

CITY OF LOS ANGELES

CALIFORNIA

TONY M. ROYSTER
GENERAL MANAGER
AND
CITY PURCHASING AGENT



KAREN BASS
MAYOR

DEPARTMENT OF
GENERAL SERVICES
ROOM 701
CITY HALL SOUTH
111 EAST FIRST STREET
LOS ANGELES, CA 90012
(213) 928-9555
FAX No. (213) 928-9515

August 29, 2024

Matthew W. Szabo, Chair
Municipal Facilities Committee
200 N. Main Street, Suite 1500
Los Angeles, CA, 90012

STRUCTURAL EVALUATION OF THE JAMES K. HAHN CITY HALL EAST BUILDING

On June 25th, 2024, staff from the Structural Engineering Division (SED) of Public Works Engineering joined members of the Department of General Services (GSD) Building Maintenance Division (BMD) for a site visit to the James K. Hahn City Hall East, located at 200 N. Main St, Los Angeles, CA 90012. The objective of the visit was to conduct a visual inspection of the reported deterioration in the building columns on the southwest side, near the planter area and open court. SED provided an assessment based on the visual inspection. (see attached)

BACKGROUND

The James K. Hahn City Hall East building, constructed in 1970, features steel moment frames with concrete floors, and the steel columns are encased in concrete. Recently, GSD building maintenance staff discovered spalling of concrete in the basement parking level P-2. They also noted large cracks in the concrete encasing the steel columns and observed corrosion in the rebars along the columns at this level. The deterioration of these columns has been attributed to water infiltration into the basement, caused by the failure of both the expansion joints and waterproofing in the planters. BMD staff are currently working with SED to seek a solution to these ongoing issues.

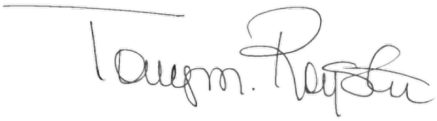
NEXT STEPS

SED has recommended that a shoring system be installed before any testing is started. BMD contacted Goss Construction Co., Inc. to perform detailed calculations for such shoring. Goss Construction Co., Inc. provided a proposal with a detailed scope of work. The scope of work has been approved by the Bureau of Engineering and BMD issued a Notice to Proceed to Goss Construction Co., Inc.

Once the shoring is completed, BMD will report back on the total anticipated cost of repairing/retrofitting the columns and slabs at City Hall East.

RECOMMENDATION

That the Municipal Facilities Committee note and file this report.

A handwritten signature in black ink, appearing to read "Tony M. Royster". The signature is written in a cursive style with a long horizontal line extending to the left from the start of the name.

Tony M. Royster
General Manager

Attachment

CITY OF LOS ANGELES
INTERDEPARTMENTAL CORRESPONDENCE

Date: July 16, 2024

To: Matthew Rocke, Assistant Director
Department of General Service

Attention: Paul Merritt, Director of Building Maintenance

From: 
Shailish "Sunny" Patel, S.E., Division Engineer
Structural Engineering Division

Subject: **STRUCTURAL EVALUATION OF THE JAMES K. HAHN CITY HALL EAST-
200 N. MAIN ST. W.O. EXX01002**

INTRODUCTION

On June 25th, 2024, Structural Engineering Division (SED) staff accompanied City Hall East (CHE) building maintenance staff to perform a site visit for The James K. Hahn City Hall East located at 200 N. Main St, Los Angeles, CA 90012 (Photos 1 and 2). The purpose of the site visit was to perform a visual inspection of the reported deterioration in building columns (A to G) located on southwest side of the building adjacent to the planter area and open court. (Photos 3, 4 and 5).

This assessment is solely based upon a visual inspection. This evaluation is limited to the elements explicitly identified in this report. No other structural elements of the building are part of the scope of this report.

BUILDING DESCRIPTION

The James K. Hahn City Hall East building was constructed in 1970 and comprises of steel moment frames with concrete floors. Steel columns are encased in concrete. Recently, CHE building maintenance staff observed spalling of concrete pieces in the basement parking F-2. Additionally, visible large cracks in the concrete of the encased steel columns and corrosion in rebars were observed along the columns at the F-2 level. The failure of both the expansion joints and waterproofing at the planters have caused water to seep into the basement and this has resulted in the column deterioration. CHE staff are seeking a solution to address the ongoing issues.

STRUCTURAL INSPECTION

The following observations were made:

Basement Ceiling:

- The soffit at the F-2 basement parking shows considerable deterioration and spalling. Rebars were exposed and are corroded. This appears to be the result of water ingress in the basement from deteriorated expansion joint and planter waterproofing (Photos 6, 7 and 8).
- A temporary collection system has been installed to collect the loose and broken concrete pieces from falling on the vehicles parked under the affected area (Photo 9).
- Efflorescence was observed at several locations (Photo 11).

