

Generic Variable Description	Definition	MMIRE Priority ¹²	Ease of Data Collection ¹³	HPMS ¹⁴	IHSDM ¹⁵	SafetyAnalyst ¹⁶	TSIMS ¹⁷	MMUCC
I. ROADWAY SEGMENT DESCRIPTORS								
I.a. Segment Location/Linkage Variables								
1. County ¹⁸	County location of segment	1	E			M	B	
2. City/Local Jurisdiction	City/local jurisdiction location of segment if applicable	1	E	U		O	M	
3. Route Number	Route number	1	E	U	Y	M	M	
4. Street Name	Street name	1	E					
5. Section End-Points Descriptors	Location information defining the location on a route of each endpoint of the section	1	E	U	Y	M	E	
6. Section Identifier	Unique segment identifier, derived from other variables (e.g., combination of route number, county location and beginning and ending mileposts)	1	E	U		M	E	
7. Section Length	Section length	1	E	U	Y	M		
8. Highway District	Highway district	1	E			O		
9. Governmental Ownership	Governmental owner of segment (including FIPS code)	1	E	U				
10. Type of Governmental Ownership	Type of governmental ownership	1						
11. Route Signing	Type of route signing on the segment	1	E	U		M	M	

¹² 1 = 1st Priority, 2 = 2nd Priority

¹³ E = Easy, M = Moderate, D = Difficult. Note that an asterisk (*) indicates an element for which data collection technology is being developed.

¹⁴ U = Universe File, S = Sample Section

¹⁵ Y = Yes, O = Optional

¹⁶ M=Mandatory, O=Optional, S=Supplemental

¹⁷ M=Minimum, B=Basic, E=Extended

¹⁸ Variable numbers are cross-referenced to variable coding in Appendix C.

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12. Route Signing Qualifier	Whether the route is "business" or other qualifier	1	E	U				
13. Coinciding Route Indicator	Whether the route segment is a "primary" coinciding route (i.e., the route that crashes are referenced to) or a "minor" coinciding route	1	E					
14. Coinciding-Route Primary Route Number	If a minor coinciding route segment, the route number for the major (primary) route	1	E					
15. Direction of Inventory	Direction of inventory	1	E					
I.b. Segment Roadway Classification								
16. Functional Class	Functional class	1	E	U		M	M	YES
17. Rural/Urban Designation	Rural/urban designation	1	E	U	Y	M	B	
18. Federal Aid/ Route Type	Federal aid/route type	1	E	U			E	
19. Access Control	Access control	1	E	S		O	M	YES
20. Operational Class	Operational class of segment, if different from official functional class	2	D					
I.c. Segment Cross Section								
I.c.1. Surface Descriptors								
21. Surface Type	Surface type (paved, unpaved or types of pavement)	1	E	S	Y			
22. Surface Friction	Surface friction indicator	1	D					
23. Surface Friction Date	Date surface friction measured	1						
24. Total Surface Width	Total paved surface width (could be derived if all other lane widths are captured)	2	M				B	
25. Pavement Roughness	Pavement roughness (roughness number)	2	D	U			E	

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26. Pavement Roughness Date	Date pavement roughness number assigned	2						
27. Pavement Condition	Pavement condition (descriptive scale)	2	D	S			M	
28. Pavement Condition Date	Date pavement condition assigned	2						
I.c.2. Lane Descriptors								
29. No. of Thru Lanes	Number of thru lanes, including HOV and reversible lanes	1	E	U	Y	M	M	YES
30. Average Thru Lane Width	Average lane width used by traffic (i.e., not including wide curb lanes, parking area, bicycle lanes, etc.)	1	M	S	Y	O	M	YES
31. Exclusive Left Turn Lane Presence	Exclusive left turn lane type	1	E					
32. Exclusive Left Turn Lane Length	Exclusive left turn lane length	1	E					
33. Exclusive Right Turn Lane Presence	Exclusive right turn lane type	1	E					
34. Exclusive Right Turn Lane Length	Exclusive right turn lane length	1	E					
35. Auxiliary Lane Presence/Type	Presence or type of auxiliary lane	1	E					
36. Auxiliary Lane Length	Length of auxiliary lane	1	E					
37. HOV Lanes	Presence of HOV lanes in segment	1	M	U		M/O		
38. HOV Lane Types	HOV lane types	2	E					
39. Reversible Lanes	Number of reversible lanes present on segment	1						
40. Presence/Type of Bicycle Facility	Presence or type of bicycle facility on segment	1	D			O	B	YES
41. Width of Marked Bicycle Lane or Bike Path	Width of marked bicycle lane or bike path	1	D					

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42. Width of Wide Curb Lane	Width of wide curb lane used by both vehicles and bicycles	1	M					
43. Number of Peak Hour Lanes	Number of through lanes used in peak period in the peak direction	2	M	U				
I.c.3. Shoulder Descriptors								
44. Right Shoulder Type	Shoulder type on right side of road in direction of inventory	1	E	S	Y	M	M	
45. Right Shoulder Total Width	Total width of right shoulder, including paved and unpaved parts	1	M		Y	O	B	YES
46. Right Paved Shoulder Width	Width of paved portion of right shoulder	1	E	S	Y	O	B	YES
47. Left Shoulder Type	Shoulder type on left side of roadway in direction of inventory. For undivided roads and divided roads with one direction of inventory, this will be the outside shoulder on the opposing side. NOTE that information on paved width of the inner (left) shoulder on divided roads is captured in the Median descriptors.	1	E	S	Y	M	M	
48. Left Shoulder Total Width	Width of left (outside) shoulder, including paved and unpaved parts	1	M		Y	O	B	YES
49. Left Paved Shoulder Width	Width of paved portion of left shoulder	1	E	S	Y	O	B	YES
50. Shoulder Rumble Strip Presence	Presence of shoulder rumble strip	1	M			S		
51. Rumble Strip Type	Rumble strip type if present	2	M					
52. Sidewalk Presence	Presence of sidewalk in direction of inventory	1	D*				B	
53. Curb Presence	Presence of curb	1	M				B	
54. Curb Type	Curb type	2	D					
I.c.4. Median Descriptors								
55. Median Type	Median type (including two-way left turn lane)	1	E	S		M	M	

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56. Median Width	Median width, including inside shoulders	1	E	S		O	M	YES
57. Median Barrier Type	Median barrier type	1	E			M		
58. Median (Inner) Paved Shoulder Width	Median (inner) paved shoulder width	1	E					
59. Median Shoulder Rumble Strip Presence	Presence of median shoulder rumble strip	1	M					
60. Median Rumble Strip Type	Rumble strip type if present	2	M					
61. Median Left Turn Lane Type	Type of left turn lane in median.	1	E					
62. Median Left Turn Lane Width	Width of median left turn lane	1	E					
I.d. Segment Roadside Descriptors								
63. Roadside Clearzone Width	Roadside clearzone width	1	D*					
64. Sideslope	Sideslope	1	D*					
65. Roadside Rating	A rating of the safety of the roadside from Appendix D, Publication No. FHWA-RD-99-207, Prediction of the Expected Safety Performance of Rural Two-Lane Highways. Only collect if clearzone width and sideslope are not collected.	1 (only if clearzone and sideslope variables are not collected)	D		Y			
66. Driveway Information	Driveway count by type	1	D*		Y			
67. Roadside Hardware Descriptors	Roadside hardware descriptors (including type, location, size, distance from lane edge). Examples include barrier (type and terminal type), signs (size, breakaway?), culverts, etc.	2 (Linkage to Asset Management ?)	D*					
I.e. Other Segment Descriptors								

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68. Terrain Type (e.g., Mountainous, Level)	Basic terrain type around segment. This is a (poor) surrogate for detailed data on curvature and grade, and would be collected only in the absence of those variables. See "Alignment" variables below.	1	M	S		O	B	
69. Bridge Descriptors for Bridges in Segment	Bridge descriptors for bridges in segment	Linkage to Bridge File	E					
70. RR Grade Crossing Descriptors for Crossings in Segment	RR grade crossing descriptors for crossings in segment	Linkage to RR File	E					
71. Number of Signalized Intersections in Section	Number of signalized intersections in section	1 (only if no intersection file)	M*	S				
72. Number of Stop-Controlled Intersections in Section	Number of stop-controlled intersections in section	1 (only if no intersection file)	M*	S				
73. Number of Uncontrolled/Other Intersections	Number of uncontrolled/other intersections	1 (only if no intersection file)	M*	S				
1.f. Segment Traffic Flow Data								
74. Average Daily Traffic Volume	Average Annual Daily Traffic	1	E	U	Y	M	M	YES
75. AADT Year	Year of AADT	2 (if annual file)	E		Y		M	YES
76. AADT Annual Escalation Percentage	AADT annual escalation percentage	2 (if annual file)	M		O	O	B	
77. Percentage Truck or Truck AADT	Percentage truck or truck AADT (includes tractor-semis and trucks with 6+ wheels)	1	M	S		O	E	

