

Kentucky-Specific SPF Spreadsheets



Purpose

- Allow for easy application of the Kentucky-specific SPF
- Ensures uniform use of the SPFs across the state
- Assists in safety analysis and identifying high crash segments
- *Spreadsheets are currently in draft form and are not fully operational



SPF Development

- SPF Development for the SHIFT 2020 cycle
- 8 roadway types and 36 intersection types
- Calibrated to balance between accuracy and the amount of data needed



Base Conditions

- Base conditions are the common characteristics of the dataset used to calibrate an SPF
- Different for each roadway type
- Any segment differing from its SPF's base conditions needs an adjustment factor to account for the difference



Uniform Segments

- Segments must be uniform with respect to each SPFs base conditions

Roadway Type	Must be uniform with respect to:						
Rural Two Lane	No Intersections	AADT	Lane width	Shoulder width	Median width	Horizontal curve degree	Grade
Urban Two Lane	No Intersections	AADT					
Rural Interstate/Parkway	No Intersections	AADT					
Urban Interstate/Parkway	No Intersections	AADT					
Rural Multilane Divided	No Intersections	AADT	Shoulder Width				
Rural Multilane Undivided	No Intersections	AADT	Lane Width				
Urban Multilane Divided	No Intersections	AADT	Median Width				
Urban Multilane Undivided	No Intersections	AADT	Lane width				



Obtaining Crash Data

- Create uniform segments table
- Import .csv into CDAT
- Export crash data



Using the Spreadsheets

- Follow color-coded instructions on “Instruction” tab
- Each roadway type is a separate tab
- All data is summarized in the “Summary” tab



Instruction

Instructions:

1. Follow the color coded guide to identify the data necessary for a user to input.
2. All roadway segments must be uniform with respect to the necessary data elements for each roadway type (as seen listed below). The necessary data elements for each roadway type are based on the base conditions for each SPF. Uniform segments should not include intersections.
3. Find the tab corresponding to the roadway type for your data. If multiple roadway types are being assessed at once, data may be entered into multiple tabs. Enter your data in their respective green columns. Each row represents a single uniform roadway segment.
4. The SPF predictions, adjustment factors, EB expected crashes, and EEC will be calculated automatically for each segment entered.
5. View the "Summary" tab to see a summary of crash metrics for all the uniform segments you entered. In the event a project spans multiple roadway types, the summary tab will show a break down of the crash metrics by roadway type.

- Need Data Input
- Calculated for you
- SPF Parameters

Roadway Type	Must be uniform with respect to:						
Rural Two Lane	No Intersections	AADT	Lane width	Shoulder width	Median width	Horizontal curve degree	Grade
Urban Two Lane	No Intersections	AADT					
Rural Interstate/Parkway	No Intersections	AADT					
Urban Interstate/Parkway	No Intersections	AADT					
Rural Multilane Divided	No Intersections	AADT	Shoulder Width				
Rural Multilane Undivided	No Intersections	AADT	Lane Width				
Urban Multilane Divided	No Intersections	AADT	Median Width				
Urban Multilane Undivided	No Intersections	AADT	Lane width				

Summary Table

	Total Observed Crashes	Total SPF Predicted	Total EB	Total EEC
Rural Two Lane	0	0	#DIV/0!	#DIV/0!
Urban Two Lane	0	0	#DIV/0!	#DIV/0!
Rural Interstate/Parkway	0	0	#DIV/0!	#DIV/0!
Urban Interstate/Parkway	0	0	#DIV/0!	#DIV/0!
Rural Multilane Divided	0	0	#DIV/0!	#DIV/0!
Rural Multilane Undivided	0	0	#DIV/0!	#DIV/0!
Urban Multilane Divided	0	0	#DIV/0!	#DIV/0!
Urban Multilane Undivided	0	0	#DIV/0!	#DIV/0!
Ramps				
Intersections				
Total	0	0	#DIV/0!	#DIV/0!