

General Description:

- **Location:**
Kalamazoo, MI
- **Profile:**
31,500 sq. ft.
- **Project:**
Roof Replacement

Services Provided:

- Evaluation
- Design Development
- Construction Document
- Bidding
- Construction Administration & Review

Challenge:

- Existing roof had severe drainage problems

Solution:

- Tapered insulation, insulation saddles, crickets, and new drains were designed as a part of a new drainage system.

Kalamazoo Public Schools *Arcadia Elementary School*

The existing roof experienced "ponding" water conditions up to six inches in depth at some locations. There were extreme areas of bare exposed felt. Splits and fractures

provided for competitive bidding. During the construction phase, the existing roof, insulation, and flashings were removed down to the metal deck. At this point a tapered insulation system, insula-



Overview of Arcadia Elementary School

occurred along the edge details. In order to solve these problems, a tapered insulation system was designed to incorporate positive slope throughout the field of the roof. Insulation saddles and crickets were also designed to aid with water dispersion. New drains were strategically designed to complement the new drainage system. A snap-lok fascia system was incorporated to prevent splits and fractures along the edge detail. After the design phase, construction documents were

tion saddles, crickets and new drains were installed. The Manville roof membrane system was constructed and fabricated with four plies of type IV fiberglass



Completed installation of built-up roof system



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Previous roof had bare exposed felt which allowed "wicking" of moisture into the roof system..



Repairs were made to the existing metal deck before installing the new roof system. New lumber curbing was installed to raise the height and allow for new expansion joint and coping covers.

felts. The protective finish consisted of a final flood coating and specified roofing gravel. The flashings were constructed of reinforced CSPE (Hypalon) as furnished by Goodyear. The tapered insulation system and the new additional drains did prove successful in eliminating the previous ponding water conditions. The M & M snap-lok fascia system was installed to prevent the splits and fractures experienced in the previous edge detail. The anodized dark bronze fascia system conformed to the existing perimeter architec-



Installation of second layer of insulation.

<u>FEATURES</u>	<u>BENEFITS</u>
Designed tapered insulation	Allowed water to flow towards the drains
Designed insulation saddles and crickets	Prevented standing water by aiding in dispersion
Designed new drains	Helped eliminate ponding
Designed new fascia system	Prevented splits and fractures along edge detail
Life cycle cost (high rating for longevity)	Maximizes return on investment
Provided Field Quality Assurance	Ensures higher quality end product

tural panels. The elastomeric flashings were installed to accommodate expansion and contraction at the flashing transitions. Construction /Review and Administration was provided for all phases of work in progress. Kalamazoo Public Schools was able to save money in the long term with a roof that did not cause ponding water problems and had a high rating for longevity. ■

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