

## Executive Summary

At the request of the City of Columbia, Walker Consultants performed condition assessments of three of the six City of Columbia downtown parking facilities: the 5<sup>th</sup> & Walnut Parking Facility, the 6<sup>th</sup> & Cherry Parking Facility, and the Short Street Parking Facility. The work performed was in accordance with our August 11, 2022 proposal.

The objectives of our work were to provide a condition assessment of the structural and waterproofing systems within three of the City of Columbia Downtown Parking Facilities that identifies current visible distress and future maintenance needs in order to develop a 5-year capital repair and maintenance plan for planning and budgeting. Repair recommendations are divided into Immediate Actions, Near-Term Repairs (recommended to be performed within 1 to 2 years), Medium-Term Repairs (recommended to be performed within 3 to 5 years), and Enhancement Options.

Additionally, Walker Consultants performed a condition assessment of the 8<sup>th</sup> & Cherry Parking Facility in 2020. The work performed was in accordance with our August 8, 2020 proposal. Walker provided the City of Columbia with a report detailing our findings in November 2020. For convenience, the contents of the 2020 report have been incorporated within this report.

Condition assessments, such as this one, are typically the first phase of a repair implementation program. They are intended to assist owners in identifying repair needs, provide alternative repair approaches, anticipate life cycle repair costs, and prioritize repair and maintenance needs. With the results from a condition assessment, owners and engineers are able to work together to develop a customized repair program that addresses the specific restoration goals, budgetary requirements, and construction phasing needs to limit disruption during the repairs.

Our report is divided into five sections. The first section includes an overview of project objectives, facilities descriptions, our evaluation methods, and an overall summary cost opinion for recommended repairs. The next four sections are each devoted to an individual parking facility with detailed repair recommendations, cost opinions, observations, and photographs. Based on the level of deterioration and anticipated budgeting needs, recommendations were prioritized as Immediate Actions, Near-Term Repairs (1 to 2 Years) and Medium-Term Repairs (3-5).

## Findings & Recommendations

We found the 5<sup>th</sup> & Walnut Parking Facility to be in generally “Good” condition. The condition of the structure is what is relatively expected of an approximately 14 year old well-designed and constructed parking structure. Based on our assessment, as an Immediate Action item, we recommend removing potentially loose overhead concrete near the stairs. Aside from the recommended Immediate Action, the facility requires minimal Near-Term repairs to address failed concrete at a stair tower guardrail and the stair tower haunches. Near-Term recommendations also include recommendations to engage a plumber to review and repair the lower level sump and to engage a building envelope consultant to review water leakage at the retail spaces based on concerns expressed by the City. Medium-Term recommendations include minimal concrete repair and mainly focus on renewal of existing waterproofing elements that are nearing the end of their anticipated life.

We found the 6<sup>th</sup> & Cherry Parking Facility to be in generally “Good” condition. Three Immediate Action items were noted in our investigation: removal of potentially loose concrete from the façade, install a supplemental façade bearing panel support, and repair a few stair tower guardrail attachments. For Near-Term repairs, we recommend repairs to address distorted shim stacks supporting precast façade panels. Medium-Term recommendations include minimal concrete repair and mainly focus on renewal of deteriorated waterproofing elements. We also recommend that the City budget for stair tower roof replacement based on some observed water intrusion and the roof’s current age.

We found the Short Street Parking Facility to be in generally “Good” condition. The condition of the structure is what is relatively expected of an approximately 10 year old well-designed and construction parking structure. Three Immediate Action items were noted in our investigation: implement barrier cables repairs, remove loose façade brick, and replace missing and/or damaged fire extinguishers. Because of the young age of the structure, Near-Term recommendations consist of repairing an isolated floor spall and cleaning floor drain baskets. Medium-Term recommendations include minimal concrete repair and mainly focus on renewal of deteriorated waterproofing elements.

The 8th & Cherry Parking Facility was found to be in generally “Good” condition in our 2020 condition assessment. We did not identify any Immediate Action needs. Most of the recommend repairs include renewing worn traffic-bearing membrane, painting, and replacing roofing elements that have reached the end of their anticipated life. Concrete and structural related repairs were generally minor. At the roof, we have provided roofing alternates to either replace the roof or recover the existing.

Due to the potential for significant energy savings, we have provided recommendations and an opinion of probable costs to upgrade existing lighting within each facility to an energy efficient LED system as an enhancement option.

All of the studied City of Columbia parking facilities are currently in generally “Good” condition. This can be attributed to being well-designed and constructed parking structures along with well-performing existing waterproofing systems. The parking structures will require ongoing repairs and maintenance as they age to be maintained in good condition. The recommended repairs should be viewed as normal routine parking structure and roofing maintenance. With completion of the recommended repairs and similar repairs every 10 years, we anticipate the life of the of the structures can be extended well beyond the typical 40 to 50-year anticipated life for a parking structure.

A summary of our opinions of probable cost for the recommended repairs and enhancement options are shown in the tables below: