

AGENDA
REDONDO BEACH HARBOR COMMISSION
Monday, July 8, 2013, 6:30pm
REDONDO BEACH CITY COUNCIL CHAMBERS
415 DIAMOND STREET

I. OPENING SESSION

- 1. CALL MEETING TO ORDER**
- 2. ROLL CALL**
- 3. SALUTE TO THE FLAG**

II. APPROVAL OF ORDER OF AGENDA

III. RED FOLDER ITEMS

Red folder items require immediate action, and came to the attention of the City subsequent to the 72-hour noticing requirement. These items require a 2/3 vote of the Commission (or if less than 2/3 are present, a unanimous vote) to add to the Agenda.

IV. BLUE FOLDER ITEMS

Blue folder items are additional backup material to administrative reports and/or public comments received after the printing and distribution of the agenda packet for receive and file.

V. CONSENT CALENDAR

Business items, except those formally noticed for public hearing, or those pulled for discussion are assigned to the Consent Calendar. The Commission Members may request that any Consent Calendar item(s) be removed, discussed, and acted upon separately. Items removed from the Consent Calendar will be taken up under the "Excluded Consent Calendar" section below. Those items remaining on the Consent Calendar will be approved in one motion following Oral Communications.

5. APPROVAL OF AFFIDAVIT OF POSTING FOR THE HARBOR COMMISSION MEETING OF JULY 8, 2013

6. APPROVAL OF THE FOLLOWING MINUTES: JUNE 10, 2013

7. CITY COUNCIL RECEIVED AND FILED THE MAY 21, 2013 MONTHLY UPDATES TO THE STRATEGIC PLAN; VITALIZE THE WATERFRONT AND ARTESIA CORRIDOR

Staff recommendation: Receive and file

8. DISCUSSION AND CONSIDERATION OF STRUCTURAL REVIEW OF THE PIER AND PLAZA PARKING STRUCTURES

Staff recommendation: Receive and file

VI. ORAL COMMUNICATIONS

Anyone wishing to address the Harbor Commission on any Consent Calendar item on the agenda, which has not been pulled by Harbor Commission may do so at this time. Each speaker will be permitted to speak only once and comments will be limited to a total of three minutes.

VII. EXCLUDED CONSENT CALENDAR ITEMS

VIII. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

This section is intended to provide members of the public with the opportunity to comment on any subject that does not appear on this agenda for action. This section is limited to 30 minutes. Each speaker will be afforded three minutes to address the Commission. Each speaker will be permitted to speak only once. Written requests, if any, will be considered first under this section.

IX. EX PARTE COMMUNICATIONS

X. PUBLIC HEARINGS

XI. ITEMS FOR DISCUSSION PRIOR TO ACTION

9. QUARTERLY UPDATE FROM HARBOR PATROL

Staff recommendation: Receive and file

10. UPDATE ON MOLE B MASTERPLAN

Staff recommendation: Receive and file

11. DIRECTOR'S REPORT

Staff recommendation: Receive and file

XII. ITEMS CONTINUED FROM PREVIOUS AGENDAS

XIII. MEMBERS ITEMS AND REFERRALS TO STAFF

XIV. ADJOURNMENT

The next meeting of the Harbor Commission of the City of Redondo Beach will be a Regular Meeting of the Harbor Commission to be held on Monday, August 12, 2013 in the Redondo Beach Council Chambers, 415 Diamond Street, Redondo Beach, California.

It is the intention of the City of Redondo Beach to comply with the Americans with Disabilities Act (ADA) in all respects. If, as an attendee or a participant at this meeting you will need special assistance beyond what is normally provided, the City will attempt to accommodate you in every reasonable manner. Please contact the City Clerk's Office at (310) 318-0656 at least forty-eight (48) hours prior to the meeting to inform us of your particular needs and to determine if accommodation is feasible. Please advise us at that time if you will need accommodations to attend or participate in meetings on a regular basis.

An Agenda Packet is available 24 hours a day at the Redondo Beach Police Department and at www.redondo.org under the City Clerk. Agenda packets are available during Library Hours, at the Reference Desk at both the Redondo Beach Main Library and North Branch Library. During City Hall hours, Agenda Packets are also available for review in the Office of the City Clerk.

Any writings or documents provided to a majority of the Harbor Commission regarding any item on this agenda will be made available for public inspection at the City Clerk's Counter at City Hall located at 415 Diamond Street, Door C, Redondo Beach, CA during normal business hours.

PROOF OF POSTING

I, Holly Short, hereby declare, under penalty of perjury, that I am over the age of 18 years and am employed by the City of Redondo Beach, Harbor Department, and that the following document was posted by me at the following location(s) on the date the time noted below:

Agenda – Redondo Beach Harbor Commission

Meeting of July 8, 2013

Posted on: July 3, 2013 at 2:00 pm

Posted at: DOOR "A" BULLETIN BOARD

and CITY CLERK'S OFFICE

Holly Short
Signature

7/3/13
Date

**MINUTES OF THE
REDONDO BEACH HARBOR COMMISSION MEETING
JUNE 10, 2013**

CALL TO ORDER

A regular meeting of the Harbor Commission was called to order at 6:30 p.m. in the City Council Chambers, 415 Diamond Street, by Chairperson M. Jackson.

ROLL CALL

Commissioners Present: Cignarale, Dalton, D. Jackson, M. Jackson, Keidser, Shaer

Commissioners Absent: Bloss

Officials Present: James Allen, Harbor Facilities Manager
Margareet Wood, Recording Secretary

SALUTE TO THE FLAG

Commissioner Dalton led the members in the salute to the flag.

APPROVAL OF ORDER OF AGENDA

It was the consensus of the Commission to approve the order of agenda.

