## **Getting Started**

AASHTOWare Bridge Design and Rating Overview

#### What is AASHTOWare Bridge Design and Rating?

AASHTOWare Bridge Design and Rating may be considered as an operating environment with applications that aid in the design and load rating of bridges. This is similar to the role Microsoft Windows plays in that it is an environment where we run applications to conduct our day to day business.

AASHTOWare Bridge Design and Rating currently houses a few applications such as BrD and BrR for Design and Load rating. This is somewhat similar to applications that run in Windows, such as Excel or Word. The two applications still take the role of an environment, but their respective duties are more specific to their purpose. The underlying engines

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### BrR

BrR is used for bridge superstructure load rating, featuring

graphical tools to speed preparation of the data and application of the results. Using the AASHTO LFR/LRFR as its analytical engine for load factor rating, BrR provides an integrated



database where rating inputs and outputs can readily be stored, reviewed, and reused.

#### BrD

BrD is currently a bridge superstructure and substructure design-review software product using the AASHTO Load

and Resistance Factor Design (LRFD) Bridge Specifications. BrD employs the same database and graphical user interface as BrR, and shares much of the same source code. Development



of both products began in 1997. The AASHTO LRFD Engine provides the system's structural analysis and specification checking engine.

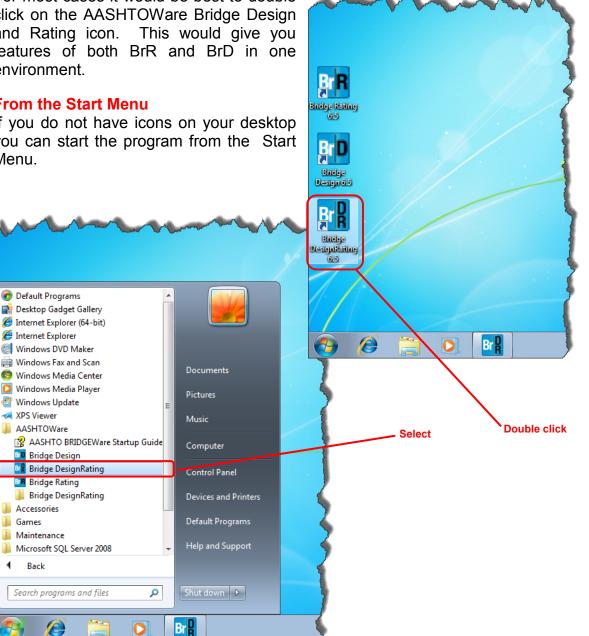
### Starting AASHTOWare Bridge Design and Rating

#### From the Desktop

For most cases it would be best to double click on the AASHTOWare Bridge Design and Rating icon. This would give you features of both BrR and BrD in one environment.

#### From the Start Menu

If you do not have icons on your desktop you can start the program from the Start Menu.



## **Entering User Name and Password**

The AASHTOWare Bridge Design and Rating Logo Window will pop up. Here you will need to enter your user name and password in the provided fields.

AASHTOWare	American Association of State Highway and Transportation Officials A Proprietary Computer Software Product	
Connect BrR Bridge Rating AASHID	Bridge Rating (formerly Vitis) Version 6.5.0 Build date Jul 26 2013 Bridge Design (formerly Opis) Version 6.5.0 Build date Jul 26 2013	
Username: Password: Data Source:	AASHTOWareBr65	- <b>1</b> Enter username and password
Copyright 19	OK Cancel Help 97 to 2013 by the American Association of State Highway and Transportation Officials, Inc. 444 North Capitol Street, N.W., Suite 249 Washington, D.C. 20001 U.S.A. (202) 624-5800	Click to connect to database

