
101	Seg/Rur; 2-lane	Fatal and All Injury Crashes	2009	0.4793
101	Seg/Rur; 2-lane	Fatal and All Injury Crashes	2010	0.4241

Rural Multilane UNDIVIDED				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
102	Seg/Rur; Multilane undivided	Total Crashes	2005	1.1882
102	Seg/Rur; Multilane undivided	Total Crashes	2006	1.2194
102	Seg/Rur; Multilane undivided	Total Crashes	2007	1.3124
102	Seg/Rur; Multilane undivided	Total Crashes	2008	1.2372
102	Seg/Rur; Multilane undivided	Total Crashes	2009	1.1873
102	Seg/Rur; Multilane undivided	Total Crashes	2010	1.0503
102	Seg/Rur; Multilane undivided	Fatal and All Injury Crashes	2005	0.4858
102	Seg/Rur; Multilane undivided	Fatal and All Injury Crashes	2006	0.4812
102	Seg/Rur; Multilane undivided	Fatal and All Injury Crashes	2007	0.5714
102	Seg/Rur; Multilane undivided	Fatal and All Injury Crashes	2008	0.5305
102	Seg/Rur; Multilane undivided	Fatal and All Injury Crashes	2009	0.4327
102	Seg/Rur; Multilane undivided	Fatal and All Injury Crashes	2010	0.4207

Rural Multilane DIVIDED				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
103	Seg/Rur; Multilane divided	Total Crashes	2005	1.3893
103	Seg/Rur; Multilane divided	Total Crashes	2006	1.2937
103	Seg/Rur; Multilane divided	Total Crashes	2007	1.6352
103	Seg/Rur; Multilane divided	Total Crashes	2008	1.7748
103	Seg/Rur; Multilane divided	Total Crashes	2009	1.6560
103	Seg/Rur; Multilane divided	Total Crashes	2010	1.5128
103	Seg/Rur; Multilane divided	Fatal and All Injury Crashes	2005	1.1366
103	Seg/Rur; Multilane divided	Fatal and All Injury Crashes	2006	0.8662
103	Seg/Rur; Multilane divided	Fatal and All Injury Crashes	2007	1.4055
103	Seg/Rur; Multilane divided	Fatal and All Injury Crashes	2008	1.4824
103	Seg/Rur; Multilane divided	Fatal and All Injury Crashes	2009	0.7673
103	Seg/Rur; Multilane divided	Fatal and All Injury Crashes	2010	1.0358

Michigan Calibration Values
RURAL SEGMENTS

Rural Freeway 4-Lane				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
104	Seg/Rur; Fwy (4 ln)	Total Crashes	2005	1.9735
104	Seg/Rur; Fwy (4 ln)	Total Crashes	2006	1.8108
104	Seg/Rur; Fwy (4 ln)	Total Crashes	2007	2.0466
104	Seg/Rur; Fwy (4 ln)	Total Crashes	2008	2.4249
104	Seg/Rur; Fwy (4 ln)	Total Crashes	2009	2.0736
104	Seg/Rur; Fwy (4 ln)	Total Crashes	2010	1.9001
104	Seg/Rur; Fwy (4 ln)	Fatal and All Injury Crashes	2005	1.1473
104	Seg/Rur; Fwy (4 ln)	Fatal and All Injury Crashes	2006	1.0028
104	Seg/Rur; Fwy (4 ln)	Fatal and All Injury Crashes	2007	1.1280
104	Seg/Rur; Fwy (4 ln)	Fatal and All Injury Crashes	2008	1.2337
104	Seg/Rur; Fwy (4 ln)	Fatal and All Injury Crashes	2009	1.1201
104	Seg/Rur; Fwy (4 ln)	Fatal and All Injury Crashes	2010	0.9696