CONSENT CALENDAR

5. Approval of Affidavit of Posting for the Harbor Commission Meeting of June 10, 2013
6. Approval of the Following Minutes: May 13, 2013
7. City Council Received and Filed the May 21, 2013 Monthly Updates to the Strategic Plan; Vitalize the Waterfront and Artesia Corridor
8. Monthly Statistics from Harbor Patrol
9. Second Amendment to ENA with CenterCal Properties
10. Consideration and Possible Action to Approve a Third Amendment to the Ground Lease Between the City of Redondo Beach and Zisli's Boutique Hotels

Commissioner D. Jackson excluded Consent item 7.

ORAL COMMUNICATIONS

None.

Motion by Commissioner D. Jackson, seconded by Commissioner Keidser, to approve Consent items 5, 6, 8, 9, and 10. Motion carried unanimously.

EXCLUDED CONSENT CALENDAR ITEMS

City Council Received and Filed the May 21, 2013 Monthly Updates to the Strategic Plan; Vitalize the Waterfront and Artesia Corridor

In response to Commissioner D. Jackson, Manager Allen confirmed the Harbor Business Plan update will come before the Commission prior to Council approval.

In response to Commissioner Keidser, Manager Allen advised that Budget Response Report #42 contains information on the potential renaming of Artesia Boulevard, including names provided by the Commission.

In response to Commissioner Keidser, Manager Allen said a recommendation related to paddle sports will be presented to City Council in July and he believed the topic will come to the Harbor Commission this year.

Motion by Commissioner D. Jackson, seconded by Commissioner Keidser, to receive and file Consent item 7. Motion carried unanimously.

PUBLIC PARTICIPATION ON NON AGENDA ITEMS

Sean Guthrie, Marina Cove leasehold, reported that the first mosaic has been installed on the Harbor Drive wall between the Sea Lab and Spectrum. He said the completed project will include six mosaics depicting various water activities. He said the project designer also designed the *Ocean Steps* project. He said the mosaics are composed of colored tile cemented to the wall.

ITEMS FOR DISCUSSION PRIOR TO ACTION

Director's Report

Manager Allen reported the following:

- Transient vessel moorings – habitat study submitted to Coastal Commission, project submittal by fall 2013, grant money extended through June 2014
- Mole B – options under evaluation for moving forward without sailing center
- Herondo/Harbor Gateway Improvement Project - plans and specifications complete in the fall, project completion by spring 2015
- Shade Hotel – demolition complete, lease amendment extends deadlines and establishes penalties
- RDR leasehold improvements – Neighborhood Grinds and Bella Gelato are open, Barney's Beanery opening delayed until the fall
- CenterCal – site plan being refined, public meeting scheduled for June 13, final presentation to Council on July 30
- Standup paddleboard requirements – under review by City Attorney, targeting mid-summer for presentation to Council
- Parcel 10 – City Council approved option 3 for even grade surface, also approved site for temporary community-based activities, project to be completed in July or August

- Parking system – LAS Parking has been hired as ambassador on weekend afternoons, 5 new machines will be installed, signage to be installed within 2 weeks
- Torrance Boulevard renaming – outreach will occur, total cost = \$8,000

Events:

- June 11, June 21 – budget public hearings
- June 13 - CenterCal public outreach meeting
- June 14-16 – art exhibit at AES
- July 4 – fireworks in the harbor
- July 6 – summer concerts begin

In response to Commissioner D. Jackson, Manager Allen stated that he was not aware of any feedback from businesses on the Torrance Boulevard renaming, however he said they will be included in the outreach.

In response to Commissioner Dalton regarding future parking changes north of the pier parking structure, Manager Allen said the leasehold parking lots operate independently with the only requirement being that they are primarily open to the public.

In response to Commissioner Shaer, Manager Allen said that construction on Parcel 10 is expected to begin later this month. He said the project will proceed as a sealed bid process. He said the site is well-contained and the project will cause minimal interference with summer pier activities. He said that building construction hours will be observed.

In response to Commissioner Shaer, Manager Allen did not know when the CenterCal contract amendment will be submitted to the Harbor Commission; however he said it is scheduled for Council on July 30.

In response to Commissioner Shaer, Manager Allen stated that the Mole B design work will be significantly changed and will require additional work. He said the changes have not yet gone to Council.

Commissioner Shaer said this is the first he heard of a design change; and he requested to know how the development schedule will be impacted. He requested to agendize the topic for the next meeting.

Commissioner Dalton referenced a recent newspaper article about the vision for the harbor and he complimented CenterCal for their work thus far.

In response to Chairperson M. Jackson regarding the reason for the changes in plan and schedule for Mole B, Manager Allen said the changes are due solely to the fact that Marina Cove has withdrawn from the process.

Chairperson M. Jackson stressed the importance of Mole B as a waterfront feature and he hoped to discuss it further at the July meeting.

Commissioner Shaer also stressed the importance of the Mole B facility. He expected a full report including the background on what happened to cause the change in plans as well as future plans and how they will affect the boater groups.

Motion by Commissioner D. Jackson, seconded by Commissioner Cignarale, to receive and file the Director's Report.

Mr. Guthrie explained that as Marina Cove got further into the Mole B design, costs rose to more than triple the amount received from Chevron. He said it would take many years to raise sufficient funds for the Mole B project; therefore it was determined that building a sailing center in conjunction with King Harbor Yacht Club on Mole A would be a better opportunity. He said his business will work with the City on dry mast-up storage for Mole B providing that terms on parking can be agreed upon. He said other design issues are the splash wall costs and handicap requirements. He said it has always been his vision to accommodate the City sailing program. He said that slip vacancies are still increasing and facilities are needed to generate interest in sailing. He viewed the change as a better solution for everyone concerned.