Expansion Joint and Waterproofing:

- An expansion joint is located in between the building (edge of columns) and planter area of the open courtyard at the F-1 Level (Photos 4 and 5).
- The waterproofing at the planter wall shows considerable deterioration (Photo 6), due to lack of maintenance.
- The concrete soffit at F-2 level, located beneath and directly adjacent to the expansion joints and waterproofing, shows deterioration and spalling concrete (Photo 12).

Concrete Encased Columns:

- The columns at F-2 level have significant cracks (up to 5/8" wide and spanning entire height of the column), efflorescence, spalling and corrosion of the steel rebars (Photos 13 and 14). This condition is observed at all seven columns (A to G) on the southwest side of the building.
- Honeycombing was also observed on the concrete columns at the F-2 level (Photo 15).

Concrete Parapet Wall:

- A noticeable warping was observed in the parapet wall spanning between columns F and G at the street level along main street. This might be a result of foundation settlement or inadequate design/construction (Photo 17).
- No cracks or deterioration was observed on this parapet wall.

RECOMMENDATIONS

SED recommends the following:

Cordon off access to the areas of concern (photos 9 and 12). Do not allow vehicular parking or pedestrian traffic in this area until it is repaired/retrofitted. Limit access to construction, engineering and inspection personnel only.


A nondestructive testing (NDT) should be performed to determine the extent of corrosion in the concrete columns and concrete slabs. The deteriorated expansion joint and waterproofing at the open courtyard and behind the planter walls need to be replaced and regularly maintained.

SED recommends the following non-destructive tests to assess the condition of existing concrete and rebars:

1. Ultrasound Pulse Velocity (UPV) Test in accordance with ASTM C597
2. Corrosion Half-Cell Potential Survey in accordance with ASTM C876

The tests results will provide information on how to proceed with the repair/retrofit recommendations.

The repair/retrofit procedure should be designed by a California Licensed Civil/Structural Engineer and depending on the extent of repair may need to be approved by LADBS prior to construction. If you have any questions or need additional information, please contact myself or Manan Bhalja of my staff at (213) 485-5363.