Rural Freeway 6-Lane				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
105	Seg/Rur; Fwy (6+ ln)	Total Crashes	2005	2.1388
105	Seg/Rur; Fwy (6+ ln)	Total Crashes	2006	1.4696
105	Seg/Rur; Fwy (6+ ln)	Total Crashes	2007	1.8481
105	Seg/Rur; Fwy (6+ ln)	Total Crashes	2008	2.3876
105	Seg/Rur; Fwy (6+ ln)	Total Crashes	2009	1.8902
105	Seg/Rur; Fwy (6+ ln)	Total Crashes	2010	1.6653
105	Seg/Rur; Fwy (6+ ln)	Fatal and All Injury Crashes	2005	1.1753
105	Seg/Rur; Fwy (6+ ln)	Fatal and All Injury Crashes	2006	0.7217
105	Seg/Rur; Fwy (6+ ln)	Fatal and All Injury Crashes	2007	1.0651
105	Seg/Rur; Fwy (6+ ln)	Fatal and All Injury Crashes	2008	1.3341
105	Seg/Rur; Fwy (6+ ln)	Fatal and All Injury Crashes	2009	0.8406
105	Seg/Rur; Fwy (6+ ln)	Fatal and All Injury Crashes	2010	0.7732

Rural Freeway Interchange Area 4-Lane				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
106	Seg/Rur; Fwy in intchng area (4 ln)	Total Crashes	2005	1.4098
106	Seg/Rur; Fwy in intchng area (4 ln)	Total Crashes	2006	1.2569
106	Seg/Rur; Fwy in intchng area (4 ln)	Total Crashes	2007	1.3017
106	Seg/Rur; Fwy in intchng area (4 ln)	Total Crashes	2008	1.5848
106	Seg/Rur; Fwy in intchng area (4 ln)	Total Crashes	2009	1.3605
106	Seg/Rur; Fwy in intchng area (4 ln)	Total Crashes	2010	1.2653
106	Seg/Rur; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2005	0.7545
106	Seg/Rur; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2006	0.6875
106	Seg/Rur; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2007	0.7353
106	Seg/Rur; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2008	0.8471
106	Seg/Rur; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2009	0.6236
106	Seg/Rur; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2010	0.5549

Michigan Calibration Values
RURAL SEGMENTS

Rural Freeway Interchange Area 6-Lane				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
107	Seg/Rur; Fwy in intchng area (6+ ln)	Total Crashes	2005	3.0944
107	Seg/Rur; Fwy in intchng area (6+ ln)	Total Crashes	2006	2.3388
107	Seg/Rur; Fwy in intchng area (6+ ln)	Total Crashes	2007	2.7904
107	Seg/Rur; Fwy in intchng area (6+ ln)	Total Crashes	2008	3.3455
107	Seg/Rur; Fwy in intchng area (6+ ln)	Total Crashes	2009	2.5358
107	Seg/Rur; Fwy in intchng area (6+ ln)	Total Crashes	2010	2.0589
107	Seg/Rur; Fwy in intchng area (6+ ln)	Fatal and All Injury Crashes	2005	1.5964
107	Seg/Rur; Fwy in intchng area (6+ ln)	Fatal and All Injury Crashes	2006	1.0400
107	Seg/Rur; Fwy in intchng area (6+ ln)	Fatal and All Injury Crashes	2007	1.3424
107	Seg/Rur; Fwy in intchng area (6+ ln)	Fatal and All Injury Crashes	2008	1.5608
107	Seg/Rur; Fwy in intchng area (6+ ln)	Fatal and All Injury Crashes	2009	1.2339
107	Seg/Rur; Fwy in intchng area (6+ ln)	Fatal and All Injury Crashes	2010	0.8710