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78. Total Daily Two-Way Pedestrian Count/Exposure	Total daily pedestrian flow in both directions (unless directional segment). This is a (poor) surrogate for crossing pedestrian counts.	2 (Collect only if crossing counts are unavailable for intersection/junction approaches. see below)	D					
79. Bicycle Count/Exposure	Total daily bicycle flow in both directions (unless directional segment)	1	D			S		
80. Motorcycle Count or Percentage	Motorcycle daily count or percentage of AADT	1	D					
81. Hourly Traffic Volumes (or Peak and Off-Peak AADT)	Hourly traffic volumes (or peak and off-peak AADT)	2	D			O		
82. K-Factor	The K-factor is the 30th highest hourly volume (i.e., the design hour volume) for a year, as a percentage of the annual average daily traffic	2	D	S			B	
83. Future AADT	Forecasted AADT	2	D	U	O		B	
84. Future AADT Year	Year of forecasted AADT	2	D	U	O		B	
85. Directional Factor	Proportion of peak hour traffic in the predominate direction of flow	2	D	S		O		
86. Percent Combination Trucks - Daily Average	Percent combination trucks—daily average	2	M	S			E	
87. Percent Single Unit Trucks - Daily Average	Percent single unit trucks—daily average	2	M	S			E	
I.g. Segment Traffic Operations/Control Data								
88. One/Two-Way Operations	Whether the segment operates as a one- or two-way roadway	1	E	U		M		
89. Speed Limit	Speed limit	1	E	U		O	M	

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90. School Zone Indicator	Whether segment contains a school zone	1	M					
91. On-Street Parking Presence	Time-based parking restrictions	1	D			S	M	
92. On-Street Parking Type	On-street parking type	1	D	S				
93. Roadway Lighting	Type of roadway lighting	1	M			S	B	YES
94. Truck Route Designation	Truck route designation	1	E	U				
95. Toll Facility?	Toll facility indicator	1	E	U				
96. Edgeline Presence/Type	Edgeline presence/type	1	D*					
97. Centerline Presence/Type	Centerline presence/type	1	D*					
98. No Passing Zone Code / Passing Permissibility	No passing zone code/passing permissibility	2	D*	S				
99. 85th % Speed	Traffic speed exceeded by 15 percent of the vehicles in the flow	2	D			S		
II. Roadway Alignment Descriptors								
II.a. Horizontal Curve Data (NOTE: Each data record will define an angle point or a single curve, even if the curve is a component of a compound or reverse curve. Spirals or other transitions are part of the curve.)								
100. Curve Identifiers and Linkage Variables	All variables needed to define location of each curve record and all variables necessary to link with other safety files	1	D*		Y			
101. Curve Feature Type	Type of horizontal alignment feature being described in the data record	1	D*					
102. Horizontal Curve Degree or Radius	Degree or radius of curve	1	D*	S	Y	S		YES
103. Horizontal Curve Length (Including Spiral)	Length of curve	1	D*	S	Y	S	E	YES
104. Curve Superelevation or Superelevation Adequacy	Either measured superelevation rate or percent or adequacy of superelevation when compared to AASHTO design standards	2	D*		Y			YES

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105. Horizontal Transition/Spiral Curve Presence	Presence/type of transition from tangent to curve	1	D		Y			
106. Horizontal Curve Intersection/Deflection Angle	The angle between the two intersecting tangents in the direction of inventory (sometimes called the "deflection angle")	2	D					
107. Horizontal Curve Direction	Direction of curve in direction of inventory	1	M*		Y	S		
II.b. Vertical Grade Data (NOTE: Each data record will define an individual grade or the angle point or vertical curve linking two grades.)								
108. Grade Identifiers and Linkage Variables	All variables needed to define location of each vertical feature and all variables necessary to link with other safety files	1	E					
109. Vertical Alignment Feature Type	Type of vertical alignment feature being described in the data record	1	E					
110. Percent of Gradient	Percent of gradient	1	D*		Y	S	E	YES
111. Grade Length	Grade length	1	D*	S	Y			
112. Vertical Curve Length	Vertical curve length	1	D					
III. Roadway Junction Descriptors								
III.a. At-Grade Intersection/Junctions (NOTE: These junctions can include both normal "intersections" and also junctions of roadways with independent pedestrian crossings, bike trails, railroad grade crossings, etc. Thus, the category includes what has been considered "mid-block" crossings.)								
III.a.1. General Descriptors								
113. Unique Intersection Identifier	A numeric unique identifier for each intersection/junction	1	E					