### Connecting to the database

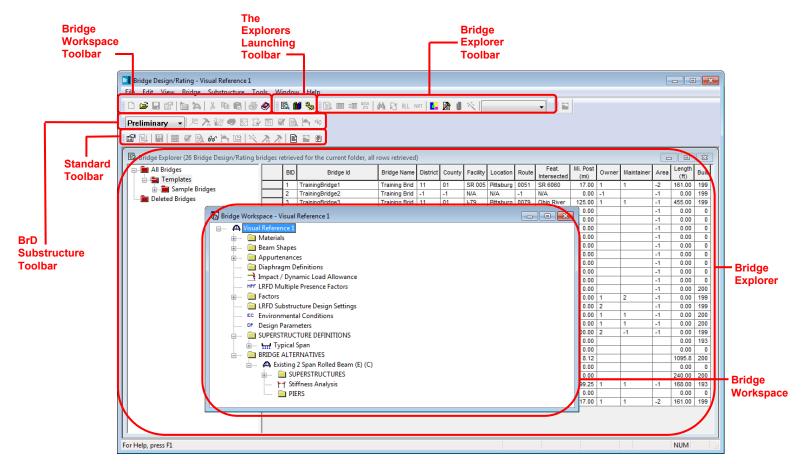
At times, the Data Source field will be empty. This means the database is not connected. You will need to connect to the database. To do this, click on the button with the three periods. Then . . .

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### **AASHTOWare Bridge Design and Rating Basics**

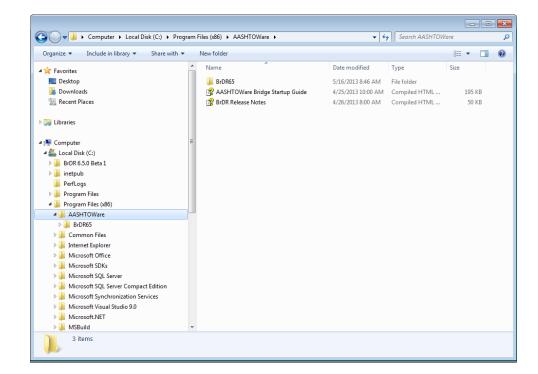




## AASHTOWare Bridge Design and Rating Environment

All Bridges	PO	Bridge Id	Bridge Name	District	County	Fac
Sample Bridges	1	TrainingBridge1	Training Brid	11	01	SR
	2	TrainingBridge2	Training Brid	-1	-1	N/A
- AISI LRFD Example Bridges	3	TrainingBridge3	Training Brid	11	01	1-79
- Concrete Example Bridges	4	PCITrainingBridge1	PCI TrainingB			- 1
📲 Steel Example Bridges	5	PCITrainingBridge2	PCITrainingBr			
📲 Timber Example Bridges	6	PCITrainingBridge3	PCI TrainingB			
Deleted Bridges	7	PCITrainingBridge4	PCITrainingBr			
	8	PCITrainingBridge5	PCI TrainingB			
	9	PCITrainingBridge6	PCITrainingBr			
	10	Example7	Example 7 PS			
	11	RCTrainingBridge1	RC Training B			Bridge I
	12	TimberTrainingBridge1	Timber Tr. Bri			corresp
	13	FSys GFS TrainingBridge1	FloorSystem	06	15	NJ-T to the s
	14	FSys FS TrainingBridge2	FloorSystem	11	333	195 folder
	15	FSys GF TrainingBridge3	FloorSystem	07	06	1-95
	16	FLine GFS TrainingBridge1	FloorLine GF	01	01	1-75
	17	FLine FS TrainingBridge2	FloorLine FS	02	02	1-7
	18	FLine GF TrainingBridge3	FloorLine GF	01	01	1.5
	19	TrussTrainingExample	Truss Trainin			
	20	LRFD Substructure Example 1	LRFD Substr			
	21	LRFD Substructure Example 2	LRFD Substr			SR 4
	22	LRFD Substructure Example 3	LRFD Substr			
	23	LRFD Substructure Example 4	LRFD Substr			
	24	Visual Reference 1	Visual Refer	01	12	1-7/
	25	Culvert Example 1	Culvert Exam			
	26	TrainingBridge1x	Training Brid			SR

