Screening Criteria Category: Engineering-Fundamentals
Screening Criteria Name: Flexibility
Code: e

Brief Description of Importance:

Bridge types under consideration provide different amount of flexibility to accommodate changes in basic design parameters. Anticipated additional information, process, and design development will likely require refinements and may require significant changes as bridge study is a relatively early phase in its’ design development. In addition, flexibility is important to anticipate and adjust to project financial and schedule assumptions should this need to occur.

If all other factors were considered equal, the bridge with the most flexibility would be the best under this criterion.

All individual flexibility criteria include an assessment of the cost impacts of a given consideration meaning that lower cost bridge types will typically perform better than higher cost types.

Metrics:

Will be provided, when available, under individual “Flexibility Considerations Criteria”.

Evaluation Methodology:

The total range for any individual flexibility criteria score is 5 to 1. This is because information available at this time is insufficient to accurately rank all of the individual bridge types under consideration. Information available is, however, adequate to compare families of bridge types against each other (ex. truss, arch, cable-stayed, etc.).

The total flexibility is calculated as the mathematic average of individual flexibility criteria scores.

Each total flexibility average is then multiplied by 3 to obtain the final Flexibility score. This allows this criterion proper “weight” when compared to the ranked scoring for other criteria and follows from the maximum possible average score (5) if adjusted to the maximum possible averaged score (15); (5*3= 15).

Scoring:

Highest Score = Best. Most design flexibility
Lowest Score = Worst. Least design flexibility