

## Categorical Ranking for Roadway Flood Vulnerability Analysis

### Matrix Input Guide

Relative Importance	Description
1	Equally important
3	Slightly more important
5	More important
7	Significantly more important
9	Absolutely more important

2, 4, 6, 8 are used as intermediate determinations if you cannot determine between two categories.

### Instructions:

Overwrite the values in the white cells of the matrix, following the Matrix Input Guide to rank the importance of each category in the overall vulnerability score. Results from the matrix update the Weight of Final Score table and pie chart.

### Example:

If you were to input '9' in the **Demographics** column on the **Flood Exposure** row, you would be rating the **Flood Exposure** as "Absolutely more important" than the **Demographics** category and therefore the weight percentage of the **Flood Exposure** category will be significantly higher than the weight percentage of the **Demographics** category.

If input values are not trending with each other (i.e. are appearing too random), an error message will appear above the matrix.

### Score Matrix for Analysis Categories

Categories	Flood Exposure	Road Service	Bridge Sensitivity	Emergency Response	Gateways	Development Density	Demographics
Flood Exposure	1	7	5	3	8	9	8
Road Service	1/7	1	1/3	1/3	2	5	4
Bridge Sensitivity	1/5	3	1	1/5	5	7	7
Emergency Response	1/3	3	5	1	7	9	9
Gateways	1/8	1/8	1/5	1/7	1	2	3
Development Density	1/9	1/5	1/7	1/9	1/2	1	2
Demographics	1/8	1/4	1/7	1/9	1/3	1/2	1

### Weight of Final Score

Category	Weight (approx. %)
Flood Exposure	41%
Road Service	8%
Bridge Sensitivity	15%
Emergency Response	26%
Gateways	4%
Development Density	3%
Demographics	2%

