

# NEW FIRE MARSHAL APPROVED, COST-EFFECTIVE COLD AISLE CONTAINMENT TECHNOLOGY

## DATA CENTER CASE STUDY

### Overview

Loudoun County, Virginia—known as the “Data Center Capital of the World”—hosts the highest concentration of data centers globally. Growth in the region is driving stricter safety and building standards, accelerating innovation in air containment systems.

### The Challenge

- Data centers and mission-critical facilities require air containment solutions that do not compromise fire safety.
- Traditional materials can block sprinkler systems, create hazards, or fail to meet fire code requirements.

### Why Plastic Drop-Out Panels Are Being Phased Out



#### Safety Risks for Firefighters

- Trip hazards for firefighters caused by fallen or warped panels during fire events
- Obstructed movement and reduced visibility impacting safe and efficient emergency response



#### Not Approved by Loudoun County Fire Marshal's Office

- Plastic drop-out ceiling panels were previously used but are no longer approved
- Signals stricter enforcement of fire codes and firefighter-first safety requirements



#### Hyperscaler Requirements Are Evolving

- Hyperscalers like Meta, Google, and Microsoft are requiring safer, environmentally friendly materials
- Sustainability and code compliance are now critical factors in material selection

### Our Solution

<b>FireDrop™</b> , an ASTM E84 Class A fire-rated, water-soluble material that disperses within seconds when exposed to water.	
<b>Air Containment</b>	Maintains efficient airflow in cold aisle containment systems while supporting high-performance data center operations
<b>Fire-Resistant</b>	ASTM E84 / UL 723 Class A rated and used in a system approved by Loudoun County Fire Marshal, ensures compliance with strict fire safety codes
<b>Water-Soluble</b>	Disperses rapidly in 5-10 seconds when exposed to sprinkler systems, allowing immediate water penetration through the paper with no obstruction

### Conclusion

This new material, included in a system approved by the Loudoun County Fire Marshal, provides a safer, more reliable alternative to plastic air containment materials. By eliminating debris and trip hazards, supporting evolving fire codes, and aligning with hyperscaler sustainability goals, it sets a new standard for modern data center design.

**To learn more about this patent-pending innovation, contact the SmartSolve team today!**

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