In response to Commissioner Dalton, Mr. Guthrie said a sailing center would cost less to construct on Mole A than on Mole B because of the existing landside facilities on Mole A. He also mentioned a concern about the safety of young boaters crossing through the main channel. He said that King Harbor Youth Foundation can expand and serve more of the community on Mole A.

In response to Commissioner Shaer, Manager Allen said the length of time necessary to build out the City portion will be connected to the design process.

Mr. Guthrie said the possibility for a parking reorganization must be determined.

M. Hansen recalled working on Mole B for 12 years, including Measure G zoning which restricts activities on Mole B to specific uses. He said the change in plans just unfolded and formal discussions with King Harbor Marina and the King Harbor Yacht Club board have not occurred.

Mr. Hansen's speaking time was extended.

Mr. Hansen said the Tidelands Trust Act and Coastal Act contain requirements for boat storage and a boat ramp. He referred to the Mole B master plan feasibility study containing mast-up boat storage.

Mr. Hansen then submitted a flyer announcing the Tom Collier Regatta for Hope.

Motion by Commissioner D. Jackson, seconded by Commissioner Keidser, to receive and file the flyer. Motion carried unanimously.

Mr. Hansen invited the members to attend the Tom Collier Regatta for Hope on July 13.

Commissioner D. Jackson's motion to receive and file the Director's Report carried unanimously.

ITEMS CONTINUED FROM PREVIOUS AGENDAS

None.

MEMBERS ITEMS AND REFERRALS TO STAFF

Chairperson M. Jackson corrected the agenda item to read *XIII*.

Commissioner Shaer advised that the appropriate time for members to request future agenda topics is during a Commission meeting; therefore he reminded the members to come to the meetings prepared to make their requests.

Commissioner Shaer raised the issue of sea lions in the harbor being abused: he said the problem has been discussed with staff and will be discussed at future meetings.

Chairperson M. Jackson stated that he was advised by staff that Harbor Commission meetings are the best venue for discussing future agenda items. He said that in the absence of Commissioner items, he will recommend items during the agenda-setting meeting with staff.

Motion by Commissioner D. Jackson, seconded by Commissioner Shaer, to adjourn the meeting. Motion carried unanimously.

At 7:25 p.m. Chairperson M. Jackson adjourned the meeting to the next regular meeting on July 8, 2013.

Respectfully submitted,

Peter Carmichael
Waterfront and Economic
Development Director



Administrative Report

Council Action Date: May 21, 2013

To: MAYOR AND CITY COUNCIL

From: WILLIAM P. WORKMAN, CITY MANAGER

Subject: STRATEGIC PLAN UPDATE ON SIX-MONTH OBJECTIVES, WATER QUALITY IMPLEMENTATION MATRIX, SUSTAINABILITY/GREEN TASK FORCE PRIORITY MATRIX, AND MAJOR CITY FACILITIES PRIORITY LIST

RECOMMENDATION

Receive and file the monthly updates to: 1) the six-month strategic objectives established at the Strategic Planning Retreat held on February 21, 2013; 2) the Water Quality Implementation Matrix; 3) the Sustainability/Green Task Force Priority Matrix; and 4) the Major City Facilities Priority List.

EXECUTIVE SUMMARY

On February 21, 2013, the City Council held a Strategic Planning Workshop to establish six-month objectives. Monthly updates are provided to the Mayor and Council to enable them to monitor the City's progress. Updates to the Water Quality Implementation Matrix, the Sustainability/ Green Task Force Priority Matrix and the Major City Facilities Priority List are also provided. This current update is the second of the February 21, 2013 Strategic Planning session's six-month objectives. The next Strategic Planning Retreat will be held on September 12, 2013.

BACKGROUND

The City Council's Strategic Plan directs the development of the City budget, program objectives, and performance measures. The goals provide the basis for improving services, and preserving a high quality of life in the City.

The City began strategic planning in 1998 with the creation of the first three-year strategic plan covering the period of 1998-2001. In October 2001, a second three-year plan was developed for 2001-2004. At the February 25, 2003 retreat, these Core Values were added: Openness and Honesty, Integrity and Ethics, Accountability, Outstanding Customer Service, Teamwork, Excellence, Environmental Responsibility, and Fiscal Responsibility. A third three-year plan was developed in March 2004,

covering the period of 2004-2007, and including a vision statement. In September 2007, the fourth three-year plan was developed with new goals and objectives. A fifth three-year plan was developed on March 3, 2010. Finally, the sixth three-year strategic plan was developed on February 21, 2013. The following are the five strategic plan goals for 2013-2015. They are not in priority order:

- Improve financial viability and expand economic opportunities;
- Improve public facilities and the infrastructure;
- Increase organizational effectiveness and efficiency;
- Maintain a high level of public safety; and
- Vitalize the Waterfront and Artesia Corridor.

The City Manager provides monthly updates to the adopted six-month objectives to enable the Mayor and City Council to monitor the City's progress on the Strategic Plan.

Water Quality Implementation Matrix

On July 19, 2005, the City Council adopted a resolution to form a 15-member Water Quality Task Force. During their 12-month assignment, the Task Force developed a Recommendations Report. The Report was presented to a joint meeting of the City Council and Harbor Commission. The City Council directed staff to report back with a prioritized action plan for implementation. The Recommendations Implementation Matrix was received by the Council on November 21, 2006, with direction for staff to provide a status report to accompany the Strategic Plan reports. The monthly status update is attached.

Sustainability/ Green Task Force Priority Matrix

On January 16, 2007, the City Council adopted a resolution to form a 15-member Green Task Force to study and address a variety of environmental issues faced by the City. During their 12-month assignment (later extended to 15 months), the Task Force developed a Sustainable City Plan that included 26 recommendations. The Report was presented to the City Council on May 13, 2008. The City Council directed staff to assemble the recommendations into a matrix. On August 19, 2008, the City Council received and filed the Sustainability/ Green Task Force Priority Matrix and reviewed it on October 21, 2008. The monthly status update is attached.