 LH for Manan Bhalja

SP/MA/MB

cc: SED File

APPENDIX A - PHOTOGRAPHS

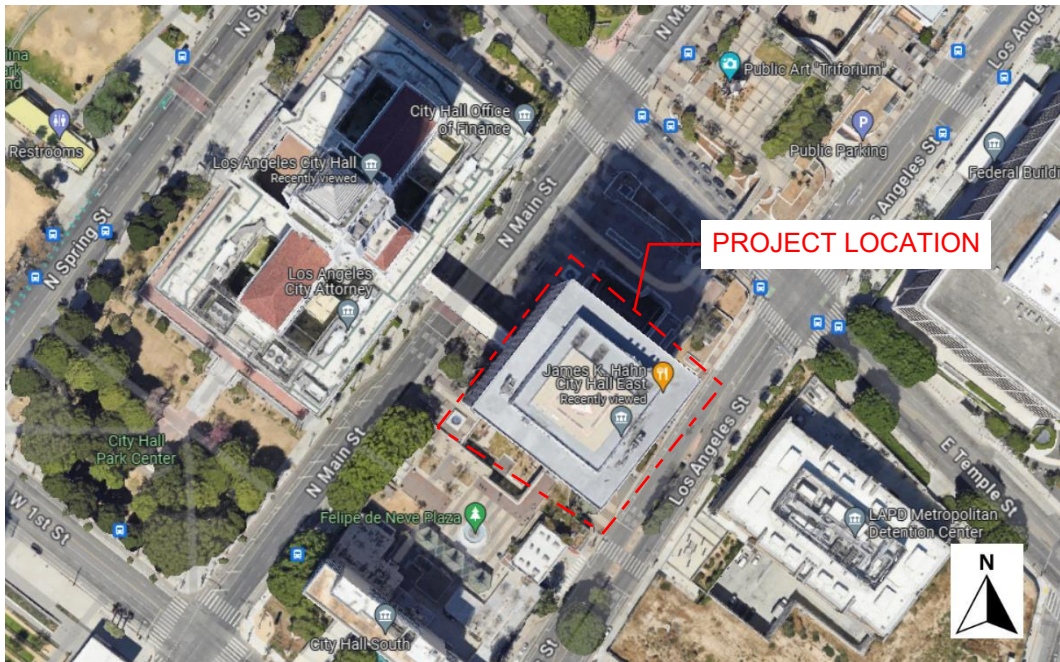


Photo 1: Site Plan

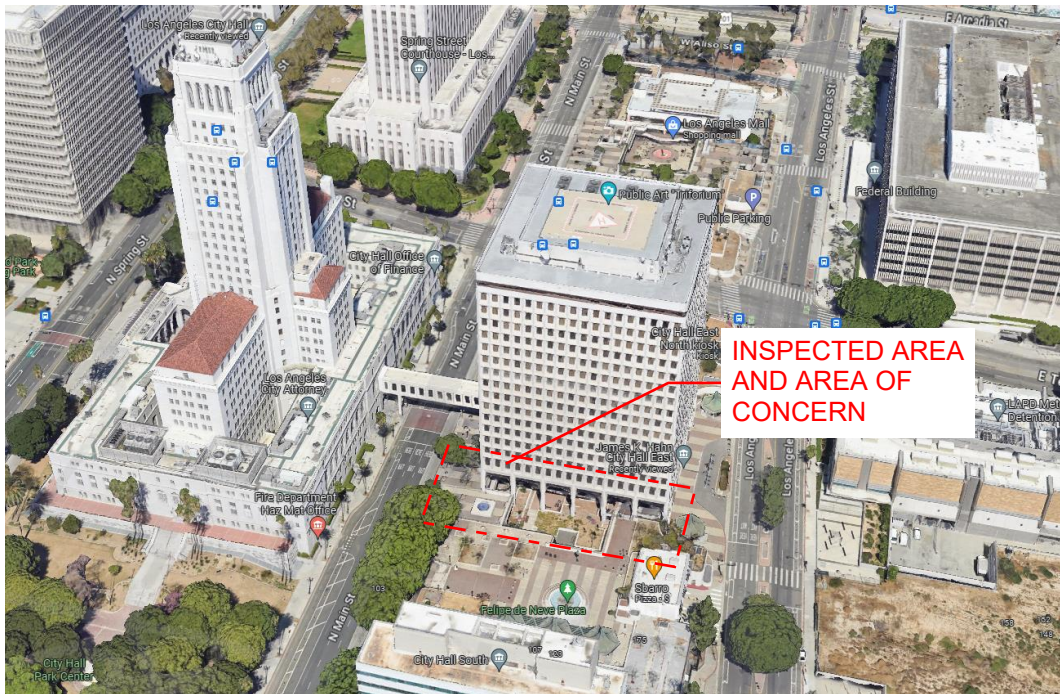


Photo 2: Aerial Photo

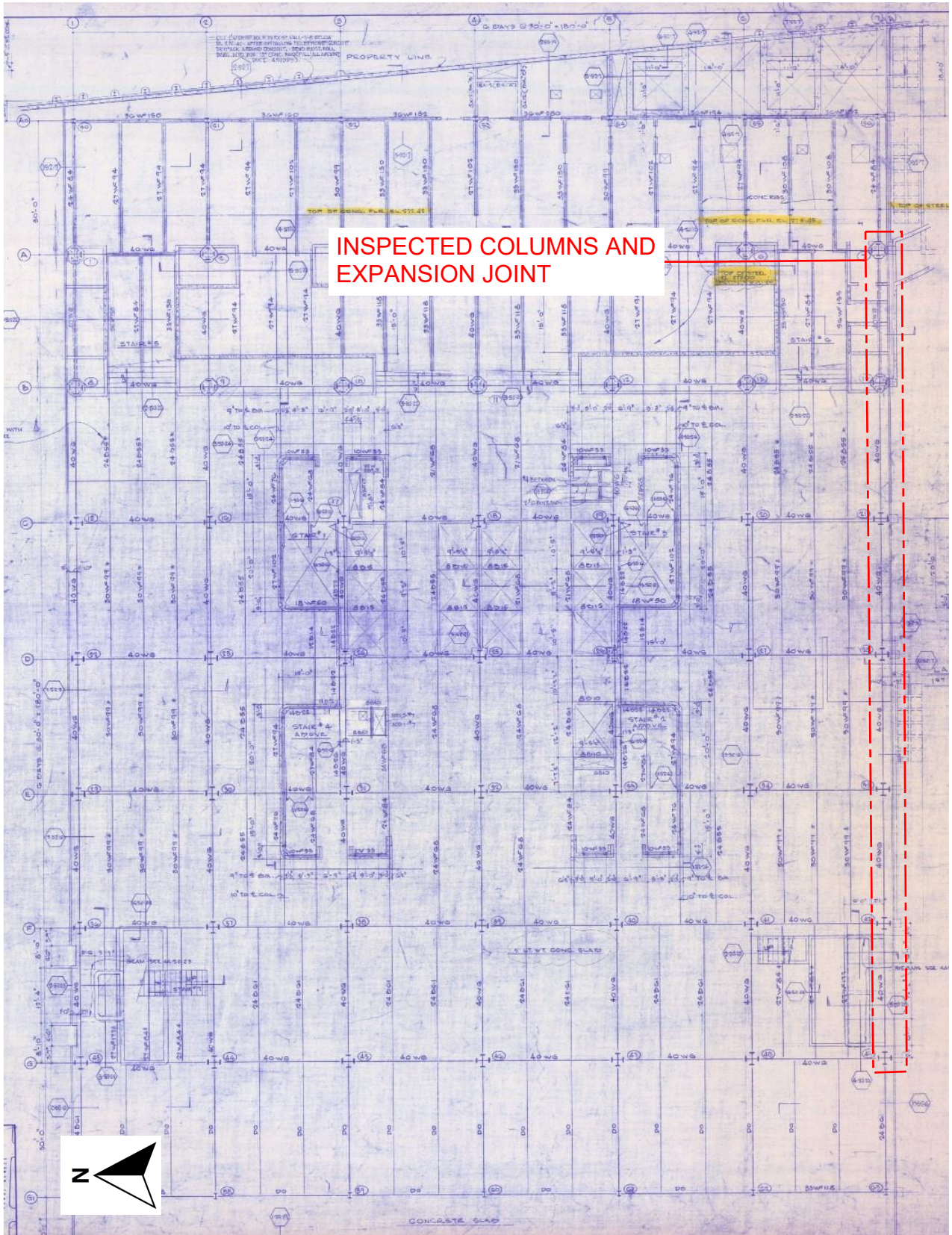