Michigan Calibration Values
URBAN SEGMENTS

Urban 2-Lane				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
151	Seg/Urb; 2-lane arterial	Total Crashes	2005	2.7975
151	Seg/Urb; 2-lane arterial	Total Crashes	2006	2.6768
151	Seg/Urb; 2-lane arterial	Total Crashes	2007	2.7227
151	Seg/Urb; 2-lane arterial	Total Crashes	2008	2.9491
151	Seg/Urb; 2-lane arterial	Total Crashes	2009	2.7726
151	Seg/Urb; 2-lane arterial	Total Crashes	2010	2.5665
151	Seg/Urb; 2-lane arterial	Fatal and All Injury Crashes	2005	1.7753
151	Seg/Urb; 2-lane arterial	Fatal and All Injury Crashes	2006	1.5693
151	Seg/Urb; 2-lane arterial	Fatal and All Injury Crashes	2007	1.6473
151	Seg/Urb; 2-lane arterial	Fatal and All Injury Crashes	2008	1.5772
151	Seg/Urb; 2-lane arterial	Fatal and All Injury Crashes	2009	1.4668
151	Seg/Urb; 2-lane arterial	Fatal and All Injury Crashes	2010	1.3431

Urban Multilane UNDIVIDED				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
152	Seg/Urb; Multilane undivided	Total Crashes	2005	0.8875
152	Seg/Urb; Multilane undivided	Total Crashes	2006	0.8115
152	Seg/Urb; Multilane undivided	Total Crashes	2007	0.7979
152	Seg/Urb; Multilane undivided	Total Crashes	2008	0.7807
152	Seg/Urb; Multilane undivided	Total Crashes	2009	0.7497
152	Seg/Urb; Multilane undivided	Total Crashes	2010	0.7326
152	Seg/Urb; Multilane undivided	Fatal and All Injury Crashes	2005	0.4484
152	Seg/Urb; Multilane undivided	Fatal and All Injury Crashes	2006	0.4032
152	Seg/Urb; Multilane undivided	Fatal and All Injury Crashes	2007	0.3757
152	Seg/Urb; Multilane undivided	Fatal and All Injury Crashes	2008	0.3660
152	Seg/Urb; Multilane undivided	Fatal and All Injury Crashes	2009	0.3688
152	Seg/Urb; Multilane undivided	Fatal and All Injury Crashes	2010	0.3700

Urban Multilane DIVIDED				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
153	Seg/Urb; Multilane divided	Total Crashes	2005	1.4317
153	Seg/Urb; Multilane divided	Total Crashes	2006	1.3509
153	Seg/Urb; Multilane divided	Total Crashes	2007	1.3067
153	Seg/Urb; Multilane divided	Total Crashes	2008	1.3614
153	Seg/Urb; Multilane divided	Total Crashes	2009	1.3027
153	Seg/Urb; Multilane divided	Total Crashes	2010	1.3017
153	Seg/Urb; Multilane divided	Fatal and All Injury Crashes	2005	0.8083
153	Seg/Urb; Multilane divided	Fatal and All Injury Crashes	2006	0.7522
153	Seg/Urb; Multilane divided	Fatal and All Injury Crashes	2007	0.7709
153	Seg/Urb; Multilane divided	Fatal and All Injury Crashes	2008	0.7428
153	Seg/Urb; Multilane divided	Fatal and All Injury Crashes	2009	0.7724
153	Seg/Urb; Multilane divided	Fatal and All Injury Crashes	2010	0.6938

Michigan Calibration Values
URBAN SEGMENTS

Urban One-Way				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
154	Seg/Urb; One-way arterial	Total Crashes	2005	0.4868
154	Seg/Urb; One-way arterial	Total Crashes	2006	0.5355
154	Seg/Urb; One-way arterial	Total Crashes	2007	0.5297
154	Seg/Urb; One-way arterial	Total Crashes	2008	0.4764
154	Seg/Urb; One-way arterial	Total Crashes	2009	0.4462
154	Seg/Urb; One-way arterial	Total Crashes	2010	0.5026
154	Seg/Urb; One-way arterial	Fatal and All Injury Crashes	2005	0.2327
154	Seg/Urb; One-way arterial	Fatal and All Injury Crashes	2006	0.3224
154	Seg/Urb; One-way arterial	Fatal and All Injury Crashes	2007	0.2083
154	Seg/Urb; One-way arterial	Fatal and All Injury Crashes	2008	0.2714
154	Seg/Urb; One-way arterial	Fatal and All Injury Crashes	2009	0.2423
154	Seg/Urb; One-way arterial	Fatal and All Injury Crashes	2010	0.3066