Major City Facilities Priority List

On February 13, 2007, the City Council adopted the Major City Facilities Priority List. The Council requested that the list come back periodically for review. The attached version reflects the addition of the Dominguez Park Community Center as directed by

the City Council during adoption of the Fiscal Year 2007-2008 Budget on June 19, 2007.

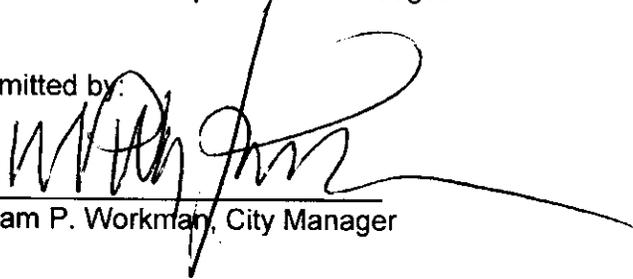
COORDINATION

All departments participated in the development of the Strategic Plan and in providing the attached update. Relevant departments have reviewed the Water Quality Implementation Matrix, Sustainability/Green Task Force Matrix, and Major City Facilities Priority List.

FISCAL IMPACT

The total cost for this activity is included in the Mayor and City Council's portion of the FY 2012-2013 Adopted Annual Budget.

Submitted by:



William P. Workman, City Manager

Attachments:

- Strategic Plan Update - Six-Month Objectives dated May 21, 2013
- Water Quality Implementation Matrix dated April 16, 2013
- Sustainability/ Green Task Force Implementation Matrix dated November 20, 2012
- Major City Facilities Priority List dated June 2007

CITY OF REDONDO BEACH  **SIX-MONTH STRATEGIC OBJECTIVES**
February 21, 2013 – September 1, 2013

ACM=Assistant City Mgr CD=Community Development FS=Financial Services PW=Public Works RTCS= Recreation, Transit and Community Services WED=Waterfront and Economic Development

THREE-YEAR GOAL: VITALIZE THE WATERFRONT AND ARTESIA CORRIDOR							
WHEN	WHO	WHAT	STATUS			COMMENTS	
			DONE	ON TARGET	REVISED		
1. At the March 12, 2013 City Council meeting	WED Dir.	Present to the City Council for action CenterCal's conceptual site plan and financial plans for the waterfront, including Redondo Beach Marina Acquisition Plan.	X				
2. At the March 19, 2013 City Council meeting	PW Dir.	Present to the City Council for consideration a report on process costs and potential names for renaming Torrance Blvd.	X				
3. At the March 19, 2013 City Council meeting	Asst. to the CM and CD Dir. (co-leads), working with the City Attorney	Present to the City Council for action a plan to engage with AES and the community post-election.	X			Follow-on action underway	
4. At the April 16, 2013 City Council meeting	City Manager and Asst. to the City Mgr., working with the Artesia Working Group	Complete and present to the City Council for consideration a Mini Strategic Plan, including the potential renaming of Artesia Blvd.					
5. At the April 16, 2013 City Council meeting	PW Dir. and WED Dir.	Present to the City Council for action Herondo/Harbor Gateway Improvement Project plan options.	X				
6. At the June 4, 2013 City Council meeting	Harbor Master and City Attorney	Recommend to the City Council for action regulations related to paddle sports in King Harbor.				HM/Fire has completed its review. Input has been provided to City Atty.; awaiting draft regulation for review.	
7. At the June 4, 2013 City Council meeting	ACM, working with Forest City and the City Attorney	Present to the City Council for action the land swap for the new Transit Center.			X	August	

8. At the June 25, 2013 City Council meeting	WED Dir. and CD Dir.	Present to the City Council for action CenterCal's detailed site plan for waterfront development and initiate the CEQA environmental review process		X		
9. September 1, 2013	PW Dir. and WED Dir.	Present to the City Council for action final plans and specifications for the Moonstone Park area development.		X		
10. FUTURE OBJECTIVE _____	WED Dir.	Present to the City Council for consideration an update to the Harbor Business Plan reflecting current challenges and opportunities.	X			
11. FUTURE OBJECTIVE _____	PW Dir. – lead, WED Dir., Fire Chief, Harbor Master	Develop the Phase 2 Plan for transient vessel moorings, including land side boater amenities.				Fire/HM has reviewed current regulations on moorings; no additional collaboration has occurred with Fire/HM.



Administrative Report

Council Action Date: July 2, 2013

To: MAYOR AND CITY COUNCIL

From: PETE CARMICHAEL, WATERFRONT & ECONOMIC DEVELOPMENT DIRECTOR

Subject: STRUCTURAL REVIEW OF THE PIER AND PLAZA PARKING STRUCTURES

RECOMMENDATION

Receive, file and discuss this report and the presentation by Walker Parking Consultants/Engineers Inc. regarding the structural review of the Pier and Plaza Parking Structures.

EXECUTIVE SUMMARY

The City of Redondo Beach owns two waterfront parking structures amounting to approximately 1,350 public parking spaces for nearby retail, office and recreation uses. On August 24, 2010 the City Council adopted the Harbor Enterprise Business Plan which included a task to develop an alternatives study for renovation or replacement of the parking structures. In 2011, the City Council approved a contract with Walker Parking Consultants/Engineers, Inc. to fulfill this task.

BACKGROUND

Walker has completed their assessment of the Parking Structures and their findings are listed below in terms of immediate repairs and those necessary to extend the useful life of each structure. Note: while operationally the Pier Parking Structure functions as a single structure, it is actually two parking structures built in two phases a decade apart. Thus, the Pier Parking Structure is evaluated as the North Pier Parking Structure and the South Pier Parking Structure.