Photo 3: As-Built F-1 Floor Framing Plan

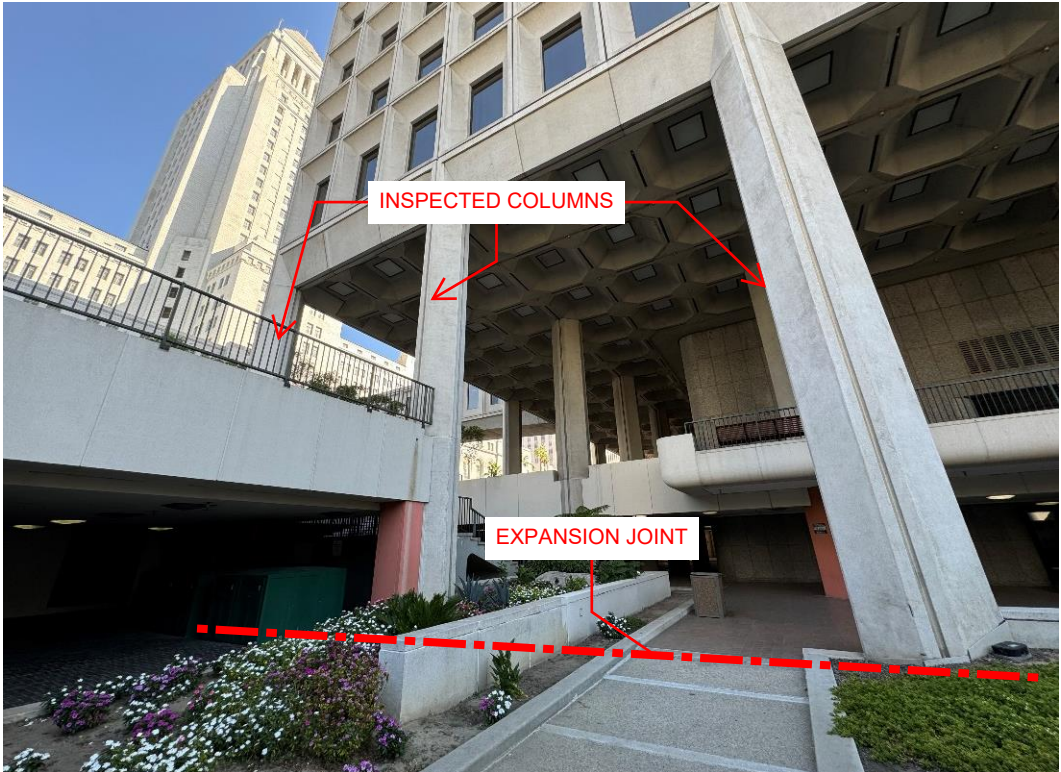


Photo 4: Columns Above Ground

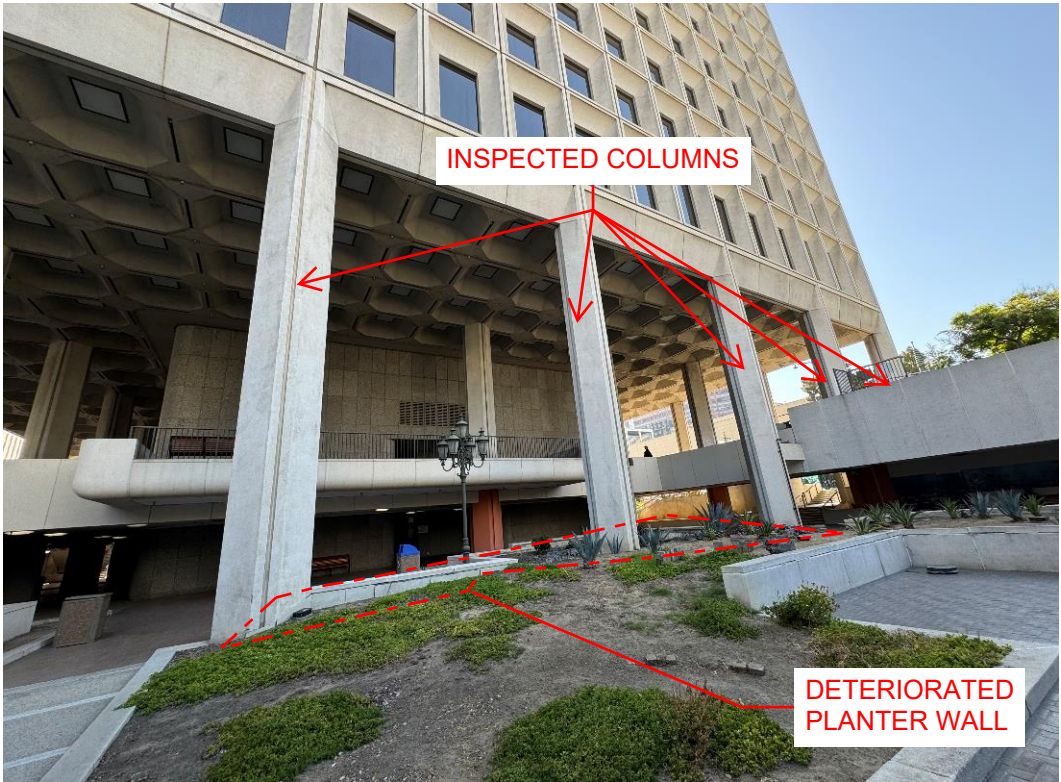


Photo 5: Columns Above Ground

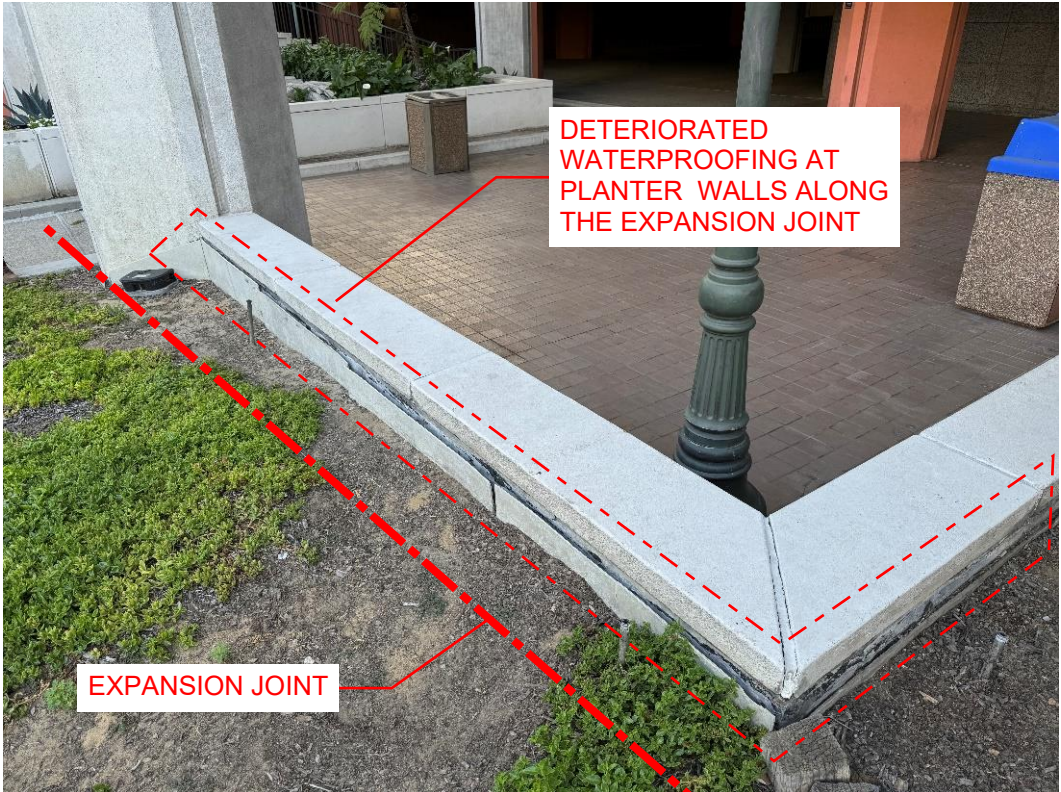


