

BrR System File Updates

The BrR System File (IowaDOT_System_BrR_V750_12182024.brsx) consolidates all the System Data previously submitted separately, along with additional updates to the Analysis Event Templates and General Preferences Templates. The items included in this updated file are listed below.

1. Analysis Event Template (updated)
2. System Defaults
3. Unit Tolerance
4. General Preference Template (added)
5. Parameters
6. Custom Agency Fields Labels

Updates to the Analysis Event Templates and General Preferences Templates are detailed below.

1. BrR Analysis Event Template
 - a. Updated the existing “Iowa DOT LRFR” Analysis Template
 - i. Permit Vehicles’ Frequency updated from Single Trip to Unlimited Crossing.
 - b. Created a new “Iowa DOT LRFR All-System OW” Analysis Template
 - i. Created to include Annual Permit Trucks – All-System Overweight vehicles.
2. BrR General Preference Template
 - a. Included IowaDOT_2024_CMP (IowaDOT_System_BrR_V750_CMPCControlOption.brsx)
 - i. Control Options template for Corrugated Metal Pipe.
 - ii. Previously submitted on September 30, 2024.
 - b. Included IowaDOT_2024_PSC (IowaDOT_System_BrR_V750_PSCControlOption.brsx)
 - i. Control Options template for Prestressed Concrete Beams.
 - ii. Previously submitted on September 16, 2024.
 - c. Included IowaDOT_2024_RCB Culvert (IowaDOT_System_BrR_V750_RCB CulvertControlOption.brsx)
 - i. Control Options template for RC Box Culvert.
 - ii. Previously submitted on September 30, 2024.
 - d. Included IowaDOT_2024_RCSlab (IowaDOT_System_BrR_V750_RCSControlOption.brsx)
 - i. Control Options template for Reinforced Concrete Slab.
 - ii. Previously submitted on September 16, 2024.
 - e. Included IowaDOT_2024_SteelBM_Before1962 (IowaDOT_System_BrR_V750_SteelControlOption.brsx)
 - i. Control Options template for Steel Beam built in or before 1962. Allow moment redistribution & plastic analysis options unselected.
 - ii. Previously submitted on July 12, 2024.
 - f. Included IowaDOT_2024_SteelBM_After1962 (IowaDOT_System_BrR_V750_SteelControlOption.brsx)
 - i. Control Options template for Steel Beam built after 1962. Allow moment redistribution & plastic analysis options selected.
 - ii. Previously submitted on July 12, 2024.

BrR System Data: Analysis Event Template

Open Template

Templates	Description	Analysis	Owner	Public / Private
> Iowa DOT LFR	BrR new analysis event.	LFR		Public
Iowa DOT LRFR	BrR new analysis event.	LRFR		Public
Iowa DOT LRFR All-System OW	BrR new analysis event.	LRFR		Public

Delete Open Cancel

BrR System Data: General Preference Template

Open template

Template Name	Description
> IowaDOT_2024_CMP	Control Options for Corrugated Metal Pipe
IowaDOT_2024_PSC	Control Options for Prestressed Concrete Beams
IowaDOT_2024_RCB Culvert	Control Options for RC Box Culvert
IowaDOT_2024_RCSlab	Control Options for Reinforced Concrete Slab
IowaDOT_2024_SteelBM_Before1962	Control Options for Steel Beam in or before 1962. Not Allow moment redistribution & plastic analysis
IowaDOT_2024_SteelBM_After1962	Control Options for Steel Beam after 1962. Allow moment redistribution & plastic analysis

Delete Open Cancel

Import System File

The updated BrR System file (IowaDOT_System_BrR_V750_12182024) can be imported into BrR using the steps described in Section 2.1, “Iowa DOT BrR System and Library Data Summary” document, submitted on June 25, 2024.

If there is an existing template in BrR that has an identical name to the one being imported, a duplicate may be created with “~1” at the end of the name. Therefore, the existing template will need to be deleted before importing the new one.