Immediate Repairs

- 1) **Removal of loose or delaminated concrete** – On May 21, 2013, the City Council approved a contract with Arnaz Engineering Contractors to complete a significant portion of this task. This project will focus on a particularly disturbing portion of the South Pier Parking Structure and is expected to be completed this summer.
- 2) **Installation of signage and deterrents to restrict tall and/or heavy vehicles** – Staff is evaluating signage and overhead clearance bars to accomplish this item.

- 3) Inspection and testing of fire suppression system – On June 4, 2013, the City Council approved a contract with First Fire Systems Inc. to replace and certify the fire suppression system. This project is expected to be completed this fall.

North Pier Parking Structure

Walker found the North Pier Parking Structure to be in poor condition and, at over 50 years old, reaching the end of its useful life. Many repairs and maintenance has occurred over time to nearly every element of the structure, but the structure's age and proximity to salt water and air are proving to be a formidable challenge to a longer life.

Walker recommends concrete and concrete slab repairs, seismic strengthening, new acrylic coatings and traffic membranes. The estimated cost for these repairs approximate \$1.8 million. Walker estimates these repairs will likely yield an additional 5-10 years of useful life.

South Pier Parking Structure

This approximately 40-year-old structure was found to be in fair condition. Its age, proximity to salt water and air, failing traffic membranes, and leaking from above have contributed greatly to a rapidly-deteriorating condition. Test results indicate significant chloride penetration into slabs.

Walker recommends removal and replacement of deteriorated concrete, repair of concrete slabs, new acrylic coatings and traffic membranes, removal of planters, and replacement of the fire suppression system. These repairs are estimated to cost approximately \$5.3 million. Walker estimates this repair program may produce an additional 15-20 years of useful life.

Plaza Parking Structure

The Plaza Parking Structure was found to be in good condition. This structure is younger (approximately 30 years old) and its location away from salt water splash puts it in a better position than the other two structures.

Walker recommends localized concrete and crack repair, new traffic membrane and sealants, and protective paint. These repairs are estimated to cost \$670,000, and will yield an additional 30-40 years of useful life.

The repair and maintenance estimates above are intended to allow for the Parking Structures to continue in their current form for the period specified. However, the North and South Pier Parking Structures will continue to suffer from poor design and the lack of structural components to allow for integrated development. Millions of dollars in additional funding will be necessary to implement these improvements.

COORDINATION

The Waterfront & Economic Development Department collaborated with Walker to create this report and presentation.

July 2, 2013

FISCAL IMPACT

None.

Submitted by:



Pete Carmichael
Waterfront & Economic Development Director

Approved for forwarding by:



Office of the City Manager

Attachment: Conditional Assessment and Capital Improvement and Protection Program – Walker Parking Consultants/Engineers Inc. (Appendices on file in City Clerk's Office)

jallen



WALKER
RESTORATION CONSULTANTS

CONDITIONAL ASSESSMENT & CIPP

CITY OF REDONDO
BEACH HARBOR
PARKING STRUCTURES
REDONDO BEACH, CA

Prepared for:
CITY OF REDONDO BEACH

AUGUST 2012

FINAL

CITY OF REDONDO BEACH PARKING STRUCTURES
 CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
 RESTORATION CONSULTANTS

PROJECT # 37-8243.00

TABLE OF CONTENTS

EXECUTIVE SUMMARY i

INTRODUCTION 1

 Objectives 1

 Facility Descriptions 1

RECOMMENDATIONS 5

 Immediate Repair 5

 Recommended Base Repairs 5

 Preventive Maintenance 7

 Enhancement Options 8

 Opinion of Probable Costs 9

 Implementation 13

DISCUSSION 14

 North Pier Parking Structure 14

 South Pier Parking Structure 16

 Plaza Parking Structure 19

 Routine Maintenance 21

SUMMARY 22

 Observations 22

 Material Testing 26

LIMITATIONS 27

APPENDIX A - Opinion of Probable Costs

APPENDIX B - Photographs

APPENDIX C - Material Testing

APPENDIX D - Scope of Services

APPENDIX E - References

APPENDIX F - Deterioration Mechanisms & Glossary

APPENDIX G - Routine Maintenance

APPENDIX H - Structural Analysis of North Pier Parking Structure

LIST OF TABLES AND FIGURES

Table 1: Opinion of Probable Costs
 Executive Summary Page v

Table 2: Opinion of Probable Costs
 North Pier Parking Structure Page 10

Table 3: Opinion of Probable Costs
 South Pier Parking Structure Page 10

Table 4: Opinion of Probable Costs
 Plaza Parking Structure Page 11

Figure 1: Executive Summary

Figure 2: 10 Year Budget Forecast Appendix A

Figure 3: South Pier Parking Structure
 Opinion of Probable Costs Appendix A

Figure 4: Plaza Parking Structure
 Opinion of Probable Costs Appendix A

Figure C1: North Pier Parking Structure
 Chloride Content Appendix C1-2

Figure C2: South Pier Parking Structure
 Chloride Content Appendix C1-4

Figure C3: Plaza Parking Structure
 Chloride Content Appendix C1-6

Figure C2: Material Testing Summary
 Appendix C2-1

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

EXECUTIVE SUMMARY

Walker Restoration Consultants has completed a Condition Appraisal of the North Pier, South Pier, and Plaza Parking Structures. We have investigated the overall general condition of the structures with visual observations and a limited materials testing program. We have also completed a Structural Analysis report for the North Pier Parking Structure.