Photo 6: Deteriorated Waterproofing at Planter Walls

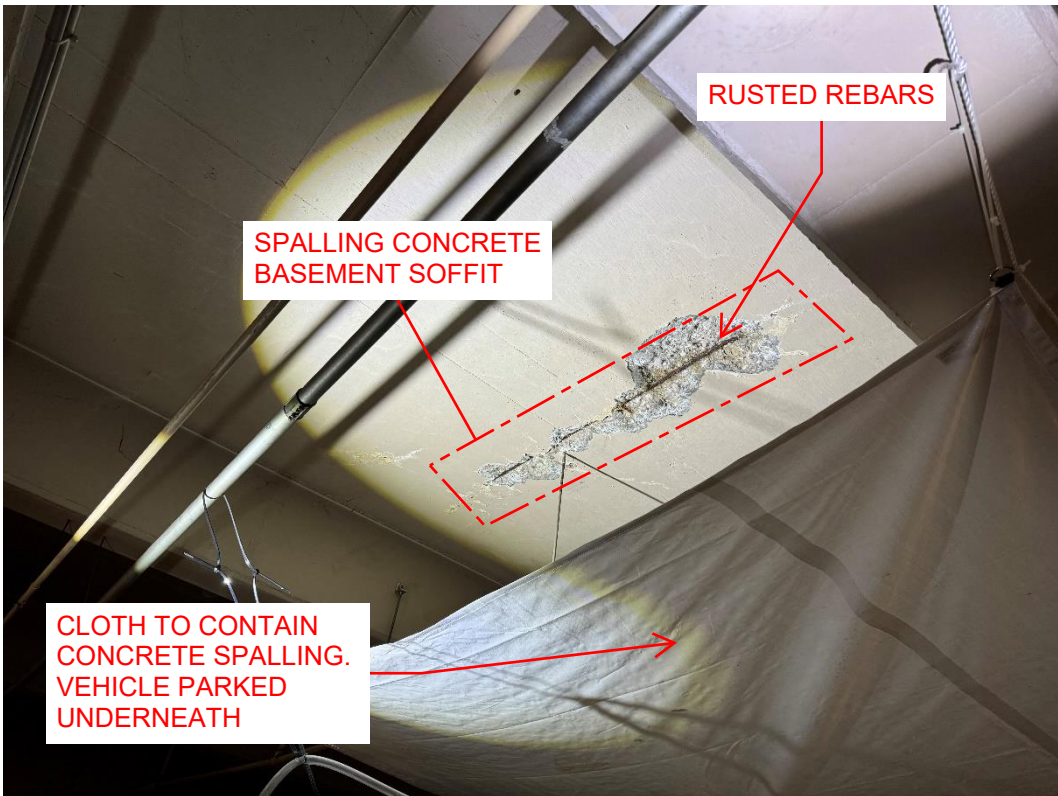


Photo 7: Deteriorated Waterproofing at Planter Walls



DETERIORATED
WATERPROOFING

