



**Licking County Monolithic Dome Tornado / Severe Weather Shelters Utilized
During Recent Storm Events**

by Jim Mickey, Licking County Environmental Planner

Construction of tornado/severe weather shelters at mobile home parks was listed as a mitigation priority during the development in 2003 of the first Countywide All Natural Hazards Mitigation Plan, or CANHMP, which was approved by local government entities and the Federal Emergency Management Agency (FEMA) back in 2004. By 2005, an application was made to FEMA for Pre Disaster Mitigation – Competitive funding to make this part of the plan a reality.

Once funding was secured in the amount of nearly \$775,000 for 6 locations in 2007, which included 75% Federal funding and 25% Local matching funds provided by the mobile home park owners, and agreements were in place, construction began in earnest at 2 of the locations in the spring of 2009.

The resulting tornado domes at Summit Ridge Estates in Pataskala and Wilkins in Mary Ann Township have been utilized several times this year to provide shelter from the severe storms that have taken aim at Licking County this spring and summer thus far.

The severe weather shelters are constructed of steel reinforced concrete cast in place to a reinforced ring foundation and concrete floor. The structures provide what FEMA terms “near absolute” protection from tornadoes, high winds, and severe weather.

For example, the larger Summit Ridge was constructed of over 100 cubic yards of concrete with 8,000 pounds of steel rebar reinforcement. The structure has over 800 square feet of floor space, which can provide short-term shelter (up to 3 hours) for up to 315 people per FEMA requirements. Over 4,000 pounds of polyurethane insulation and the dome or “igloo” shape of the structures provide about 40% less surface area and no flat walls, contributing to the energy efficiency and wind resistance of the shelters.

For more information and a look at the Summit Ridge Dome all weather shelter, visit the Monolithic Dome web site at www.monolithic.com and search for Tornado Shelters, or visit <http://www2.nbc4i.com/news/2010/sep/26/3/tornado-domes-ar-241925/> for a recent story by Storm Team NBC 4 Meteorologist Ben Gelber.