

## Madero ASR Analysis Module Sunset Notification

Applies to the following products:

- BrDR/BrR version 7.5.x

### Description

The AASHTOWare Bridge Design and Rating Task Force has made the decision to sunset the Madero ASR analysis module. Version 7.5.x is the last release to provide the Madero ASR analysis module. The AASHTOWare Bridge Design and Rating Task Force strongly encourages users switching to use the AASHTO Timber ASR Engine as soon as possible.

### Background

The development of the Madero Analysis Engine included with the BrR software was funded by the USDA Forest Products Laboratory back in the 1990s. The engine was written in Fortran and provided to AASHTO in the form of a dynamic link library (.dll) file, without the source code, to serve as a plug-in analysis engine for Allowable Stress Rating (ASR) of timber bridges within BrR (formerly Virtis). Without having access to the source code, the engine is not being maintained for issues, enhanced for new capabilities and features, or kept current with the advancement of software technology. As the BrDR development migrates to the .NET 8 software development platform this year, the execution and data exchange linkage between BrR and the Madero engine will become too complex to maintain as the technology gap between BrR and the Madero engine will become even more pronounced.

With the limited future of the Madero engine and the needs of the BrR user community in consideration, the Task Force made the decision to create a new analysis engine for timber bridges. The AASHTO Timber Engine for ASR and LRFR delivered with BrR version 7.3 in 2022 exceeded the capabilities of the Madero engine and became the default timber engine in BrR.

Material & Member type	BrR with Madero Engine		AASHTO Timber Engine	
	ASR		ASR	LRFR
Sawn girder	✓		✓	✓
Sawn deck	✓		✓	✓
Glulam girder	✗		✓	✓

## Switching to the AASHTO Timber ASR Engine

The General Preferences feature can be used to apply "AASHTO Timber ASR" as the Timber Analysis Module - ASR preference to a bridge or group of bridges in the Bridge Explorer. For information on using the General Preferences feature, visit <https://www.aashtowarebridge.com/bridge-rating-and-design/training/> for the tutorial.