Photo 8: Deteriorated Waterproofing at Planter Walls



RUSTED REBARS

SPALLING CONCRETE
BASEMENT SOFFIT

CLOTH TO CONTAIN
CONCRETE SPALLING.
VEHICLE PARKED
UNDERNEATH

Photo 9: Spalling Concrete Soffit

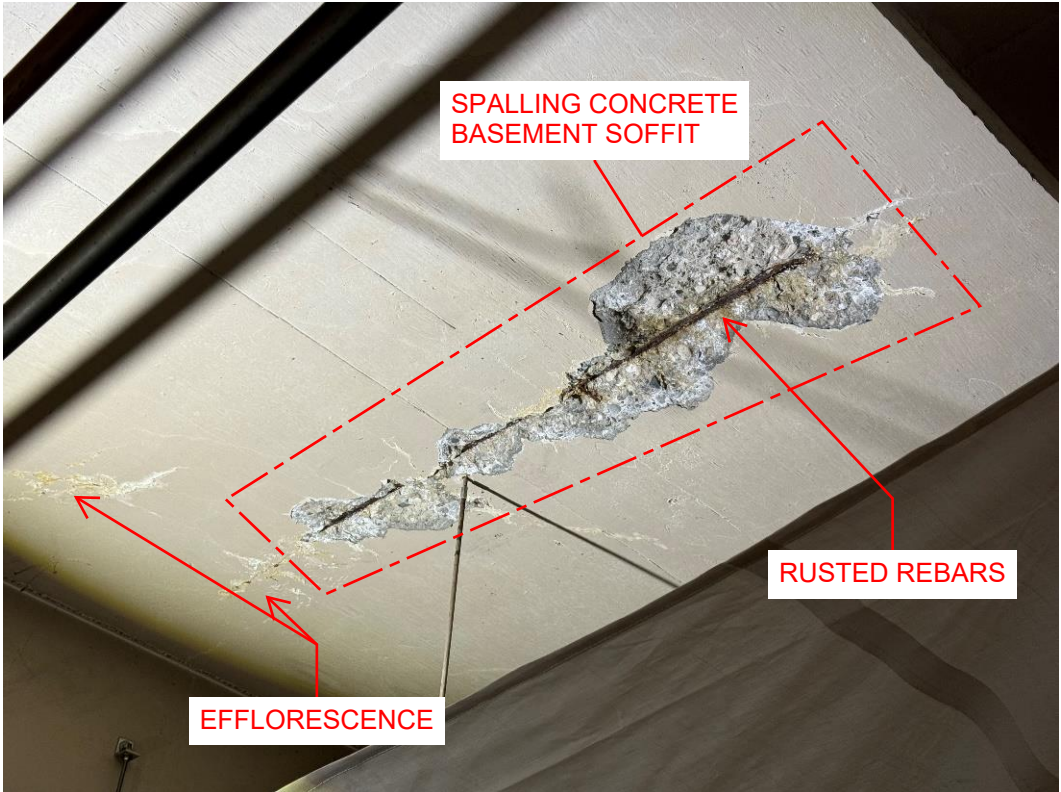


