

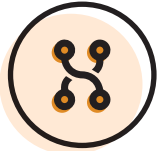
Manufacturing + Food Processing Design Construction Trends

Designing for Employee Welfare

ISG



Improving indoor air quality in specific spaces that assist in reducing the transmission of SARS-CoV-2, the virus that causes COVID-19, through enhanced filtration, bipolar ionization, ultraviolet UV-C light, and increased humidity control.



Evaluating employee flow to mitigate bottlenecks to break areas and other shared spaces, such as bathrooms, locker rooms, or break areas.



Creating separate, dedicated public entrances from employee entrances that provide additional protection between staff and outside visitors.



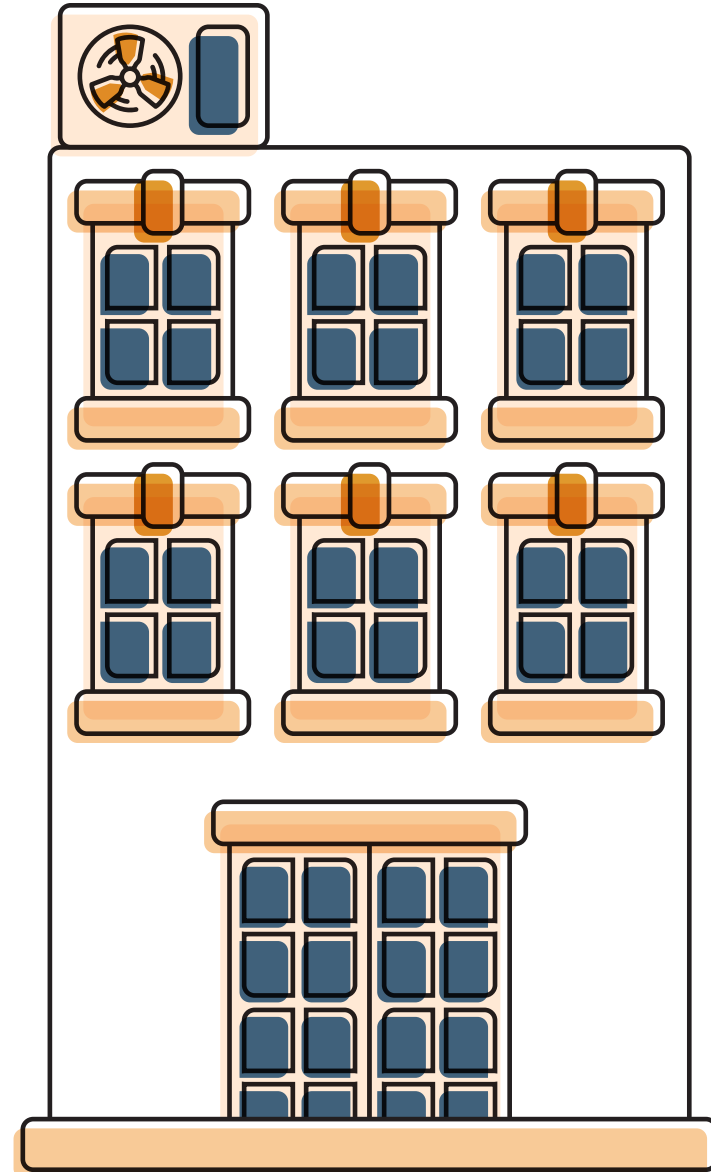
Expand general assembly space to provide adequate personal space. Additional screening infrastructure to accommodate potential virus upticks.



Furniture and Fixtures that can adequately be maintained and sanitized.



Hands Free technology - faucets and plumbing fixtures, doors, light sensors and proxy badging can all decrease amount of generally touched surfaces.



How to Plan Effectivity for Building Expansion in Today's Economy

The effects of a world-wide pandemic in 2020 and into 2021 had a significant impact on building design and construction delivery. Understanding the impacts and approaching future projects holistically can help mitigate expanding lead times, costs, and general construction uncertainty.

Currently, one of the greatest challenges businesses are facing when approaching new design and construction is the increase in material costs. Regional and National Construction Cost Index reports have shown significant increases in the first quarter of 2021. Raw materials, including lumber, copper, and steel, have increased, contributing to the noticeably sharp rise in construction costs.

In addition, an increased or uncertainty of material lead times have extended or delayed construction schedules. So, what caused this uncertainty and disruption in our supply chain? Although the pandemic contributed to some of the supply chain disruptions, environmental and federal policy changes have compounded the challenges building owners face when planning for a construction project.

Designing for Lead Times

Business owners and project managers can mitigate risks associated with supply chain disruption and increasing material costs by understanding the current challenges and engaging key design and building partners earlier in the project. During the planning stages, having a partner that will ask questions and push discussions around the topics of schedule, cost, and material can positively influence design and construction decisions.

Construction materials and structural design can vary depending on the project goals and building type. As material costs rise, in addition to extended and uncertainty around lead times, understanding a holistic view of material and schedule constraints, as well as innovative design solutions, will help ensure that your project goals are achieved. This dynamic has allowed for less common, innovative structural design types that would have been cost-prohibitive in the past. For example, one North East Wisconsin project recently opted to use wide flange structural members in lieu of bar joists. While historically, this solution would have been more costly, due to current lead times, the ISG design team was able to work with the Construction Manager at the beginning of the project to identify the best strategy to achieve the owner's project and production schedule goals.

Designing for Employee Welfare

During the planning stages, owners should also consider employee health and welfare. The environment and how employees engage with a space can positively impact retention, recruitment, and overall welfare and safety. This is especially vital in production or food processing areas where staff may work in close proximity.

Some of the most influential areas include breakrooms, locker rooms, restrooms, production spaces, and entrances and exits. These now common design strategies and considerations include:

- Improving indoor air quality in specific spaces that assists in reducing the transmission of SARS-CoV-2, the virus that causes COVID-19, through enhanced filtration, bipolar ionization, ultraviolet UV-C light, and increased humidity control.
- Evaluating employee flow to mitigate bottlenecks to break areas and other shared spaces, such as bathrooms, locker rooms, or break areas.
- Creating separate, dedicated public entrances from employee entrances that provide additional barriers between staff and outside visitors.

- Expanded general assembly space to provide adequate personal space. Additional screening infrastructure to accommodate potential virus upticks.
- Furniture and fixtures that can be adequately maintained and sanitized.
- Hands free technology—faucets and plumbing fixtures, doors, light sensors, and proxy badging can all decrease the amount of generally touched surfaces.
- Additional screening infrastructure to accommodate potential virus upticks.
- Adequately maintain and sanitize furniture and fixtures

Planning Effectively for Building Expansion

While the past year has brought challenges, it also provided opportunities for new strategies and approaches. When hiring a consultant, make sure you understand a firm's full range of services.

A multi-disciplinary design team and partner contractor can help you balance project goals with budget and capital resources. In addition, engaging your internal human resources team for input and feedback can help you meet employee attraction and retention goals, positioning your company for long-term success.

ISG info:

ISG, a 100 percent ESOP firm, has a rich history, which extends over 48 years, of building trusting relationships with clients, stakeholders, and the community. As a full-service architecture, engineering, environmental, and planning firm with 300+ professionals in offices throughout Iowa, Minnesota, Wisconsin, and South Dakota, ISG provides exceptional services, strategies, and guidance to a wide range of markets nationwide. ISG fosters strong collaboration between all firm disciplines, providing clients a diverse knowledge base, high level of creativity, and broad perspective.