

PennDOT

## Bridge Inspection Terminology and Sufficiency Ratings

Please read the definitions below to understand the information on the accompanying hart.

COLUMN ID and NAME	DEFINITION																				
a. County	Name of county where bridge is located.																				
b. Bridge ID	Unique identification number assigned to bridge.																				
c. Location / Structure Name	Geographic location of bridge, or the official, or commonly used, name for bridge.																				
d. Feature Carried	Roadway that continues (or is carried) over bridge.  Roadway is identified by either the assigned street name or number, and possibly the direction of traffic using the bridge (for example, EB means eastbound). Abbreviation indicates whether the roadway is a federal highway (I for interstate), state-owned roadway (SR for state route), or local roadway owned by township/municipality.																				
e. Feature Intersected	Roadway, waterway or railroad (or combination of these) that exists underneath the bridge.																				
f. Owner Code	Two-digit code identifying governmental agency or railroad that owns bridge and is responsible for inspecting and maintaining the physical structure.  <u>Codes:</u> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">01 PennDOT</td> <td style="width: 50%;">31 State Toll Authority</td> </tr> <tr> <td>02 County Highway Agency</td> <td>32 Local Toll Authority</td> </tr> <tr> <td>03 Town or Township Highway Agency</td> <td>60 Other Federal Agencies (not listed below)</td> </tr> <tr> <td>04 City, Municipal Highway Agency, Borough</td> <td>62 Bureau of Indian Affairs</td> </tr> <tr> <td>11 State Park, Forest or Reservation Agency</td> <td>64 U.S. Forest Service</td> </tr> <tr> <td>12 Local Park, Forest or Reservation Agency</td> <td>66 National Park Service</td> </tr> <tr> <td>21 Other State Agencies</td> <td>68 Bureau of Land Management</td> </tr> <tr> <td>25 Other Local Agencies</td> <td>69 Bureau of Reclamation</td> </tr> <tr> <td>26 Private (other than railroad)</td> <td>70 Military Reservation Corps of Engineers</td> </tr> <tr> <td>27 Railroad</td> <td>80 Unknown</td> </tr> </table>	01 PennDOT	31 State Toll Authority	02 County Highway Agency	32 Local Toll Authority	03 Town or Township Highway Agency	60 Other Federal Agencies (not listed below)	04 City, Municipal Highway Agency, Borough	62 Bureau of Indian Affairs	11 State Park, Forest or Reservation Agency	64 U.S. Forest Service	12 Local Park, Forest or Reservation Agency	66 National Park Service	21 Other State Agencies	68 Bureau of Land Management	25 Other Local Agencies	69 Bureau of Reclamation	26 Private (other than railroad)	70 Military Reservation Corps of Engineers	27 Railroad	80 Unknown
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g. Length (feet)	Length of the bridge measured in feet.																				
h. # Spans	Total number of sections (or spans) to the bridge from edge of roadway to support (pier), and from support to support.																				
i. Structure Type	Material and construction type of bridge's superstructure.																				
j. Year Built	Year the bridge was built.																				
k. Post Status	Operational status of bridge:  <i>Open</i> – bridge is open to traveling public  <i>Closed</i> – bridge is closed to vehicular traffic (barriers and signs put in place). Pedestrian traffic may/may not be allowed.  <i>Posted</i> – bridge is open but signs have been placed stating a weight limit that can travel across the bridge.  <i>Temp</i> – bridge has temporary supports and/or restrictions in place.  <i>U/CON</i> - bridge is closed due to construction																				

