

**General Description:**

- **Location:**  
Kalamazoo, Michigan
- **Profile:**  
Medical Building
- **Project:**  
Exterior Wall Restoration

**Services Provided:**

- Emergency Evaluation
- Design Development
- Construction Management
- Construction Document
- Negotiations
- Field Quality Assurance

**Challenge:**

- Emergency status
- Critical time frame
- Entire section required replacement

**Solution:**

- Organized a strategy for safety and coordination
- Served as Construction Manager to fast-track project
- Designed replacement of masonry ties and units

## Borgess Medical Center Main Complex - South Tower

Borgess Medical Center (BMC), a major health care provider in Southwest Michigan, discovered on a Wednesday night that a section of their exterior brick masonry was detaching from the building. This urgent condition was noted by security who then immediately taped off the area due to the potential pedestrian hazard.



Overview of completed wall restoration.



Exterior masonry brick is pulling away from interior wythe.

Services to analyze the initial problem and to develop a strategy for corrective action. During the evaluation, it was noted that the problem was being caused by missing and deteriorated masonry wall ties/anchors which had never been completely sealed. This had been a progressive failure over time and several attempts had been made to simply caulk the openings. These repairs failed to address the cause of the problem. The moisture ingress continued, and after numerous freeze/thaw cycles over multiple seasons, this ingress had spurred several problems. Degradation had occurred to the masonry units, but the primary cause of the distress was due to the corrosion of the metal ties which were no longer able to hold the masonry units in place.

The emergency status posed a unique challenge because the project needed to be completed in a very safe and timely manner. StructureTec solved this

StructureTec was promptly notified the next morning and engaged to provide engineering ser-



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Overview of work in progress.



Demolition included removing degraded masonry units and ties.

challenge by proceeding as the construction manager for the job, enabling the project to begin immediately. Another challenge was that the project was very sensitive and occurred in a high traffic area. StructureTec solved this by having the area cordoned off and having internal patients and personnel temporarily moved to another area of the hospital.

As Construction Manager, StructureTec solidified a contractor the next day and demolition began that Friday afternoon. The demolition continued over the weekend and involved removing existing masonry units and ties, as well as providing temporary weatherproofing. Simultaneously, StructureTec was involved with the corrective design and details. By Monday morning, the reconstruction of the wall began. New masonry ties were installed to provide

solid support for the exterior brick. New masonry units were installed to provide a structurally sound, weatherproof exterior wall. As Construction Manager, StructureTec was able to fast-track the project and coordinate the subtrades, therefore providing the proper sequencing and scheduling to meet the project criteria. BMC benefitted by having only one contact with which to communicate because of the

single source responsibility of the Construction Manager role.

In conclusion, StructureTec was able to deal with an emergency situation in an organized, safe, and timely manner, providing needed support to BMC. This allowed BMC to resolve the emergency situation and achieve the greatest possible return on investment. ■

| FEATURES   | BENEFITS   |
|--|--|
| Single Source - Turnkey Approach                   | Able to fast track the project on a timely schedule          |
| Subtrades coordinated through Construction Manager | Sequencing & scheduling coordinated to meet project criteria |
| One source responsibility                          | Owner deals with one contact                                 |
| Reconstructed deficient masonry wall               | Ensured structural integrity of exterior wall                |
| Replaced existing defective masonry units          | Provided structurally sound exterior wall                    |
| Installed new masonry ties                         | Provided solid support for exterior brick wall               |
| Provided Field Quality Assurance                   | Ensured high quality end product                             |

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