The new system is easily seen—it’s either in place or it isn’t.

By Duane Becker

There appears to be an increasing awareness among architects and specification writers of the need to protect the public through the use of fire-rated partitions. Code officials also are more aggressively enforcing fire codes and paying closer attention to the many details that are necessary in firewall construction. They are taking these actions to ensure that fire-rated partitions perform as intended.

Many of the components necessary in existing fire-rated partition designs are either very expensive or complicated to the point of being difficult to properly install. This has led to many substandard installations: some to try to save money in the design, some because of poorly trained installers and some because of cost cutting by contractors.

These trends have led to the development of the new, cost-effective Fires Trak system to handle expansion and firestopping at the head of metalstud partitions. It appears that need is indeed the mother of invention. The system is simple, economical, environmentally friendly and easy to install because it uses the same materials as those required to construct the wall.

If there is significant movement expected at the partition head and
roof or deck juncture, the cost of existing, tested systems can approach or even exceed the cost of the partition. With the Fire Trak system, the installation is easily understood by architects, specification writers, estimators, project supervisors, installers and inspectors. It should lead to better installations, safer buildings and increased business for the partition contractor.

This new system addresses the problems that are plaguing existing systems. Many systems now being specified are very ambiguous and easily misunderstood, even by experienced estimators. This situation leads to widely varying bids on firestopping, with the installation going to the contractor whose estimator makes the biggest mistake. This can lead to substandard firestopping installations or financial ruin for the partition contractor.

Building code officials face the same problems inspecting the installations. The existing systems are just too complicated to visually inspect from the floor. The new system is easily seen—it’s either in place or it isn’t.

One aspect of firestopping that this author is not aware of having been addressed is life-cycle testing. The system will not lose its
elasticity and fail over time, but will continue to function as intended.

At the heart of the new system is a group of special ceiling runner profiles. The ceiling runners capture the metal studs, allow for roof or deck movement at the top of the studs and provide a shoulder for the attachment of an extra piece of the wall cladding material used. The wall cladding material then slides over or under the piece of material attached to the Fire Trak ceiling runner. The basic profile provides a pleasing shadow line at the roof or deck if a suspended ceiling is not used. A reverse profile runner allows for a reveal detail if preferred.

There is also a profile for chase walls for plumbing. Several of the profiles can also be adapted for use with curtain walls that are not axially loaded. The Fire Trak runners can be used vertically at dissimilar construction to provide expansion.

Early on in the development of the system, the developer was constantly told “The system looks great, but does it have UL approval?” The system was subsequently submitted to UL and has now been approved by UL for use in 31 non-load-bearing metal stud partition designs. The UL designed that the new system has approval in, cover one- through four-hour fire-rated metal stud partitions, while allowing movement at the heads of the partition.

The system has generated some questions from contractors. The most frequently asked question is, How does it work when used across the ribs of metal decking? The profile of the metal decking can easily be cut out of the top piece of the wall material with a jig-saw

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after the profile has been traced from a scrap piece of the decking. A simpler method would be to use the FireTrak Jig, which clamps in a piece of the decking, then the top piece of wall material is also clamped in the jig and the profile cut out with the same router used by the installers to cut light boxes in the wall.

Another question that has been asked, but not nearly enough, is, “What happens at bar joists?” If the new system is used at the deck and around a bar joist, the bar joist can be installed as part of the deck or roof structure and can move in all four dimensions while maintaining the desired fire rating. All too often, with present systems the wall cladding material is cut tight to and round bar joists, and any subsequent movement of the joists loads the wall or crushes the wall material, thus eliminating its fire rating.

The best features of the Fire Trak system are its cost effectiveness, ease of installation, simplicity, no special tools or training of installers needed, easy to estimate, and easy to inspect for proper installation.

About the Author
Duane Becker is the inventor of the Fire Trak system and president of Fire Trak Corp., Kimball, Minn.