



NFBA Technical and Research Committee

The NFBA's T&R Committee brings you Post-frame Construction's best practices and technical information in this concise bulletin format.

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Post Frame Construction and Best Practices

What is DAFI and How Does it Help with Post Frame Design

INTRODUCTION

DAFI stands for Diaphragm And Frame Interaction and was developed in the early 1990s to aid in post frame construction. The structural analysis program can calculate specific values for even load, horizontal displacement, diaphragm stiffness, shear displacement, and shear load based on the number of bays in the structure, and the stiffness and load requirements. The program is fairly easy to use. The details of how the program actually works and the equations used within the program are provided in Chapter 6 of the NFBA Post Frame Building Design Manual.

DISCUSSION

The DAFI calculator download can be found on the NFBA website in this location: [Technical Resources \(nfba.org\)](http://www.nfba.org/TechnicalResources)

Another option is to download the DAFI calculator using the following steps:

1. **Click here** to download the DAFI Calculator.
2. Save the file "DAFI_1_0_0_1.zip" to your computer.
3. Once you locate the file, right click it and extract the zip file.
4. Double click on the "setup.exe" file to install the program on your computer. (You may get a security warning "Publisher cannot be verified. Are you sure you want to install this application?" Click on "Install" to proceed.)
5. When the installation is complete, the program will launch.
6. Enter default values in the first tab and click on the "Submit" button. Click on the other tabs to view specific values and the results of the frame and diaphragm analysis.

DAFI works best using Internet Explorer and Firefox.

SUMMARY

The DAFI program is a great benefit in post frame design an excellent tool for the engineer to determine loading and aid in material sizing.



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- Technical guidance
- Educational and awareness programs
- Advocating for the interests of our industry
- Recognition of industry-achievement awards
- Monitoring of industry issues, such as codes and standards
- Research to develop improved post-frame construction products and practices
- Promotional and marketing support for the post-frame construction industry
- Publications to promote use of post-frame construction

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