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114. Type of Intersection/Junction	Type of junction being described in the data record	1	E					
115. Location Identifier for Road 1 Crossing Point	Location on the first intersecting route (e.g., route-milepost)	1	M		Y		B	
116. Location Identifier for Road 2 Crossing Point	Location on the second intersecting route (e.g., route-milepost)	1	D (unless spatial data system)					
117. Location Identifier for Road 3, 4, etc., Crossing Point (e.g., Route-Milepost), etc.	Location on the third and subsequent intersecting route (e.g., route-milepost)	1	D (unless spatial data system)		Y			
118. Intersection/Junction No. of Legs	Intersection/junction no. of legs	1	M		Y	M		
119. Intersection/Junction Geometry	Intersection/junction geometry	1	E		Y	M		
120. School Zone Indicator	Whether the intersection/junction is in a school zone	1	E					
121. Railroad Crossing Number if a RR Grade Crossing	Railroad crossing number if a RR grade crossing (for linkage to National Highway-Rail Crossing Inventory)	1	M					
122. Intersection Skew Angle	Angle from perpendicular of intersection of the roads	1	D		Y	S		
123. Intersection/Junction Offset	Whether crossroad approach centerlines are directly opposed or offset by some distance	1	D			O	E	
124. Intersection/Junction Offset Distance	Distance that approach centerlines are offset	1	D			O	M	

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125. Intersection/Junction Traffic Control	Traffic control present at intersection/junction	1	M		Y	M		YES
126. Signalization Type (e.g., Actuated, Fixed, System)	Type of signalization at intersection/junction	2	M			S		
127. Number of Intersection/Junction Quadrants With Limited Sight Distance	Number of intersection/junction quadrants with limited sight distance	1	D		Y		B	
128. Intersection/Junction Lighting	Type of lighting at intersection/junction	1	M					
129. Roundabout - No. of Circulatory Lanes	No. of circulatory lanes in roundabout	1	E					
130. Roundabout - Circulatory Width	Width of the roadway between the central island and outer edge of the circulatory lane	1	E					
131. Roundabout—Inscribed Diameter	Distance between the outer edges of the circulatory roadway	1	M					
132. Roundabout—Bicycle Facility	Type of bicycle facility at roundabout	1	E					
III.a.2. At Grade Intersection/Junction Descriptors—Each Approach								
133. Approach AADT	AADT on approach described	1	E (if system road), M (if nonsystem crossroad)					YES
134. Approach Use Type	Usage of approach	1	E					
135. Approach Is Two-Way, One-Way	One-way or two-way flow on approach	1	E			M		
136. No. of Thru Lanes	Total number of thru lanes on approach, both directions	1	E					

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137. No. of Exclusive Left Turn Lanes	Number of exclusive left turn lanes on approach	1	M		Y	M	M	
138. No. of Exclusive Right Turn Lanes	Number of exclusive right turn lanes on approach	1	M		Y	M		
139. Length of Exclusive Left Turn Lanes	Length of exclusive left turn lanes	2	M					
140. Length of Exclusive Right Turn Lanes	Length of exclusive right turn lanes	2	M					
141. Median Type at Intersection	Median type at intersection on approach	1	M			M		
142. Approach Traffic Control	Traffic control present on approach	1	M					
143. Left Turn Protection	Presence and time of left turn protection	1	D			O		
144. Signal Progression	Signal progression on approach	1	D			S	E	
145. Crosswalk Presence/Type	Type of crosswalk	1	D					
146. Pedestrian Signalization Type	Type of pedestrian signalization on approach	1	M				B	
147. Pedestrian Signal Special Features	Special features for either pushbutton or recall pedestrian signals	2	M					
148. Crossing Pedestrian Count/Exposure	Count or estimate of average daily pedestrian flow crossing this approach (Note: only applicable to approaches with vehicular traffic.)	1	D			S		
149. Left/Right Turn Prohibitions	Left or right turn prohibitions on this approach	1	D			O		

