



WALKER
PARKING CONSULTANTS

Walker Parking Consultants
1660 South Highway 100, Suite 350
Minneapolis, MN 55416

Voice: 952.595.9116
Fax: 952.595.9518
www.walkerparking.com

October 15, 2003

Mr. Buick Alavy
City of Minneapolis
Property Services
350 South 5th Street, Room 223
Minneapolis, MN 55415

Re: Annual Observation Report
Loring Park Parking Facility
1330 Nicollet Mall
Minneapolis, Minnesota
Walker Commission No. 21-3136.05

Dear Mr. Alavy:

In conformance with the City of Minneapolis inspection requirements for parking ramps, the following is a summary of the structural condition of the Loring Park Parking Facility.

Walker completed a second year field observation of the parking facility to review the condition of the structural elements.

FACILITY DESCRIPTION

Built in 1980, the Loring Park Parking Facility is a cast-in-place, post-tensioned concrete parking structure approximately 265 feet long by 120 feet wide. There are nine supported parking levels with a total supported floor area of 265,000 square feet. The floor consists of 6-1/2 inch to 9-1/2 inch thick concrete floor slabs supported on post-tensioned concrete beams spaced at 27 feet and 38 feet on center, respectively. The beams span 59 feet and are supported on conventionally reinforced concrete columns. The top reinforcement in the floor slab, beam top bars, and beam stirrups are epoxy coated. A concrete sealer was applied to the slab surface upon completion of construction and again in 1988 and 1994.

Access to the facility at street level is provided by an express ramp from Nicollet Avenue with the exit express ramp to LaSalle Avenue. The parking structure is a double threaded helix design with one-way traffic and angle parking. A stair tower is located at the northwest corner of the facility and a stair/elevator tower is located at the northeast corner. The facility provides parking for approximately 750 vehicles.

VISUAL OBSERVATION SUMMARY AND CONCLUSIONS

During the course of our visual observation of this parking facility, we did not observe any conditions, which would restrict the facility from qualifying for an operating certificate. However, hidden or latent conditions may exist in this facility, which have not yet revealed themselves through visual evidence and may require removal subsequent years. The following is a summary of conditions noted:



1. Floor cracking and scaling.
2. Concrete floor and ceiling delaminations of limited areas.
3. One broken post-tensioned slab tendon. Exposed at ceiling of the southwest corner of Level 4.
4. Leaking ceiling cracks and east / west construction joints.
5. Grease stains at isolated ceiling cracks.
6. Isolated beam delaminations adjacent to expansion joints.
7. Isolated water ponds.
8. Minor expansion joint nosing deterioration and leaking.
9. Stairway doors and frames are rusting at northwest stair tower.
10. Water and rust staining on the interior walls of the northwest stair tower.
11. Deteriorated/damaged traffic topping on Roof Level (tennis court level).
12. Leaking around Roof Level drains at ceiling of Level 9.
13. Water draining through holes in Roof Level slab.
14. Unsealed construction joints.
15. Random spot rust staining on ceiling.
16. Debonded transition concrete overlay at crossovers.
17. Exposed ends of reinforcing bars on floor slab. Minimal concrete cover.
18. Missing and damaged floor drain grate covers.
19. Leaching at exterior P/T anchor pockets at random locations.
20. Isolated lights not functioning.

Leaking construction joints, expansion joints, or cracks can contribute to corrosion of embedded post-tensioning tendons and anchors and reinforcing steel. Corrosion of embedded post-tensioning tendons and anchors can adversely affect the structural integrity of the floor slab; therefore, all joints and cracks should be sealed and maintained annually.

It should be noted that Walker Parking Consultants/Engineers, Inc. has not performed a structural review to verify the structural adequacy of the original design, as this is not within the scope of work. During our review, we did not observe deterioration to be indicative of inadequate original structural design or construction.

CERTIFICATION

The City of Minneapolis Ramp Certification Ordinance requires that the engineer state whether the structure is capable of supporting the loads for which it is used. This structure is primarily used for the parking of passenger cars and, in our opinion, presently is capable of supporting that load.

Our recommendations include the continuation of annual structural maintenance, removal of all loose overhead concrete as it is detected, rout and seal all leaking or deteriorated construction joints and cracks, budget for repair of the damaged post-tensioned tendon and traffic topping, and remaining items noted above and on drawings.



WALKER
PARKING CONSULTANTS

Mr. Buick Alavy
City of Minneapolis
October 15, 2003
Page 3 of 3

The above engineering services provided were completed by me or under my direct supervision. My field of practice is structural engineering with primary emphasis on concrete deterioration and renovation. Walker Parking Consultants/Engineers, Inc. carries the \$250,000 insurance coverage required by Section 108.80 of the City Ordinance.

If we can be of further assistance or answer any questions, please call on us.

Sincerely,

WALKER PARKING CONSULTANTS

Stephen D. Disch, P.E.
Principal

Richard J. Elsner, P.E.
Project Manager