Photo 10: Spalling Concrete Ceiling



Photo 11: Efflorescence in Soffit Slab

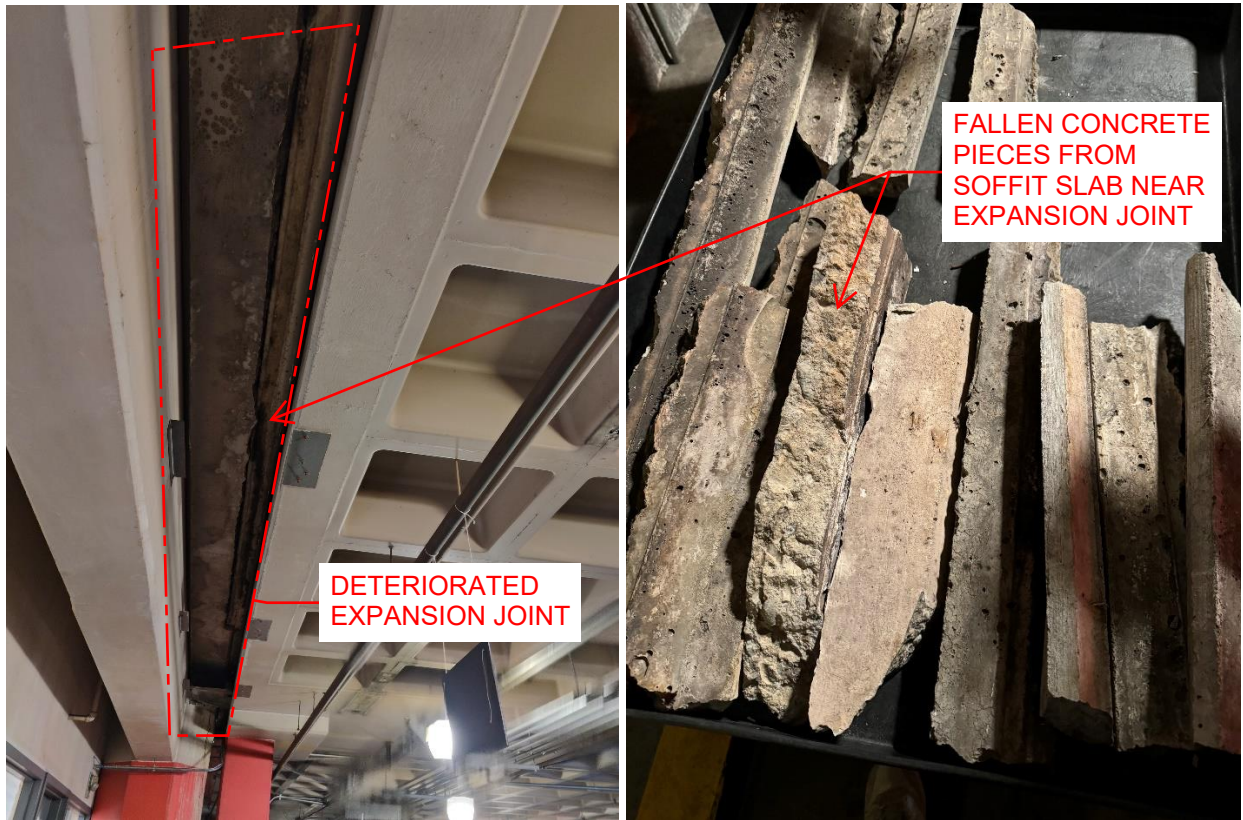


Photo 12: Spalling Concrete at Expansion Joint

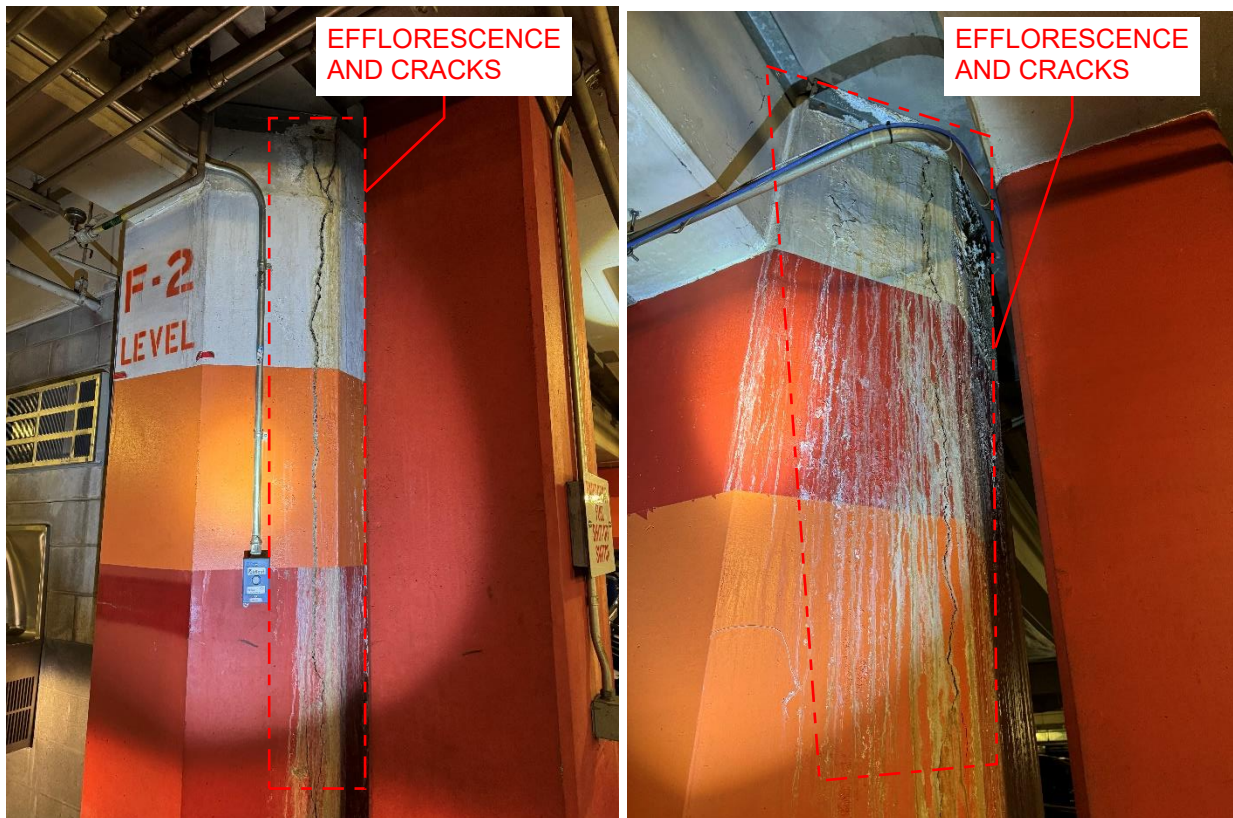


