



## Flex Cool Roof Systems Shine at Texas Schools

LaMarque Independent School District (ISD) is comprised of seven different school facilities in a bustling community within a few miles of the Gulf Coast. The community is within ten miles of the major petroleum port of Galveston. The area features numerous refineries and chemical processing facilities, and is located about 30 miles south of Houston. In the midst of all that activity, LaMarque thrives and is a pleasant place to live.

Ranging from Elementary through Middle School and High School, including a Special Programs facility of over 75,000 square feet, LaMarque ISD needed a comprehensive approach to address their roofing needs on all their buildings.

After initial conversations between LaMarque ISD managers and Armko Industries, Inc., a full service roofing consulting firm located in Flower Mound, Texas, Armko's Mike Perry took the lead role in the LaMarque project.

"If you've ever been to southern Texas, you know it can be extremely hot and humid for much of the year," Perry commented. "Schools in this region require air

conditioning if students are going to be able to focus on their work. As with energy costs everywhere, the school district was interested in a roofing solution that could help reduce energy costs, specifically a reflective white roof to help reduce air conditioning loads."

A highly reflective white roof surface can reduce roof temperatures from 180° for a black roof to 90° for a white roof such as the Flex Cool Roof System.

Perry worked closely with Flex Roofing Systems technical personnel to draw up specifications for the LaMarque buildings. Flex was chosen because of the company's history of quality applications at schools and other public buildings sharing the same environmental and climate conditions, including proximity to salt water, potential for high winds, hail, high heat and humidity.

There were three primary reasons the school district selected a Flex Cool Roof Single Ply system. First, heat reflection. With a reflective surface, school managers expect to save from 30% to 65% in air conditioning cost compared to performance with their black roofs. The

white reflective roof can be seen as a long term investment with an excellent return. The higher the fuel costs go, the greater the savings over time. Secondly, just as important to LaMarque ISD officials was resistance to hail damage, which had seriously affected some of the old roofing systems that Flex replaced at LaMarque.



**Flex roof membrane seams are hot-air welded. No solvents, glues or tapes are required.**

Finally, ease of repair was another deciding factor. The thermoplastic nature of Flex Single Ply means that the roofing surface can be repaired with a simple hot air welding gun over an indefinite period of time. This is because the DuPont Elvaloy® ingredient in all Flex single ply roofing membranes inhibits migration of plasticizers in the material to keep it pliable and in a workable state indefinitely.

Scope of the re-roofing work on the seven buildings covered a wide range, from new construction to re-roofing projects that included tearing off the old roof. In all cases the roof covering was Flex FB Elvaloy White fleece-backed 45 mil roof membrane, adhered with hot asphalt. In some cases, new insulation and a vapor barrier were installed to the deck beneath the Flex single ply. In other cases, the roof was repaired and primed, then covered with 2 ply BUR (built up roof) before Flex was installed.



John A. Walker Roofing, Inc., was the contractor. Dr. Carlos Price, LaMarque ISD Assistant Superintendent and Business Manager, had only good things to say about the entire project. “The Flex material met all of our objectives for conserving energy, resistance to hail damage and ease of repair over time.

All participants in the project performed exactly as we expected and the entire process went very smoothly. We will continue to monitor our energy costs, as we expect to see the savings accrue significantly over time. The entire LaMarque ISD project included seven buildings with a total roof coverage of 358,560 square feet of roof surface.

Flex is a member of the Cool Roof Rating Council (CRRC), a non-profit association that provides independent third party ratings for measuring effectiveness of reflective roofing materials. Flex White cool roof single ply systems provide exceptional performance according to CRRC testing results. As a point of reference, California’s Title 24 energy efficiency code requires a cool roof, defined as having initial solar reflectance of 0.70, and thermal emittance of 0.75 for low sloped roofs. Flex White Cool Roof Systems have an initial solar reflectance of 0.87 and thermal emittance of 0.87 for low sloped roofs.

In addition to exceptional technical support, Flex Roofing Systems supplies a wide range of thermoplastic single ply roofing membranes and accessories to provide building owners with a state-of-the art roofing system.

**Flex Cool Roof systems not only save energy but resist hail damage and are easy to repair.**



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