

NORTH NAPLES FIRE CONTROL AND RESCUE DISTRICT

Accepting Engineering Judgments and design equivalency for fire resistance assemblies.

PURPOSE:

To provide district fire inspectors, construction contractors and design professionals with a procedure to follow when they encounter a fire stop or fire barrier construction that cannot be protected by a nationally recognized tested and rated fire stop method.

OVERVIEW:

Occasionally, the field conditions vary from original design or unexpected construction problems are encountered. Engineering Judgments (EJ's) can serve as an alternative method to insure that the fire stop system will perform as expected.

Since Engineering Judgments are not subjected to the same fire testing as a "Listed Assembly", it is critical that they be developed, reviewed and inspected using sound engineering principles.

Clear coordination and communication between the construction industry, building department, fire code office and fire marshal is imperative.

PROCESS:

The inspector will request a copy of the testing agency detail located onsite. The inspector will discontinue the fire inspection if the "Listed Assembly" detail cannot be produced.

If the field conditions that are present prohibit the proper installation of a "Listed Assembly" required on the approved plans, the inspector will request that the general contractor contact the design professional of record to evaluate the condition, and submit a revision to the Collier County showing an alternative "Listed Assembly".

If the design professional is unable to find a suitable "Listed Assembly", they may choose to pursue an Engineering Judgment as an alternative.

The district inspector will not be involved or make binding recommendations in the design process of the Engineering Judgment. Design professionals must contact the building department and fire code office for submittal criteria, review and approval of their design.

Once the Engineering Judgment has been approved by the fire code and building department, the fire district will be notified as to the final outcome.

GUIDELINES

- An Engineering Judgment should not be used in lieu of available tested systems.
- They may only be issued by the design professional of record.
- Based on analysis of previously tested firestop or fire barrier systems that are either similar in nature or clearly bracket the conditions upon which the judgment was given.
- Additional knowledge and technical interpretations based upon accepted engineering principles, fire science and fire testing guidelines (e.g. ASTM E 2032- Standard Guide for Extension of Data from Fire Endurance Tests) may also be used as further support data.
- Be based upon full knowledge of the elements of the construction to be protected, the understanding of the probable behavior of that construction and the recommended firestop or fire barrier standard test method for the rating indicated on the Engineering Judgment.
- Be limited only to specific conditions and configurations upon which the Engineering Judgment was rendered and should be based upon reasonable expectations for the recommended firestop or fire barrier system under those conditions.
- Be accepted only for a single, specific job and project location without thorough and appropriate review of all aspects of the next jobs or locations circumstances.