Bridge Explorer tree \_\_\_\_

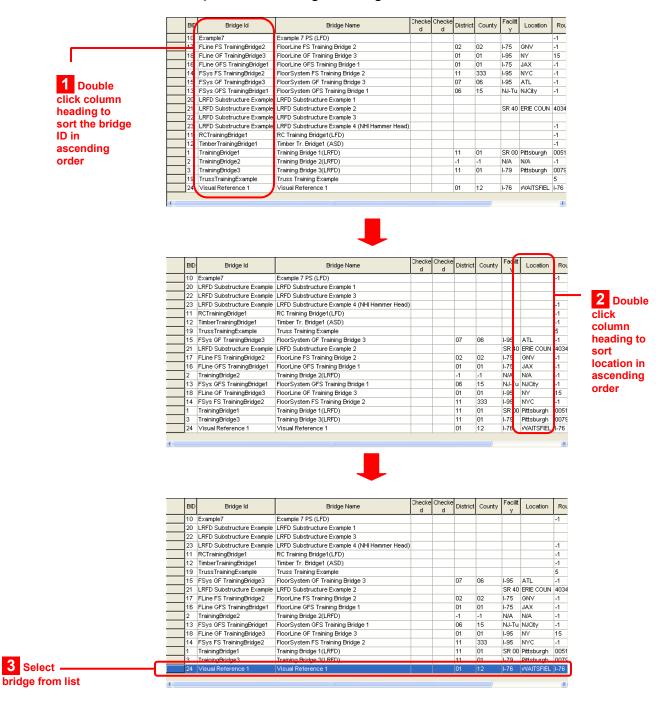


The Bridge Explorer is designed to work like the Windows Explorer

**Bridge Explorer Window** 

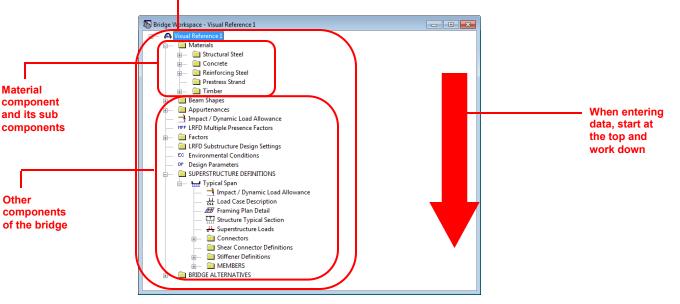
#### Sorting the Bridge List

Once you select a folder to find a bridge, you may sort the corresponding bridge list to make the search easier. Sorting the bridge list requires double clicking on a column heading. The first time you do this, it will sort in an ascending order. Double clicking again, will result in a descending sort. For example, I am looking for bridge 24 on I-76 in Waitsfield.



The result is that both the Bridge ID number and the Location are sorted in ascending order. At this point I look down the list in the location column for Waitsfield, then I look over at the Bridge ID until I find bridge 24 (see where the cursor is pointing in the third screen shot above).

Double clicking on a bridge from the bridge list opens the The Bridge Workspace tree works Bridge Workspace. similar to the Windows Explorer file tree, except that instead of sorting files and folders, the Bridge Workspace sorts out the different components of a bridge. These components include the materials the bridge uses, girders or beams, deck and supports to name a few. Each major component has components unto itself. The Materials component, for example, is broken down into structural and reinforcing steel, concrete, prestress strand and timber. These separate divisions are again broken down to the different materials of that division's type. For example, under concrete, you may have a description for concrete class A, B and C.



### Checking Data Integrity

Validate

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Bridge component

Material

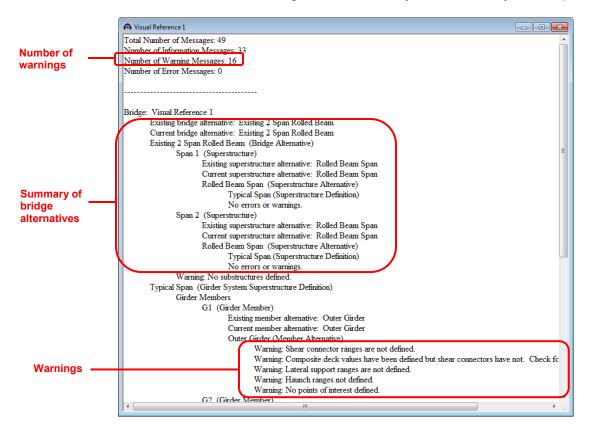
Other

After completing your data entry for the bridge, the next step is to check your data for missing components. In some cases, this may not be necessary, but in general practice, it is always good to ensure you've entered all the data for your bridge design or rating. To run the check click on the

validate button from the Bridge ۲ The Validation workspace toolbar. window will appear. This window will give you a summary of the bridge data

you've entered. It will also list a series of warnings regarding

your data. If you've missed something, it will be listed here. Use this as a guide to ensure your data entry is complete.



### Saving your Bridge Data

Once your data has been entered and verified, click on the save button from the Standard Toolbar to save your data. If you close the bridge workspace before saving, AASHTOWare Bridge Design and Rating will ask if you want to save your data. Before saving, AASHTOWare Bridge Design and Rating will validate your data and ask if you want to continue.