Urban 4-Lane Freeway				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
155	Seg/Urb; Fwy (4 ln)	Total Crashes	2005	0.8241
155	Seg/Urb; Fwy (4 ln)	Total Crashes	2006	0.7651
155	Seg/Urb; Fwy (4 ln)	Total Crashes	2007	0.8787
155	Seg/Urb; Fwy (4 ln)	Total Crashes	2008	1.0048
155	Seg/Urb; Fwy (4 ln)	Total Crashes	2009	0.8699
155	Seg/Urb; Fwy (4 ln)	Total Crashes	2010	0.7354
155	Seg/Urb; Fwy (4 ln)	Fatal and All Injury Crashes	2005	0.3251
155	Seg/Urb; Fwy (4 ln)	Fatal and All Injury Crashes	2006	0.2951
155	Seg/Urb; Fwy (4 ln)	Fatal and All Injury Crashes	2007	0.3533
155	Seg/Urb; Fwy (4 ln)	Fatal and All Injury Crashes	2008	0.3617
155	Seg/Urb; Fwy (4 ln)	Fatal and All Injury Crashes	2009	0.3341
155	Seg/Urb; Fwy (4 ln)	Fatal and All Injury Crashes	2010	0.2674

Urban 6-Lane Freeway				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
156	Seg/Urb; Fwy (6 ln)	Total Crashes	2005	1.4181
156	Seg/Urb; Fwy (6 ln)	Total Crashes	2006	1.2445
156	Seg/Urb; Fwy (6 ln)	Total Crashes	2007	1.3557
156	Seg/Urb; Fwy (6 ln)	Total Crashes	2008	1.5396
156	Seg/Urb; Fwy (6 ln)	Total Crashes	2009	1.2864
156	Seg/Urb; Fwy (6 ln)	Total Crashes	2010	1.2317
156	Seg/Urb; Fwy (6 ln)	Fatal and All Injury Crashes	2005	0.7197
156	Seg/Urb; Fwy (6 ln)	Fatal and All Injury Crashes	2006	0.6392
156	Seg/Urb; Fwy (6 ln)	Fatal and All Injury Crashes	2007	0.7180
156	Seg/Urb; Fwy (6 ln)	Fatal and All Injury Crashes	2008	0.7997
156	Seg/Urb; Fwy (6 ln)	Fatal and All Injury Crashes	2009	0.6450
156	Seg/Urb; Fwy (6 ln)	Fatal and All Injury Crashes	2010	0.6635

Michigan Calibration Values
URBAN SEGMENTS

Urban 8+ Lane Freeway				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
157	Seg/Urb; Fwy (8+ ln)	Total Crashes	2005	1.5874
157	Seg/Urb; Fwy (8+ ln)	Total Crashes	2006	1.1901
157	Seg/Urb; Fwy (8+ ln)	Total Crashes	2007	1.4362
157	Seg/Urb; Fwy (8+ ln)	Total Crashes	2008	1.5844
157	Seg/Urb; Fwy (8+ ln)	Total Crashes	2009	1.4591
157	Seg/Urb; Fwy (8+ ln)	Total Crashes	2010	1.3720
157	Seg/Urb; Fwy (8+ ln)	Fatal and All Injury Crashes	2005	0.8357
157	Seg/Urb; Fwy (8+ ln)	Fatal and All Injury Crashes	2006	0.6882
157	Seg/Urb; Fwy (8+ ln)	Fatal and All Injury Crashes	2007	0.8010
157	Seg/Urb; Fwy (8+ ln)	Fatal and All Injury Crashes	2008	0.9152
157	Seg/Urb; Fwy (8+ ln)	Fatal and All Injury Crashes	2009	0.8129
157	Seg/Urb; Fwy (8+ ln)	Fatal and All Injury Crashes	2010	0.7650

