

## Bridge Priority Report Overview

In support of the Kentucky Transportation Cabinet (KYTC) Department of Rural and Municipal Aid **County-City Bridge Improvement Program (CCBIP)**, the Department of Highways has provided **Bridge Priority Reports (BPR)** for local agencies. These reports summarize information for all locally owned bridges within the agency jurisdiction based on the National Bridge Inspection Standards (NBIS) Reports. Ratings are based on several factors, including 1) Overall Bridge Condition, 2) Risk to the transportation network and 3) Mobility to assign a cumulative Priority Index (PI) score. The figure to the right lists the factors that are considered within the Priority Index and each of the underlying measures. Based on the Priority Index, bridges are assigned to three Project Tiers.

- **Tier 1:** Highest priority indicating significance due to bridge condition, transportation risk and/or mobility.
- **Tier 2:** Medium priority indicating moderate condition, risk and mobility issues, or a mix of high and low ratings for these factors.
- **Tier 3:** Low priority indicating low condition, risk or mobility concerns.

### Priority Index Factors

#### Condition

NBI Condition Rating  
Health Index  
Age

#### Risk

Scour Criticality  
Fracture-Critical  
Existence of Fatigue-Prone Details  
Vertical Clearance  
Frequency of Inspection  
Horizontal Clearance

#### Mobility

Posting-weight  
ADT  
ADTT  
Route classification- NHS  
Detour length  
Emergency Route Designation  
School bus route

## What's information is contained in the BPR?

The BPR summarizes the NBIS report for each bridge structure on the local agency roadway system and identifies the Condition, Risk, Mobility Scores and overall Priority Index and recommended project tier.

The figure below shows the fields that are contained in second part of the BPR and discussed below. The full NBIS Inspection report can be obtained by contacting your local KYTC Highway District Bridge Engineer. (Contact information for the highway districts can be found [here](#) and [here](#)).

Bridge ID

Project Tier Assignment

Bridge ID	Facility	Length	Built	Deck	Super	Sub	Deck Area	Posting Status	Bridge Cond	Scour Cond	Design Type	Tier	PI	Mobility	Risk	Cond	CO Recommendation
001C00050N	OLD GRADYVILLE RD	46.0	1997	4	6	6	906.0	P Posted for load	Poor	8	02 Stringer/Girder	Tier 1	0.503	0.158	0.119	0.671	Superstructure Replacement
001C00007N	ARNOLDS LANDING RD	29.0	1935	5	5	4	754.0	P Posted for load	Poor	8	01 Slab	Tier 1	0.543	0.155	0.037	0.755	Replacement
001C00011N	WIDS ROAD	23.0	1971	2	6	6	271.0	K Closed to all traffic	Poor	8	02 Stringer/Girder	Tier 1	0.56	0.308	0.119	0.732	Replacement
001C00047N	ABRELL RD	22.0	1991	8	5	4	308.0	P Posted for load	Poor	8	05 Multiple Box Beam	Tier 1	0.509	0.157	0.119	0.678	Replacement
001C00040N	ALLEN SCHOOLHOUSE	26.0	1987	6	4	6	528.0	P Posted for load	Poor	8	05 Multiple Box Beam	Tier 1	0.474	0.156	0.082	0.64	Superstructure Replacement

Priority Index Score

## BPR Bridge Structure Information

### 1. Bridge ID-NBIS Structure ID.

2. Facility- Name of Road facility is located on.
3. Length- Bridge Length
4. Built- Year Bridge was built
5. Deck, Super, Sub- Condition rating of Deck, Superstructure and Substructure. Condition ratings are listing in the figure to the right.
6. Deck Area- Area of Bridge Deck
7. Posting Status- Posting Status of the Bridge (Open-No Restrictions, Posted for Load, Closed to all Traffic)
8. Bridge Condition- Determined by the lowest rating of the NBI conditions rating for Deck, Superstructure, Substructure. (Good (Rating  $\geq 7$ , Fair 5-6, Poor  $\leq 4$ ).
9. Scour Condition- Scour Condition (See Condition Code Description to right).
10. Design Type – Superstructure Bridge Design Type

### 11. Tier – Maintenance Tier (Tier 1, Tier 2, Tier 3 described above

### 12. PI – Priority Index Score (Rated from 0 (low priority) to 1 (highest priority)).

13. Mobility, Risk, Condition- Mobility, Risk and Condition Scores based on NBIS Inspection Report.
14. CO Recommendation- Maintenance Recommendations provided by KYTC Central Office. *Note: The absence of Maintenance Recommendations does not indicate that no maintenance is required.*

## How do I use the BPR?

The Bridge Priority Report provides a starting point local agencies can use to understand locally owned bridges as part of a comprehensive Bridge Management Program. The Priority Index is based on readily available data from NBIS Inspection Reports, but may not reflect local system knowledge or needs, and as such should be reviewed carefully by the local road agency. The overall goal of a Bridge Management Program should be to identify structures that are in need of

1) Cyclical and Condition Based Maintenance (*Tier 3*) 2) Repair and/or rehabilitation and replacement (*Tier 2*) and 3) Major Bridge Element replacement, rehabilitation or repair (*Tier 1*). Specific maintenance and repair needs for each structure can be identified from a thorough review of the **NBIS Inspection Reports** provided by KYTC. For more information on Bridge Management, please refer to the [FHWA Bridge Preservation Guide](#).

Condition Code	Description
N	Not Applicable
9	Excellent Condition
8	Very Good Condition-no problems noted
7	Good Condition-some minor problems
6	Satisfactory-structural elements show some minor deterioration
5	Fair Condition-all primary structural elements are sound but may have minor section loss, cracking, spalling or scour
4	Poor Condition-advanced section loss, deterioration, spalling or scour
3	Serious Condition-loss of section, deterioration, spalling or scour have seriously affected primary structural components
2	Critical Condition-advanced deterioration of primary structural elements
1	Imminent Failure Conditions-major deteriorations or section loss present in critical structural components
0	Failed Condition-out of service, beyond corrective action

