

**General Description:**

- **Location:**  
Detroit, Michigan
- **Profile:**  
State-of-the-art hospital facility
- **Project:**  
Building Envelope Program -  
Evaluation & Long-Range Plan

**Services Provided:**

- Building Envelope Evaluation
- DMS Implementation
- DMS IT Task Management
- Development of Long-Range Program

**Challenge:**

- Numerous elevations with many different components
- Existing drawings were not completely accurate
- Original materials no longer available

**Solution:**

- Utilized multiple crews and information gathering tools
- Performed extensive verification
- Developed alternative options for remediation

## Children's Hospital of Michigan *Main Hospital*

Children's Hospital of Michigan, the only freestanding hospital in Michigan devoted exclusively to caring for children, wanted to have an assessment performed on its main hospital. After spending many

le. Another difficulty arose with the existing drawings for the building. Some of the original information was incorrect or had been changed without notation. Utilizing various methods,

StructureTec overcame this challenge with extensive verification. This process was also completed on four penthouses on the facility. This extensive evaluation was the first step to establishing priorities for repair and remediation. After this process was complete, drawings were developed to show the dimensions, as well as the entire inventory. During this process,

each deficiency on each elevation were also recorded. Once the entire inventory and evaluation had been performed, a detailed restoration plan was assembled.



*Children's Hospital of Michigan.*

years focused on facility needs, the new leadership wanted to take a more proactive approach to their facility maintenance. StructureTec was contracted to perform a concerted building envelope evaluation of all of the hospital's assets.

The first challenge StructureTec faced was with the numerous elevations on the facility. This was compounded because each elevation needed to be broken down into its components and given a WCI (weatherproofing condition index) rating. Utilizing multiple crews and very structured, organized information gathering tools, StructureTec met this chal-



*Periodic staining on exterior masonry.*



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*Concrete had deteriorated over time, spalling and requiring patching.*



*Heavy rust staining is evident on the concrete. The mortar is deteriorated, and vegetation is growing too close to wall.*

This presented an additional challenge because many of the original materials were no longer available. StructureTec spent time researching alternative options for correcting the problems, outlining positives and negatives, as well as life expectancy of each option. Children's Hospital was involved in

this process as future building usage and expectations were important elements in assembling a viable plan for the restoration. Consultations were also held with members of the construction industry, in order to create detailed, realistic budgets for completing each step of the remediation. All of this information was then compiled in a database and a comprehensive report.

In conclusion, Children's Hospital of Michigan now has an extensive inventory of its building envelope assets on a database and a long-range restoration plan with all the budgets necessary for future planning. ■

### FEATURES

- Delineates integrity of each building envelope component
- Develops a weatherproofing condition index
- Delineates which weatherproofing components require restoration and which require maintenance
- Prioritization which encompasses all weatherproofing components
- Presents an organized, structured report containing all acquired information

### BENEFITS

- Ability to prioritize necessary building envelope restoration
- Establishes budgets for future capital projects and ongoing maintenance
- Allocates their resources properly, maximizing the return on investment
- Provides an inventory of all facility assets to enable accurate forecasting
- Supplies a presentation tool which can be better understood by upper management



*Multicourse, stair-step crack ran through the masonry and mortar.*

Total Building Envelope Management Solution<sup>SM</sup>

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