

Technical Bulletin

RESILIENCE IN BUILDING DESIGN

The latest buzz word with Architects and the building industry is “resilience” in buildings. Resilience is defined as the ability to prepare and plan for, absorb, recover from, and adapt to adverse events. In simple terms, buildings that can withstand adverse events or can be quickly and easily repaired after such events are more resilient.

Five actionable commitment areas have been identified in the Building Industry Statement on Resilience.

- **Research** better materials, design techniques, construction procedures to improve the standard practices.
- **Educate** the professionals to provide designs and to create more resilient communities.
- **Advocate** at all levels of government for more effective use of land, better building codes and smarter investment in the construction and maintenance of our buildings and infrastructure.
- **Respond** alongside emergency managers when disasters occur. Work to help survey damage and coordinate recovery and rebuild efforts.
- **Plan** for the future, proactively envisioning and pursuing more sustainable buildings.

Metal roof and wall panels are well suited for resilient building design. For our part, where resilience is a goal in projects we are bidding, heavier gauges, stronger panel systems, and longer lasting materials would be good recommendations. For example, a project in Florida right on the coast would be susceptible to intense sun and heat, high winds, significant rain fall, and a salt spray environment. Recommending a Kynar painted .040” aluminum ML200 roof system over a solid deck with a continuous layer of high temperature Titanium PSU would be a great way to make the roof system more resilient in the event of a hurricane.

An example of making a building more resilient would be recommending a heavier gauge exposed fastened wall panel compared to a concealed fastener panel. Concealed fastener panels may look nicer, but an exposed fastener panel will be stronger and more resistant to wind loads and in the event of a catastrophic event such as a fire or a tornado, an exposed fastener panel can be replaced much easier and quicker than a concealed fastener panel.

Heavier gauge panels with more fasteners will always make the project more resistant to damage and more likely to continue to function, even if dented or dinged by wind blow objects and, thus, or resilient.