

# Avoiding Pitfalls in Designing, Installing, and Operating K-12 Cafeteria Serving Lines

Insights from Michael Egan, Executive Vice President, Multiteria™ USA, LLC

With over 45+ years in foodservice design and operations, including nearly two decades specializing in K-12 cafeteria solutions, I've seen firsthand how serving line challenges can affect efficiency, student satisfaction, and future flexibility. K-12 foodservice directors, operators, design consultants, and architects all face unique obstacles when designing serving lines, but careful planning and innovative solutions can help avoid common pitfalls.

Below, I'll share the top challenges I've encountered and actionable strategies to overcome them—ensuring that your serving lines are functional, flexible, and engaging for students and staff alike.

## Key Challenges and How to Overcome Them

### 1. Lack of Flexibility in Serving Line Design

A static serving line can hinder your ability to adapt to changing needs, such as fluctuating student populations or menu offerings. Many schools struggle with outdated counters that cannot easily accommodate growth or adapt to changing menu trends, such as grab-and-go stations with air screen refrigerators and heated merchandisers.

#### Solutions:

- **Modular Designs:** Choose counters with adjustable legs or casters instead of fixed and rigid concrete pads or stainless steel channel bases. Adjustable legs and casters make it easier to reconfigure and upgrade layouts in the future without significant disruption to building infrastructure or the added costs of demolition.
- **Compact and Vertical Options:** For spaces that cannot be easily expanded, maximize vertical space with multi-tiered hot food merchandisers, two-tier food guards, or air-screen refrigerators to increase display capacity. Utilizing merchandising equipment not only enhances food presentation but also creates a more upscale retail experience for customers.
- **Remote Stations:** To ease congestion, move elements like milk coolers or cashier stations outside the main serving line area.

By thinking vertically and outside the traditional layout, operators can create more functional serving spaces, even in tight or outdated environments.

### 2. Utility Stub-Ups and Fixed Infrastructure

Utility stub-ups are a common challenge in construction. They refer to exposed sections of utility lines—such as electrical, plumbing, or data conduits—that extend from the ground or floor to connect with equipment or systems. These connections are typically recessed into the floor permanently, which can limit the flexibility to relocate or reconfigure equipment. This design often makes future renovations costly and disruptive. Additionally, stub-ups can complicate floor cleaning and increase the chances of

leaks affecting spaces below the service area. Even with careful planning, stub-ups are sometimes installed in incorrect locations, creating trip hazards and adding unnecessary frustration.

### **Solutions:**

- **Utility Chases:** Opt for stainless steel utility chases to house utility services such as electricity and plumbing. These can be routed from above the finished ceiling, offering easier access and significantly reducing field coordination and placement challenges compared to stubbing up through concrete floors in precise locations.
- **Plan for Renovations:** Abandon stub-ups during renovations by sealing them watertight and cutting them flush with the floor.

By implementing these solutions, you can minimize the disruptions caused by stub-ups and make your infrastructure more adaptable for both current needs and future developments.

### **3. Eliminate Utility Walls:**

Designers often use metal studs or cinderblock low walls in front of serving counters to route plumbing and electrical services. While this traditional approach also acts as a decorative surface, it creates a rigid infrastructure that limits future redesigns and equipment relocation.

Instead, choose a counter manufacturer that offers built-in utility chase ways in their counter sections and integrates decorative front panels into a single assembly. The approach provides several key solutions.

### **Solutions:**

- **Cost Reduction:** Reduces construction and material costs by streamlining the overall scope of work.
- **Coordination Simplicity:** Minimizes the need for extensive coordination across multiple trades.
- **Polished Appearance:** Provides a clean, polished appearance with a single point of accountability, especially when counters include pre-wired electrical load centers.

By designing with flexibility in mind, you save time and money during both installation and future modifications.

### **4. Logistical Challenges During Installation**

Even the most experienced foodservice operators, designers, and equipment dealers can overlook critical details about how equipment is delivered and installed within a building. Despite thorough planning, it's essential to confirm whether the building has a loading dock large enough for a truck to unload items. If not, is a lift gate required? (Keep in mind, not all delivery trucks are equipped with one unless specified in advance.)

Additionally, ensure that elevator cabs, doorways, and corridors are spacious enough to fit the equipment. This is particularly crucial in buildings constructed before 1970, as they often adhere to outdated building codes and standards.

## **Solutions:**

- **Evaluate Access Points Early:** Ensure the dimensions of loading docks, doors widths, hallways, and elevators are adequate to accommodate the equipment. Confirm whether the mullion on double doors is removable or fixed.
- **Plan Around Ceiling Heights:** Look for potential conflicts with lighting fixtures, sprinkler heads, soffits, or decorative overhangs when preparing for tall equipment.
- **Think Ahead:** Work with your design team to identify obstacles during the planning phase. Customizable equipment can be manufactured in more manageable sizes.