Photo 13: Column Corrosion Cracks and Efflorescence



Photo 14: Column Corrosion Cracks



Photo 15: Honeycombing at F-2 Column

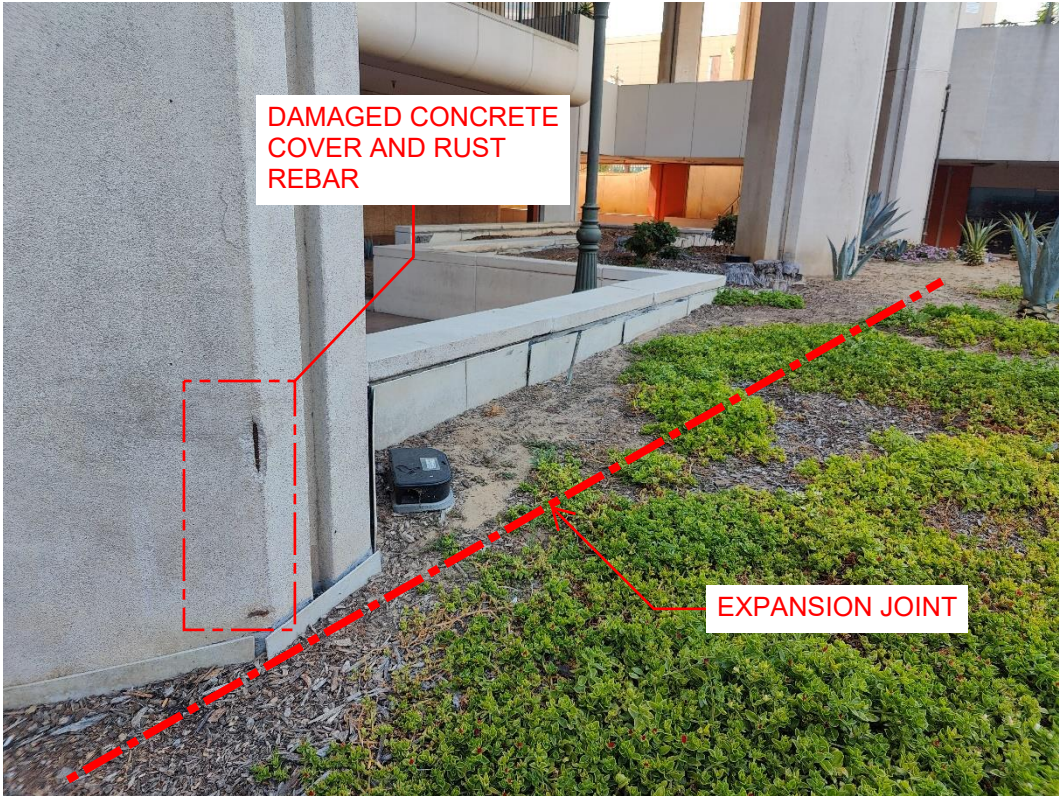


Photo 16: Damaged Concrete Cover



Photo 17: Contorted Parapet/Planter Wall