We recommend the following:

IMMEDIATE REPAIRS

Walker identified three conditions where immediate actions should be performed and are as follows:

1. Removal of loose or delaminated concrete that may be in danger of falling throughout the North and South Pier and Plaza Parking Structures. This work should be performed by either City personnel or a restoration contractor familiar with this type of work. Final repairs to these areas should be included in a regular maintenance program.
2. Installing signage and overhead clearance bars at all entrances of all the parking structures that display weight and height restrictions for vehicles entering the parking structures.
3. Inspection and testing of the current fire suppression system to confirm operational condition.

RECOMMENDED BASE REPAIRS

NORTH PIER PARKING STRUCTURE

Implement a repair and protection program for the North Pier Parking Structure that will increase the long-term service life of the structure and improve the City's investment in the property.

Complete localized partial and full depth concrete floor slab repairs of the Plaza and Pier Level.

Complete localized overhead partial and full depth concrete repairs on the Pier Level.

Complete the recommended seismic strengthening recommendations identified in the Structural Analysis Report (Appendix H).

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

Reinstall expansion joints, acrylic coatings, urethane traffic membrane on the Village and Pier Levels.

USEFUL SERVICE LIFE

Completing the Recommended Base Repairs will achieve an additional 5 to 10 years of useful service life before substantial restoration repairs are necessary. Traffic membranes may require a recoat after 5 years of service.

SOUTH PIER PARKING STRUCTURE

Implement a repair and protection program for the South Pier Parking Structure that will increase the long-term service life of the structure and improve the City's investment in the property.

Remove deteriorated and chloride contaminated concrete on all structural concrete floor slab surfaces of the Village Level and replace with a modified concrete overlay. Total slab thickness will not increase after repairs are completed.

Complete localized partial and full depth concrete floor slab repairs of the Pier Level.

Complete localized overhead partial and full depth concrete repairs on both the Village and Pier Levels.

Reinstall expansion joints, acrylic coatings, urethane traffic membrane on the Village and Pier Levels.

Remove planters down to the floor slab and install a urethane traffic membrane on the Village Level. Install supplementary drains and incidental piping in select locations of the Village Level slab and/or at either all or selected planter locations.

Replace the entire fire suppression system for the structure.

USEFUL SERVICE LIFE

Completing the Recommended Base Repairs will achieve an additional 15 to 20 years of useful service life before substantial restoration repairs are necessary. Traffic membranes may require a recoat after 5 years of service or replacement after 10 years of service.

North Pier Parking Structure
Additional 5 to 10 years of
useful service life can be
achieved.

South Pier Parking Structure
Additional 15 to 20 years of
useful service life can be
achieved.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

PLAZA PARKING STRUCTURE

Implement a repair and protection program for the Plaza Parking Structure that will increase the long-term service life of the structure and improve the City's investment in the property.

Complete localized overhead and floor slab concrete repairs on the Pier Level. Complete localized concrete repairs to the beams/girders on the Pier Level. Epoxy-inject slab cracks in the Pier Level of the structure. Recoat the existing urethane traffic membrane on the exposed portion of the Pier Level. Install expansion joint materials and sealants to mitigate leakage at the elevator core, stairs, walls, and cracks of the Pier and Basin Level. Clean the Plaza Level drains of debris and provide protective paint applications on all mechanical/electrical piping, conduit, and fixtures.

Useful Service Life

Completing the recommended Base Repairs will achieve an additional 30 to 40 years of useful service life with substantial restoration cycles of 10 to 12 years. Traffic membranes may require a recoat after 5 years of service.

Plaza Parking Structure
Additional 30 to 40 years of
useful service life can be
achieved

ENHANCEMENTS

Complete a lighting upgrade for the South Pier Parking Structure and the Plaza Parking Structure that will allow for substantial energy cost savings to the City.

Lighting retrofit could save 40-
50% in energy costs

We recommend the current high intensity discharge (HID) lighting in the South Pier Parking Structure be retrofitted with energy-efficient fluorescent or LED lighting. Although a lighting study was not performed for this project, it is our opinion that a lighting retrofit in this garage could save up to 40 to 50% in energy cost while maintaining (or even potentially increasing) the illuminance to comply with lighting industry standards. Additionally, the federal government is providing rebates to purchase energy efficient lighting systems to further incentivize owners to consume less energy. Energy costs could also be reduced by implementing lighting controls consisting of occupancy sensors and/or daylight sensors to take advantage of day-lighting around the perimeter of the garage. These garages could be retrofitted with wireless lighting controls to achieve 50 to 75% savings in energy cost. We have found the payback period can, in many cases, be less than two to three years.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

FINDINGS

In investigating the conditions of the structures, we found the following:

NORTH PIER PARKING STRUCTURE

The North Pier Parking Structure is in poor condition and is reaching the end of its useful service life. The 1993 retrofit efforts are nearly 20 years old and were implemented under what is now an outdated building code. The underlying deterioration necessitating the 1993 and 2010 repairs was not mitigated and still remains. Corrosion mechanisms continue to act on the original structural concrete, albeit at a slower rate.

The seismic performance of the structure is fair. The 1993 retrofit efforts improved the lateral load carrying capacity and load transfer paths. There are some deficiencies in the retrofit that allow for discontinuous load transfer. The Recommended Base Repairs address improving the seismic performance.

SOUTH PIER PARKING STRUCTURE

The structure is in fair condition and requires a substantial repair program to increase the intended useful service life. Repairs have been completed in the past on both the Village and the Pier Levels but now require attention to avoid more costly structural repairs in the near future. Results from our testing and observations indicate significant chloride penetration into the slabs. Failing and worn protective traffic bearing membranes, sealants, expansion joints, leaking planter locations, and leaking from under the Village Level commercial buildings are all contributing to increasing deterioration within the structure. Mitigating leakage and protecting any repaired concrete will effectively contribute to a longer service life for this structure.