Proactive planning ensures a smooth installation process and avoids project delays.

## **5. Modern Designs for Undersized Spaces**

Many K-12 cafeterias were designed decades ago to fit smaller student populations. These limited spaces present a significant challenge for foodservice operators as they manage rising student enrollment across their districts. The task at hand: finding ways to serve more students quickly while working with constrained space and fewer resources.

## **Solutions:**

- **Think Scatter Designs:** If space allows, consider developing multiple serving venues or a scatter design similar to a food court (e.g., pizza station, deli station, salad station, Tex-Mex, etc.). This approach extends beyond traditional serving lines to reduce queuing, prevent overcrowding, and create a more enjoyable, retail-like experience.
- **Enhance Displays:** Install heating and cooling elements in second-tier food shields to expand menu offerings and increase labor efficiency. Use colorful or “high merch” packaging for grab-and-go products.
- **Optimize Workflow:** Consider adding grab-and-go kiosks or separate fruit and salad bars to streamline traffic while keeping the serving line uncluttered.

Designing for efficiency improves both speed of service and student satisfaction.

## **6. Impact of Serving Line Flow on Student Experience**

An older, outdated serving area won't engage students and will have a direct impact on participation. Many districts are redesigning their "retail spaces" to create more upscale environments, resembling Starbucks or Chipotle—places students are familiar with when spending time with friends and family.

## **Solutions:**

- **Create Visual Appeal:** Use modern finishes such as solid surface or quartz countertop materials, textured or wood-grain plastic laminates, LED lighting, decorative over-structures, and digital menu displays to create a more inviting space.

- **Flexible Menus and Stations:** Institute layouts that allow students to choose from a variety of menu options. Straight, single-file serving lines tend to feel institutional and limiting.
- **Balanced School Branding:** Be mindful of overusing school colors and mascots in your design. While school pride is important, excessive use of bold school color combinations can clash with upscale materials and finishes, especially for middle and high school-age groups. Go for more subtle ways to incorporate school identity into the design.

Happy students are more likely to participate in school meal programs—boosting both revenue and nutritional outcomes.

## 7. Staff Training and Operational Management

Implementing new serving line designs or equipment can be intimidating for managers and staff employees. A new design often introduces a new way of doing things. Without proper training and buy-in, a new design or even the best designs can fall short in day-to-day operations.

### Solutions:

- **3D Renderings:** Encourage your design team to create equipment elevations, 3D renderings, or other visual aids to help staff better understand the new layout and how it improves their workflow.
- **Training Programs:** Offer comprehensive training sessions to familiarize staff with how to use the equipment, ensuring all features and benefits are fully realized.
- **Share Success Stories:** Show examples of how similar designs and types of equipment have benefited other schools to build confidence and excitement among staff.

A well-trained, motivated team not only ensures smooth operations but also creates a welcoming environment that enhances the overall student dining experience.

## Proactive Design Tips for K-12 Foodservice Projects

To avoid common pitfalls, K-12 architects and operators should integrate these best practices into the planning process:

- **Consider Future Needs:** Design built-in flexibility to accommodate future menu changes or population growth.
- **Collaborate Early:** Work closely with architects, foodservice consultants, and other stakeholders to address logistical challenges like access points and ceiling heights.
- **Think Long-Term:** Avoid inflexible designs with fixed elements such as concrete curbs, low walls, partitions, or utility stub-ups that limit future modifications.
- **Elevate the Experience:** Focus on creating an environment that students enjoy—both visually and functionally.

## Your Next Steps to Getting Started

Designing a K-12 serving line is about more than just functionality—it's about creating a space that caters to evolving needs, improves efficiency, and delights students. By addressing challenges head-on and adopting innovative solutions, schools can set themselves up for long-term success.

Finding a supplier with professional project management can be challenging when creating flexible, "A-Grade" serving line solutions tailored to your specific needs. If you're looking for insights or support to transform challenges—like encouraging your students to eat more, participate, and enjoy the entire experience—feel free to reach out to me. I'd be excited to help get you started and contribute to your success story.

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**About The Author:**

For the past 17 years, Michael has had the privilege of managing the Multiteria™ brand, a subsidiary of Lakeside® Manufacturing. During this time, he has played a key role in its growth as a leading manufacturer of retail serving line counters, specializing in the K-12, College & University, Healthcare, and B&I segments.

Before joining Multiteria in 2008, Michael enjoyed a successful 22-year career with a leading foodservice design-consulting firm in White Plains, NY. In that role, he provided design-consulting services to many leading hotel chains, world-class destination resorts, and restaurant companies. He also had the opportunity to consult with numerous public and private K-12 school districts across the country.

With over 45 years of experience in food service, Michael has developed a unique understanding of foodservice operations, equipment application, space planning, and delivering creative solutions for architecturally challenging spaces.