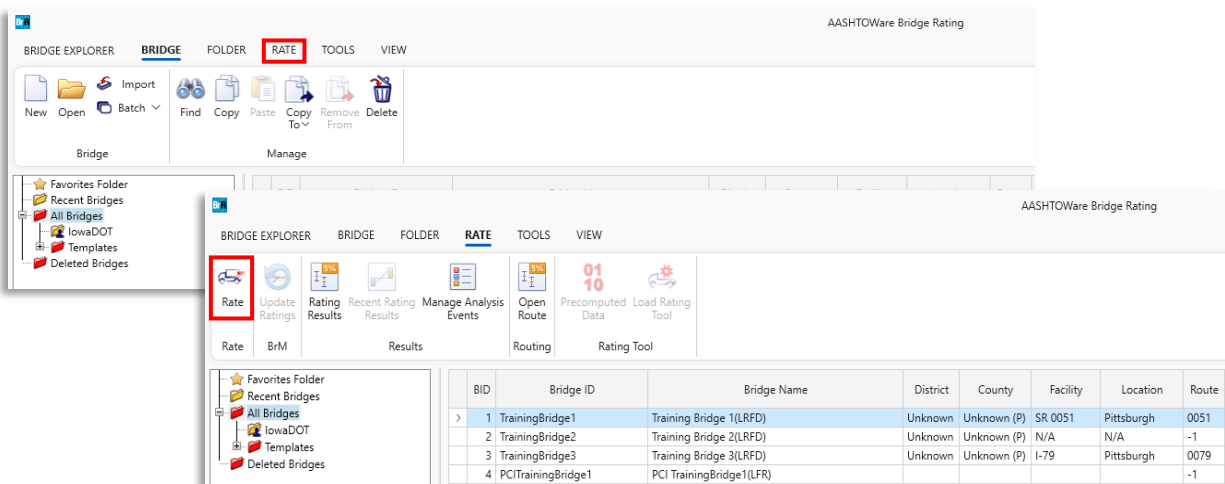
There are two options to import the updated system data:

1. Delete all the existing system data in BrR and import the updated system file in its entirety.
2. Delete the existing LRFR analysis template and import the two new LRFR analysis templates.

The next section provides detailed instructions on deleting the existing Analysis Event Template, as well as importing the updated templates.

Delete Existing Analysis Event Templates

1. In the top ribbon, select “RATE” and click on the “Rate” icon to bring up the “Analysis Settings” window.



2. In the “Analysis Settings” window, click on “Open template” at the bottom.

Analysis Settings

☐ Design review ☒ Rating

Rating method: LFR

☐ Save analysis results

Analysis type: Line Girder

Lane / Impact loading type: Detailed by Scaling

Apply preference setting: None

Vehicles Output Engine Description

Traffic direction: Both directions

Refresh Temporary vehicles Advanced

Vehicle selection

- Vehicles
 - Standard
 - Alternate Military Loading
 - EV2
 - EV3
 - H 15-44
 - H 20-44
 - HS 15-44
 - HS 20 (SI)
 - HS 20-44
 - NRL
 - SU4
 - SU5
 - SU6

Add to >>

Remove from

Vehicle summary

- Rating vehicles
 - Inventory
 - Operating
 - Legal operating
 - Permit inventory
 - Permit operating

Reset Clear **Open template** Save template OK Cancel

3. Select a template and click “Delete”. This deletes the template from the template library. In this example, the “Iowa DOT LRFR” template is selected.

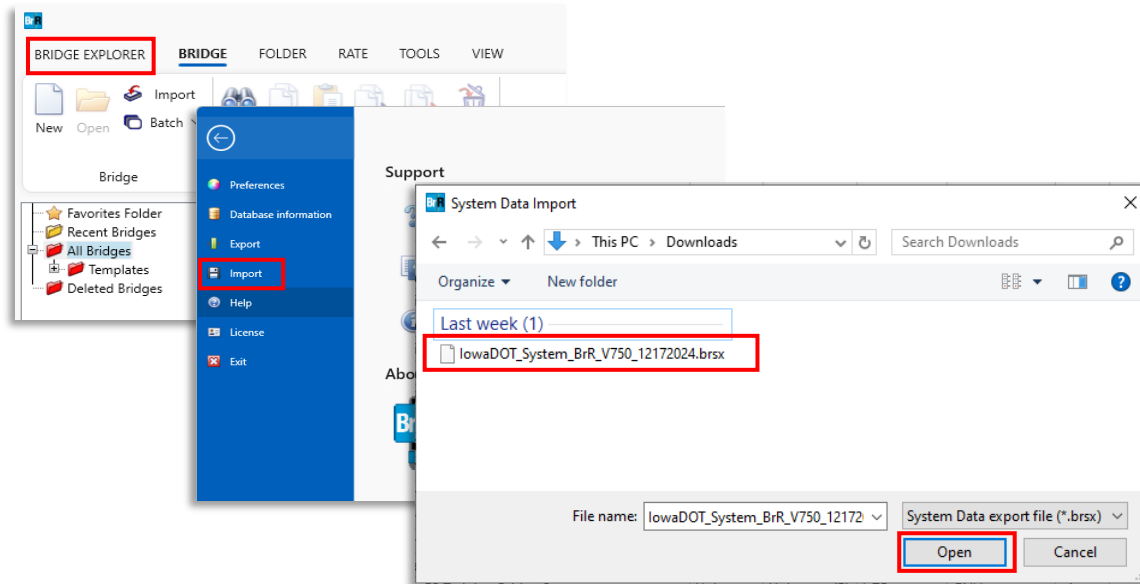
Open Template

Templates	Description	Analysis	Owner	Public / Private
> HL 93 Design Review	HL 93 Design Review	LRFD		Public
HS 20 LFR Rating	HS 20 LFR Rating	LFR		Public
LRFR Design Load Rating	LRFR Design Load Rating	LRFR		Public
LRFR Legal Load Rating	LRFR Legal Load Rating	LRFR		Public
Iowa DOT LFR	BrR new analysis event.	LFR		Public
Iowa DOT LRFR	BrR new analysis event.	LRFR		Public