PLAZA PARKING STRUCTURE

The Plaza Parking Structure is in good condition and requires a normal repair and maintenance program to increase the intended useful service life. The Village level plaza was in very good condition and appears to be well maintained. Waterproofing applications appear to have been completed within recent years and were performing at locations that were excavated for observation purposes.

The condition of all three structures is significantly worse along the ocean side.

The North Pier Parking Structure is in poor condition.

The South Pier Parking Structure is in fair condition.

The Plaza Parking Structure is in good condition.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

Slab cracking on the Pier Level was prevalent but appears to be from original construction. Attempts have been made to mitigate leakage with installation of sealants and protective traffic bearing membranes. These past applications appear to have reached the end of their useful service life.

Chloride levels were higher and above the corrosion threshold in the west bay of the Pier Level. It is prudent to apply traffic coating membrane on the Pier Level to enhance protection of the structural slab.

OPINION OF PROBABLE COSTS

Estimate of costs in Table 1 gives the summary of the Recommended Base Repair costs for the parking structures. The table has combined the costs into different cost/repair type categories. For further detailed information, listed by work items, reference Appendix, "Estimate of Probable Costs."

TABLE 1 - OPINION OF PROBABLE COSTS

City of Redondo Beach Parking Structures	
North Pier Parking Structure	\$1,773,000
South Pier Parking Structure	\$5,323,500
Plaza Parking Structure	\$670,000
Total in 2012 Dollars	\$7,766,500

Please reference the Executive Summary Table following this section for additional and detailed information including Combined Opinion of Costs for the 10 Year Budget.

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION & CONSULTANTS

PROJECT # 37-8243.00

IMPLEMENTATION/PHASING

Implementing the Recommended Base Repairs can be phased over several years, depending on the parking structure.

The North Pier Parking Structure and the South Pier Parking Structure require immediate actions to address structural and safety concerns.

The Recommended Base Repairs for all three structures can receive a phased repair program, if necessary.

Various factors to consider which may affect the work are:

- Life/safety impact of existing conditions,
- Repair priorities,
- Available annual budget,
- Construction schedule and phasing
- Maintaining parking accessibility, occupancy, and revenue,
- Reducing adverse impact to the patrons and tenants of the facilities.

Phasing the work over multiple construction seasons will typically imply an increase in the costs. Most of the increases may be from inflation, remobilization, wage increases, and costs from contractor constraints due to other work.

We recommend a comprehensive restoration program be developed using restoration construction documents and specifications, followed by construction administrative services. A qualified restoration contractor can be selected through the City's standard procurement process.

An engineering proposal to complete restoration design documents can be provided if the Owner authorizes the aforementioned repair options for implementation either in a complete repair project or phased repairs.

The repairs in the North Pier, South Pier, & Plaza Parking Structure may be phased over multiple years.

Repairs may be phased to maintain the maximum operational flexibility but generally repair work should begin along the ocean side and proceed toward the rear of all three structures.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

Please see the attached Condition Appraisal Report for a detailed discussion of our investigation.

Randal M. Beard

August 2, 2012

Randal M. Beard
Principal

Date

Ryan D. Frederick

August 2, 2012

Ryan D. Frederick S.E.
Senior Project Engineer

Date

Jason M. Dunster

August 2, 2012

Jason M. Dunster, P.E., LEED AP
Director of Operations

Date

Daniel R. Johns

August 2, 2012

Daniel R. Johns, P.E.
Vice-President, Managing Principal

Date

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

INTRODUCTION

The Redondo Beach Pier and International Boardwalk is a family destination featuring over 50 dining, entertainment and shopping choices and within walking distance to beautiful seaside accommodations. The mixed-use site includes two parking structures with parking for approximately 1,300 cars. The parking structures are owned and operated by the City of Redondo Beach.

WALKER completed a Condition Appraisal and Capital Improvement and Protection Program (CIPP) for the North and South Pier and Plaza Parking Structures in June/July of 2011. WALKER also completed a structural analysis of the North Pier Parking Structure in June 2012. Our Condition Appraisal was limited to the exposed rooftop plaza levels as well as the supported parking level structural slabs and slab-on-grade concrete. The Condition Appraisal did not include the occupied retail areas below or between the Pier and Plaza Parking Structures. The secondary commercial timber frame buildings on top of the Pier Parking Structure were not included in the Scope of Work. The structural analysis of the North Pier Parking Structure included additional investigation, materials testing, and a finite element computer analysis.

OBJECTIVES

- Evaluate the location and extent of apparent deterioration in the parking and plaza levels of the structures,
- Evaluate the impact of the deterioration that is noted on the service life of the facilities,
- Provide a condition appraisal report with necessary recommendations for repairs, alternative repair options if applicable, and an opinion of probable cost of recommended repairs,
- Provide a Capital Improvement and Protection Program based on a 10-Year projected forecast.
- Determine if potential deficiencies in the North Pier Parking Structure exist.

FACILITY DESCRIPTIONS

NORTH PIER PARKING STRUCTURE

The North Pier Parking Structure, reportedly completed in the early 1960's has experienced nearly 50 years of service life. This parking

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

structure is adjacent to the South Pier Parking Structure and currently is operated as one parking structure.

The structure is comprised of precast concrete double tees supported on precast columns, beams, and girders. A unique design feature of the precast double tee construction was the precast tees are placed apart allowing for the use of closure pour strips along each tee flange. Testing performed for this report indicate average compressive strength of the concrete in the original precast elements was approximately 7,000 psi. Lateral loads for both wind and seismic forces are addressed with cast-in-place concrete shear walls.

The footprint of the structure is 273 feet (north - south) by 123 feet (east - west). The perimeter of the parking structure has no access by public roadway other than through the South Pier Parking Structure. Harbor piers and infrastructure are on three elevations of the parking structure. The structure has three levels, two supported levels for parking and one on-grade level with two commercial businesses. From limited drawings received, the exposed upper parking level is referred to as the Village Level, the mid level is referred to as the Pier Level, and the lowest level is referred to as the Basin Level.