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l. Weight Limit – Single (Tons)	If bridge is posted, signs are placed to indicate the maximum weight (in tons) of a single vehicle (for example, a concrete mixer truck) that can travel on the bridge. “1 TRK” means that the bridge is limited to one truck traveling on it a time without a weight limit.
m. Weight Limit – Comb (Tons) (Combination)	If bridge is posted, signs are placed to indicate the maximum weight (in tons) of a combination vehicle (for example, tractor trailer) that can travel on the bridge. “1 TRK” means that the bridge is limited to one truck traveling on it a time without a weight limit.
n. Condition Rating – Deck	<p>Single-digit number that describes the physical condition of the <b>deck</b> (top surface of bridge that carries traffic) compared to its original as-built condition. Number is assigned by state-certified bridge inspectors during each inspection of the bridge, which occurs at least every two years. Number range is nine to zero.</p> <p>See the description for Condition Rating – Superstructure for a general definition of each number.</p>
<p>o. Condition Rating - Super</p> <p><i>Superstructure</i> is the underlying or supporting part of a bridge, for example steel members under the deck.</p>	<p>Single-digit number that describes the physical condition of the <b>superstructure</b> compared to its original as-built condition. Number is assigned by state-certified bridge inspectors during each inspection of the bridge, which occurs at least every two years.</p> <p>Number range is nine to zero. A rating of 4 or below indicates poor conditions that result in a structural deficient classification.</p> <p>N = Not applicable            9 = Excellent            8 = Very good            7 = Good, some minor problems noted            6 = Satisfactory, structural elements showing minor deterioration            5 = Fair, primary structural elements are sound but showing minor cracks and signs of deterioration            4 = Poor, deterioration of primary structural elements has advanced            3 = Serious, deterioration has seriously affected the primary structural components            2 = Critical, deterioration of primary structural components has advanced and bridge will be closely monitored, or closed, until corrective action can be taken.            1 = Imminent failure, major deterioration in critical structural components. Bridge is closed but corrective action may put the bridge back into light service.            0 = Failed, bridge is out of service and beyond corrective action.</p>

## Bridge Inspection Terminology and Sufficiency Ratings

Please read the definitions below to understand the information on the accompanying chart.

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<p>p. Condition Rating – Sub</p> <p><i>Substructure</i> is the part of the bridge that supports the superstructure such as piers and abutments.</p>	<p>Single-digit number that describes the physical condition of the <b>substructure</b> compared to its original as-built condition. Number is assigned by state-certified bridge inspectors during each inspection of the bridge, which occurs at least every two years.</p> <p>See the description for Condition Rating – Superstructure for an explanation of each number.</p>
<p>q. Condition Rating – Culv</p> <p><i>Culvert</i> is a curved or rectangular structure below the roadway surface used primarily for water flow.</p>	<p>Single-digit number that describes the physical condition of the <b>culvert</b> compared to its original as-built condition. Number is assigned by state-certified bridge inspectors during each inspection of the bridge, which occurs at least every two years.</p> <p>See the description for Condition Rating – Superstructure for an explanation of each number.</p>
<p>r. Struct Def (Structurally Deficient)</p>	<p>Indication of bridge’s overall status in terms of structural soundness and ability to service traveling public. “SD” indicates that the bridge has deterioration to one or more of its major components.</p>
<p>s. Func Obsol (Functionally Obsolete)</p>	<p>Indication of bridge’s overall status in terms of structural soundness and ability to service traveling public. “FO” indicates that the bridge has older features (for example, road widths and weight limits) compared to more recently built bridges.</p>

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t. Suff Rate (Sufficiency Rating)	<p>A calculated rating indicating the bridge's sufficiency (or capability). Factors included in the calculation are:</p> <ul style="list-style-type: none"> <li>• the structure's adequacy and safety (accounting for 55% and based on inspection data),</li> <li>• the structure's serviceability and functional obsolescence (accounting for 30% and based on ability of bridge to meet current traffic conditions), and</li> <li>• how essential the bridge is for public use (accounting for 15%)</li> </ul> <p>Ratings range from 100 (entirely sufficient) to 0 (entirely insufficient or deficient).</p> <p>The Sufficiency Rating is considered by the federal government when a state requests federal bridge dollars to improve the condition of the bridge. Bridges with low sufficiency ratings are eligible for more funds.</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Sufficiency Rating</th> <th style="text-align: center;">Funding Eligibility</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">80 – 100</td> <td style="text-align: center;">Not available</td> </tr> <tr> <td style="text-align: center;">50 – 79</td> <td style="text-align: center;">Eligible for costs to rehabilitate or refurbish bridge</td> </tr> <tr> <td style="text-align: center;">0 – 49</td> <td style="text-align: center;">Eligible for costs to replace bridge</td> </tr> </tbody> </table>	Sufficiency Rating	Funding Eligibility	80 – 100	Not available	50 – 79	Eligible for costs to rehabilitate or refurbish bridge	0 – 49	Eligible for costs to replace bridge
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