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150. Left Turn Counts/Percent	Count or estimate of average daily left turns, or percent of total approach traffic turning left (Note: This could also be captured for peak-periods only or by hour of day.)	2	D			O		
151. Right Turn Counts/Percent	Count or estimate of average daily right turns, or percent of total approach traffic turning right (Note: This could also be captured for peak-periods only or by hour of day.)	2	D			O		
152. Transverse Rumble Strip Presence	Presence of transverse rumble strip on approach	2	D					
153. Roundabout—Entry Width	Full width of entry where it meets the inscribed circle. Note that total width of the approach can be derived from totaling entry width, exit width and splitter island width.	1	E					
154. Roundabout—Number of Entry Lanes	Number of entry lanes into roundabout on this approach	1	E					
155. Roundabout—Entry Radius	Minimum radius of curvature of the curb on the right side of the entry	2	D					
156. Roundabout—Exit Width	Full width of exit where it meets the inscribed circle. Note that total width of the approach can be derived from totaling entry width, exit width and splitter island width.	1	E					
157. Roundabout—Number of Exit Lanes	Number of exit lanes from roundabout on this approach leg	1	E					
158. Roundabout—Exit Radius	Minimum radius of curvature of the curb on the right side of the exit	2	D					
159. Roundabout—Pedestrian Facility	Type of pedestrian crossing facility on this approach to roundabout	1	E					

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160. Roundabout—Crosswalk Location (Distance From Yield Line)	Location of marked pedestrian crosswalk relative to yield line	1	E					
161. Roundabout—Splitter Island Width	Width of the splitter island separating entry and exit legs (measured at the inscribed circle)	1	E					
III.b. Interchange and Ramp Descriptors								
III.b.1. General Interchange Descriptors								
162. Unique Interchange Identifier	A numeric unique identifier for each interchange	1	E					
163. Location Identifier for Road 1 Crossing Point	Location on the first intersecting route (e.g., route-milepost)	1	M					
164. Location Identifier for Road 2 Crossing Point	Location on the second intersecting route (e.g., route-milepost)	1	D (unless spatial data system)					
165. Location Identifier for Road 3, 4, etc., Crossing Point, etc.	Location on the third and subsequent intersecting route (e.g., route-milepost)	1	D (unless spatial data system)					
166. Interchange Type	Type of interchange	1	M			M		
167. Interchange Lighting	Type of interchange lighting	1	M					
III.b.2. Interchange Ramp Descriptors								
168. Unique Ramp Identifier	An identifier for each ramp that is part of a given interchange	1	E					
169. Ramp Length	Length of ramp	1	M			O	M	
170. Ramp No. of Lanes	Number of lanes on ramp	1	M			O	E	
171. Ramp AADT	AADT on ramp	1	M					
172. Ramp Posted Speed Limit	The posted (not advisory) speed limit on the ramp							

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173. Feature at Beginning Ramp Terminal	A ramp is described by a beginning and ending ramp terminal in the direction of inventory. This variable describes the type of feature intersecting with the ramp at the beginning terminal.	1	E					
174. Ramp Descriptor at Beginning Ramp Terminal	Description of the beginning terminal of the ramp	1	M			M		
175. Location Identifier For Roadway at Beginning Ramp Terminal	Location on the roadway at the beginning ramp terminal (e.g., route-milepost for that roadway) if the ramp connects with a roadway at that point.	1	E (if begin point is on a system roadway)					
176. Roadway Traffic Flow Direction at Beginning Ramp Terminal	Ramps can intersect a roadway on either of two sides. This defines the side of the road intersected by the ramp.	1	E					
177. Feature at Ending Ramp Terminal	A ramp is described by a beginning and ending ramp terminal in the direction of inventory. This variable describes the type of feature intersecting with the ramp at the ending terminal.	1	E					
178. Ramp Descriptor at Ending Ramp Terminal	Description of the ending terminal of the ramp	1	M			M		
179. Location Identifier for Roadway at Ending Ramp Terminal	Location on the roadway at the ending ramp terminal (e.g., route-milepost for that roadway) if the ramp connects with a roadway at that point	1	E (if end point is on a system roadway)					
180. Roadway Traffic Flow Direction at Ending Ramp Terminal	Ramps can intersect a roadway on either of two sides. This defines the side of the road intersected by the ramp.	1	E					