

BUILDING DESCRIPTION

Date:

Client:

Project:

BCG Project

Proposal No:

No:



April 13, 2009

Mr. Steve Maki

Community Planning & Economic Development

105 5th Avenue South – Suite 200

Minneapolis, MN 55401-2534

Facade Evaluation for the

Hollywood Theater 2815 Johnson St NE Minneapolis, MN 55418

R740-09-1

BCG P08205

West Elevation Looking North

SUMMARY OF RESULTS

The Hollywood Theater is located at 2815 Johnson Street NE in Minneapolis, Minnesota. The building has been vacant for several years. The building has a newer roof and the interior finishes have been stabilized in the recent past.

The building is about 30' tall and constructed with a brick and stone masonry facade and a partial basement level. The building is constructed with steel columns and roof trusses, and brick and clay tile mass masonry infill walls. A stone masonry chimney exists at the northwest corner that has previously installed steel banding to prevent movement.

No original design drawings were available for our review.

On January 21, 2009, and January 22, 2009, Buildings Consulting Group, Inc. was on site to perform close up review of isolated locations and review test openings and stabilization repairs performed by a restoration contractor.



West Elevation, South Corner Parapet

The following paragraphs summarize the results of our review:

West Elevation Parapet Limestone Stabilization:

- The southern most stone cap at the west elevation was removed to expose anchors for the stone below.
 - Stone caps are set in a bed of mortar with no dowel pins.
 - The top stone anchors for the face stone below are set in this mortar bed.
 - $\circ\,$ The top, southern face stone had loose top anchors and was removed and reset.
- At the top edge, 2 stone anchors were observed per stone. No bottom anchors were present. The stone sat on the next stone below and relied on mortar bond for lateral support at the bottom face.
- To temporarily stabilize the stone at this location, helical restoration ties were installed (4 per stone) at 3 stone at the parapet corner on January 22, 2009.
- BCG observed additional stone displacement along the top course of

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West Elevation Parapet Stone Displacement



Restoration ties installed



Test opening at north elevation



New sheet metal cap flashing

DISCUSSION AND RECOMMENTATIONS

stone along the parapet wall during review from the aerial lift.

- Stone cap mortar joints and mortar bed were severely deteriorated.
- Based on these observations, BCG recommended installation of (4) helical restoration ties per stone along the top course of stone (12 total) at the west elevation.
- Additional helical tie installation was completed on January 22, 2009.

North Elevation, Western Most Column:

- Fixed scaffolding was erected at the north elevation, west most column cover.
- At this location, an existing ³/₄" thick concrete stucco with metal lath exists over the brick masonry column cover.
- The entire column cover was shifted outward away from the building creating a gap as wide as 1 ½" at the top. The steel column and backup masonry is exposed at this opening.
- All keyed, or "toothed" in brick had fractured or debonded and pulled away from the wall, eliminating all lateral support of the brick column cover.
- Restoration ties were installed in the column cover at 16" on center on January 22, 2009, to stabilize the facade prior to observations or test cuts.
- An approximately 2 to 3 square foot test opening was made at the top of the column, exposing the top of the column and the backup masonry.
- The exposed column displayed surface corrosion over about 1/3 of its area. The remaining area displayed original red primer in varying condition.
- No significant section loss by corrosion was observed at the steel column.
- After observations were completed, salvaged and replacement brick masonry were reinstalled and a new sheet metal cap flashing was fastened to the top of the brick masonry column cover to prevent excessive water infiltration into the wall.

West Elevation Stone Facade:

- The mortar joints at the stone facade are in poor condition with extensive erosion and deterioration.
- Removed stone at the southwest corner parapet did not expose significant steel stone tie corrosion.
- Steel stone ties exist at the top edge of the stone only. Lateral support at the bottom edge of the stone is provided by frictional forces between the stone and mortar joints.
 - o Therefore, mortar joint condition will eventually determine the

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West Elevation mortar joint deterioration

lateral stability of the stone facade.

- No signs of stone movement or other distress was observed at the west elevation at the time of our review except along the parapet where stabilization repairs were completed.
- No other immediate repairs are recommended at this time at the west elevation limestone facade.

North Elevation, Western Most Column:

- Stabilization repairs completed on January 21, 2009 are considered a temporary stabilization, not a longer term repair to restore the masonry column cover to its original condition. Due to freezing temperatures during stabilization repairs, newly installed masonry mortar will deteriorate at an accelerated rate and will require repointing in the next few years.
- In its current condition, additional distress will continue to progress at an increased rate at this location. The temporary stabilization repairs did not restore the water tightness of the wall system at this location. The existing brick masonry cracking and deterioration will require repair in the future.
- Our observations at this location gave no indication that widespread hidden distress is present at other steel columns or masonry column covers.

Brick Masonry at the North, East, and South Elevations including Column Covers:



Brick masonry column covers at the north elevation

FEASABILITY OF STRUCTURE MODIFICATION

- The remaining brick masonry column covers at the north and south elevation were generally in fair condition with only isolated cracking at the "toothed" brick providing lateral support.
- In general, the exposed horizontal brick at the top of each column cover are in poor condition with significant deterioration to the mortar joints and brick body.
 - We recommend installing a metal cap flashing at the top of each column cover on the north and south elevations.
 - The cost of this work is estimated to be about \$6,000 for a total of 8 locations.
- The brick masonry mortar joints at the north, east, and south elevations are generally in poor condition with significant erosion observed especially at the upper half of the walls.
- Vertical cracking was observed at many locations through the brick masonry units and mortar joints.

Addition of Roof Top Mechanical Unit

It is our opinion the addition of a roof top mechanical unit is feasible. We recommend any future unit be located on the flat precast concrete plank roof at the west end of the building.

- A roof top mechanical unit will need to be properly sized and designed by a mechanical engineer.
- An analysis of the roof system was not completed as part of this report. The existing roof system will need to be analyzed by a structural engineer to determine if a particular unit will be sufficiently supported. Supplemental structural support may be

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required.

Floor Slab Leveling in Auditorium

- The concrete floor slab in the auditorium appears to be slab on grade over the majority of the area. Structurally supported concrete only exists over air duct chases.
- It is our opinion the addition of a topping to level part of the floor slab in the auditorium is feasible.
 - We recommend soil testing and analysis of the existing concrete slab to verify the capacity of the existing slab and soil based on a proposed topping thickness.
- An analysis of the existing slab, and a new topping was not completed as part of this report.

Installation of Windows at North and South Walls

- With properly designed steel lintels, windows or other openings are feasible along the north and south elevation masonry walls between the structural columns.
- Steel lintels were not designed as part of this report.

If you have any questions, or if we may be of further assistance, please call Keith Pashina at 612-789-1776, or Ryan Riley at 612-789-6696, ext. 29.

Sincerely,

Buildings Consulting Group, Inc.

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Ryan E. Riley, P.E. Project Engineer

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