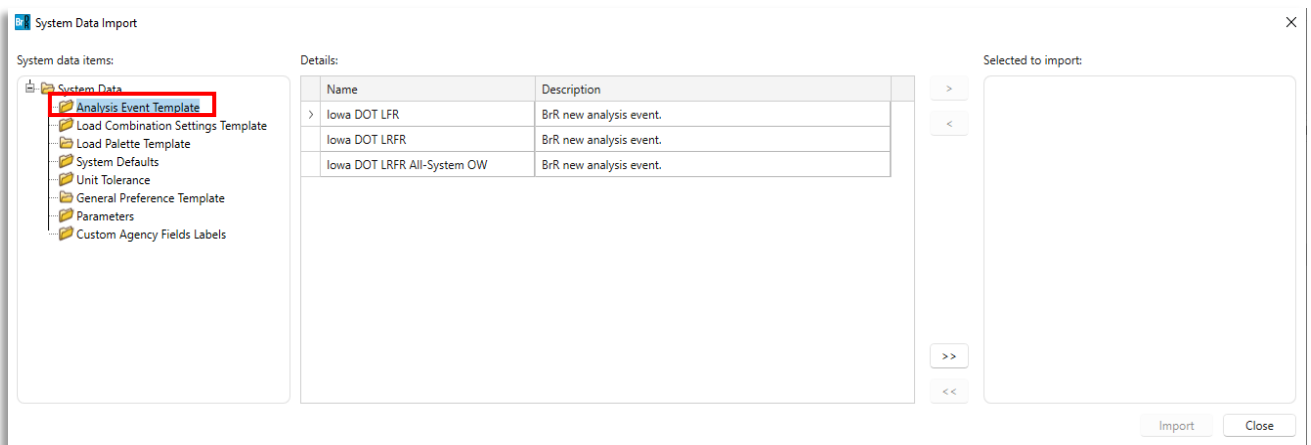
Delete Open Cancel

Import Updated LRFR Analysis Templates

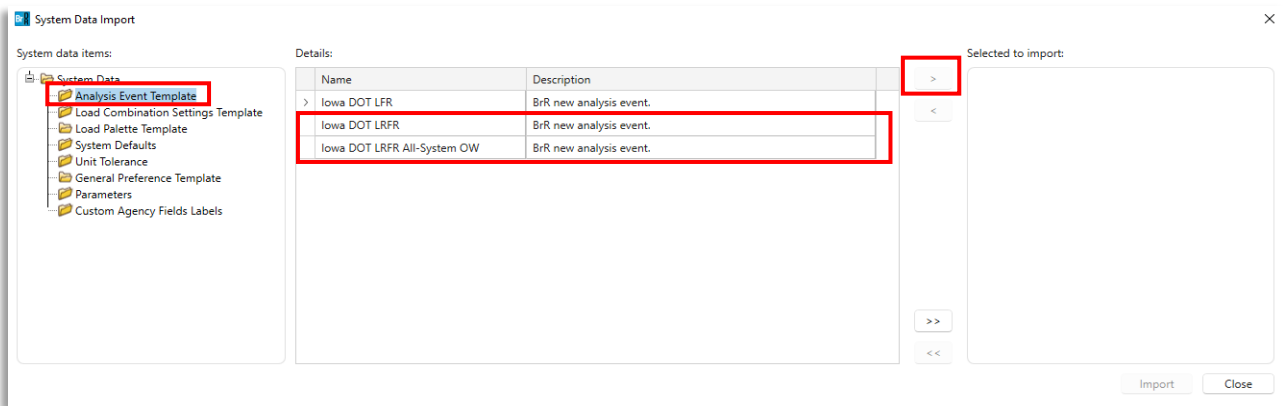
1. Download the “IowaDOT_System_BrR_V750_12182024.brsx” file to the user’s desired location for import.
2. After opening and logging into the BrR program, navigate to the Bridge Explorer window. Select “Import” and locate the “IowaDOT_System_BrR_V750_12182024.brsx” file in the folder where the file is saved at. Select the file and click “Open”.



3. In the “System Data Import” window, under the “System data items” pane, select “Analysis Event Template”. A list of 3 templates will be shown in the middle “Details” pane.



- The updated templates are “Iowa DOT LRFR” and “Iowa DOT LRFR All-System OW”. Click on the “Iowa DOT LRFR” template to highlight it, and click on the single arrow button, “>” to move the template to the “Selected to import” pane. Repeat this step for the “Iowa DOT LRFR All-System OW” template.



- Click on the “Import” button on the bottom right to import the templates. Once you’ve imported the data, a dialog box will pop up indicating the import is successful.

