

## **Alternate Materials, Design, and Methods of Construction and Equipment Guidelines for Submitting Firestop Systems Engineering Judgments**

1. An Engineering Judgment should not be used in lieu of listed and tested systems when available.
2. Written concurrence of the Project Architect shall be obtained prior to the applicant submitting a 'Request' for an Alternate Materials, Design, and Methods of Construction and Equipment.
3. Requests shall identify the conditions which cannot be met by a listed and tested system. The description should note specific locations where the Engineering Judgment shall apply.
4. Requests shall provide the components of the proposed system(s) and the similarities to the listed and tested components on which it is based.
5. The amount of detail required in an Engineering Judgment submittal will be based on the complexity of the alternate method, the rating of the assembly being penetrated, and the qualifications of the installing contractor. As a minimum, details should be similar to the level of detail available for the listed and tested system the Engineering Judgment is based upon. It would be ideal if the listed and tested system from which the Engineering Judgment is based was also submitted, and then the sketch and narrative would only need to outline/detail the conditions and items that are different from the listed and tested system.
6. Firestop product manufacturer's technical staff shall be consulted in the development of all Firestop Systems Engineering Judgments. Firestop Systems Engineering Judgments shall be signed and sealed by a Fire Protection Engineer licensed in the State of Nevada.
7. Engineering Judgments shall be based on interpolation of previously listed and tested firestop systems that are either sufficiently similar in nature or clearly have similar conditions upon which the judgment is to be given. Include copies of the listed and tested system(s) on which the Engineering Judgment is based.
8. Engineering Judgments shall be based upon full knowledge of the elements of construction to be protected and understanding the behavior of that construction and the recommended firestop system protecting it were they to be subjected to the appropriate Firestop Standard Fire Test Method for the required fire rating duration.
9. The Engineering Judgment submittal must include a dimensionally detailed drawing/sketch of the labeled fire rated assembly being penetrated, the penetrating item, and the manufacturer's recommendations on what specific product to use to accomplish this firestop, and the limits of the product's use.

10. Provide complete descriptions of the critical elements for the firestop configuration, which include but are not limited to the following:
  - 10.1 Basic, Common
    - 10.1.1 Type(s) of assembly used or being penetrated
    - 10.1.2 Hourly rating required
  - 10.2 Through Penetrations
    - 10.2.1 Penetrating item(s) (type, size etc.)
    - 10.2.2 Annular space requirements, (minimum, maximum, actual, nominal etc.)
    - 10.2.3 Opening size
    - 10.2.4 Firestop product(s) to be used, type and amount (thickness if applicable)
    - 10.2.5 Accessory item(s) (i.e. anchors, backing material, etc.)
  - 10.3 Joints
    - 10.3.1 Joint Width (installed width, nominal)
    - 10.3.2 Movement Requirements
    - 10.3.3 Movement Class (thermal wind sway, seismic)
    - 10.3.4 Firestop product(s) to be used, type and amount (thickness if applicable)
    - 10.3.5 Accessory item(s) (i.e. insulation type, thickness, compression, etc.)
11. Include clear directions for the installation of the recommended firestop system.
12. Engineering Judgments will be approved only for a specific job and location and will not be transferred to any other job or location. They shall be limited to the specific conditions and configurations upon which the Engineering Judgment was rendered and should be based upon reasonable performance expectations for the recommended firestop system under those conditions.