Urabn Freeway Interchange Area 4-Lane				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
158	Seg/Urb; Fwy in intchng area (4 ln)	Total Crashes	2005	1.2469
158	Seg/Urb; Fwy in intchng area (4 ln)	Total Crashes	2006	1.1133
158	Seg/Urb; Fwy in intchng area (4 ln)	Total Crashes	2007	1.2092
158	Seg/Urb; Fwy in intchng area (4 ln)	Total Crashes	2008	1.3620
158	Seg/Urb; Fwy in intchng area (4 ln)	Total Crashes	2009	1.1401
158	Seg/Urb; Fwy in intchng area (4 ln)	Total Crashes	2010	0.9996
158	Seg/Urb; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2005	0.5042
158	Seg/Urb; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2006	0.4816
158	Seg/Urb; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2007	0.4780
158	Seg/Urb; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2008	0.5216
158	Seg/Urb; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2009	0.4399
158	Seg/Urb; Fwy in intchng area (4 ln)	Fatal and All Injury Crashes	2010	0.3755

Urabn Freeway Interchange Area 6-Lane				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
159	Seg/Urb; Fwy in intchng area (6 ln)	Total Crashes	2005	1.4000
159	Seg/Urb; Fwy in intchng area (6 ln)	Total Crashes	2006	1.2377
159	Seg/Urb; Fwy in intchng area (6 ln)	Total Crashes	2007	1.3695
159	Seg/Urb; Fwy in intchng area (6 ln)	Total Crashes	2008	1.5123
159	Seg/Urb; Fwy in intchng area (6 ln)	Total Crashes	2009	1.2419
159	Seg/Urb; Fwy in intchng area (6 ln)	Total Crashes	2010	1.1435
159	Seg/Urb; Fwy in intchng area (6 ln)	Fatal and All Injury Crashes	2005	0.6457
159	Seg/Urb; Fwy in intchng area (6 ln)	Fatal and All Injury Crashes	2006	0.5997
159	Seg/Urb; Fwy in intchng area (6 ln)	Fatal and All Injury Crashes	2007	0.6433
159	Seg/Urb; Fwy in intchng area (6 ln)	Fatal and All Injury Crashes	2008	0.7095
159	Seg/Urb; Fwy in intchng area (6 ln)	Fatal and All Injury Crashes	2009	0.5960
159	Seg/Urb; Fwy in intchng area (6 ln)	Fatal and All Injury Crashes	2010	0.5694

Michigan Calibration Values
URBAN SEGMENTS

Urabn Freeway Interchange Area 8+ Lane				
SST	**SITE_SUBTYPE**	**CRASH_SEVERITY_LEVEL**	**Year**	**C**
160	Seg/Urb; Fwy in intchng area (8+ ln)	Total Crashes	2005	1.1241
160	Seg/Urb; Fwy in intchng area (8+ ln)	Total Crashes	2006	0.9888
160	Seg/Urb; Fwy in intchng area (8+ ln)	Total Crashes	2007	1.1963
160	Seg/Urb; Fwy in intchng area (8+ ln)	Total Crashes	2008	1.3253
160	Seg/Urb; Fwy in intchng area (8+ ln)	Total Crashes	2009	1.2922
160	Seg/Urb; Fwy in intchng area (8+ ln)	Total Crashes	2010	1.1416
160	Seg/Urb; Fwy in intchng area (8+ ln)	Fatal and All Injury Crashes	2005	0.5343
160	Seg/Urb; Fwy in intchng area (8+ ln)	Fatal and All Injury Crashes	2006	0.5295
160	Seg/Urb; Fwy in intchng area (8+ ln)	Fatal and All Injury Crashes	2007	0.6304
160	Seg/Urb; Fwy in intchng area (8+ ln)	Fatal and All Injury Crashes	2008	0.6820
160	Seg/Urb; Fwy in intchng area (8+ ln)	Fatal and All Injury Crashes	2009	0.6975
160	Seg/Urb; Fwy in intchng area (8+ ln)	Fatal and All Injury Crashes	2010	0.6217