A retrofit program was completed in 1993 which provided additional structural elements in the form of lattice shear walls, a concrete topping slab on the Village Level, and new beams and columns to support the additional design loads. A traffic bearing membrane system was applied to the concrete topping to minimize leakage.

Additional work was completed in early 2011 which included repairs to the Pier Level slab. A concrete topping installation was completed in the west bay of the structure along with a protective epoxy waterproofing coating. The east bay of the structure received concrete slab repairs and the protective epoxy coating application only.

Repairs and maintenance has occurred at various times throughout the service-life of this parking structure. The repairs include but are not limited to partial depth concrete slab repair, expansion joints, traffic coating applications, sealant applications, overhead concrete repairs to the slab soffit, beam concrete repair, painting of concrete and metals, lighting maintenance, mechanical fire suppression and electrical conduit repairs.

It was reported that Dames & Moore conducted an analysis of the parking structure in 1999, but this report was inconclusive and not received for review.

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

SOUTH PIER PARKING STRUCTURE

The South Pier Parking Structure was constructed in 1973 and has experienced 38 years of service life. The parking structure was constructed of cast-in-place conventionally reinforced concrete slabs, beams, girders, and columns. From drawings received, the exposed plaza upper level is referred to as the Village Level, the mid level is referred to as the Pier Level, and the lowest level is referred to as the Basin Level.

The Village Level has several multi-story wood framed structures used for commercial purposes. Walks and curbs outline a roadway and circular drives throughout the level. The roadway serves as access to the Village Level of the North Parking Structure. Signage at the South Pier entrance to the Village Level limits vehicle weight to 6,000 pounds.

Repairs and maintenance has occurred at various times throughout the service-life of this parking structure. The repairs include but are not limited to partial depth concrete slab repair, expansion joints, traffic coating applications, sealant applications, overhead concrete repairs to the slab soffit throughout the structure, beam/girder concrete repair, painting of concrete and metals, lighting maintenance, mechanical fire suppression and electrical conduit repairs.

PLAZA PARKING STRUCTURE

The Plaza Parking Structure was constructed in 1981 and has experienced 30 years of service life. The structure is constructed of post tensioned cast-in-place concrete slabs, beams, girders, and traditional reinforced columns. From drawings received, the exposed upper parking level is referred to as the Plaza Level, the mid level is referred to as the Pier Level, and the lowest level is referred to as the Basin Level.

The Plaza Level has concrete planters that contain sod, soils, and lightweight filler material on a waterproofed concrete slab. The waterproofing has a filter fabric and drainage layer. The Plaza Level is used for pedestrian traffic only. Portions of this level have a masonry tile application, grouted in-place. Drains are located along the west perimeter wall. Concrete planters surround the perimeter of the structure at this level on the west and north elevations.

Repairs and maintenance have occurred at various times throughout the service-life of this parking structure. The repairs include but are not limited to limited partial depth concrete slab repair, crack routing and

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

sealing, traffic coating applications, sealant applications on the exposed section of the Pier Level, beam/girder concrete repair, painting of concrete and metals, lighting maintenance, mechanical fire suppression and electrical conduit repairs.

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

RECOMMENDATIONS

Walker Restoration Consultants reviewed the City of Redondo Beach Parking Structures and provided Recommended Base Repairs outlined in this report. The recommendations address structural deterioration common to parking structures of this service life and construction located in mild climates, but with extreme exposure to corrosive ocean elements.

IMMEDIATE REPAIR

Walker identified three conditions where immediate actions should be performed as follows:

1. Removal of loose or delaminated concrete that may be in danger of falling throughout the North and South Pier and Plaza Parking Structures. This work should be performed by either City personnel or a restoration contractor familiar with this type of work. Final repairs to these areas should be included in a regular maintenance program.
2. Installing signage and overhead clearance bars at all entrances of all the parking structures that display weight and height restrictions for vehicles entering the parking structures.
3. Inspection and testing of the current fire suppression system to confirm operational condition.
4. Add vertical columns and supporting foundations at discontinuous shear walls along the eastern side of the North Pier Parking Structure.

RECOMMENDED BASE REPAIRS

NORTH PIER PARKING STRUCTURE

Implement a repair and protection program for the North Pier Parking Structure that will increase the long-term service life of the structure and improve the City's investment in the property.

- Repair deteriorated concrete slab surfaces of the Pier and Village Level by installing a latex-modified concrete overlay.
- Partial and full depth concrete repair of all deteriorated structural slab concrete underside surfaces on the Village Level.
- Partial depth concrete repair of all deteriorated structural slab concrete top surfaces on the Pier Level.
- Epoxy-inject select beam and slab cracks of the structure.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

- Replacement of all expansion joints on the Village and Pier Levels.
- Replace the failing urethane traffic membrane on all exposed concrete surfaces of the Pier and Village Level.
- Removal of all planters on the Village Level, install concrete as needed, followed by installation of urethane traffic membrane.
 - As an alternative, remove all soils, vegetation, etc. from the planters and waterproof with fluid-applied urethane waterproofing, with drainage and filter fabric layers.

*FROM THE NORTH PIER STRUCTURAL ANALYSIS
RECOMMENDATIONS:*

- Add horizontal reinforcement at the Arcade level shear walls (see Photo 4) where existing shear wall reinforcement in the horizontal direction doesn't meet the ASCE 31-03 and ACI 318-08 minimum wall reinforcement requirement.
- Add slab collector reinforcement at the shear walls oriented in the East-West direction at the Village Level at Line 3 and 1-1 (See Photos 5 and 6).
- Increase slab thickness near the shear walls oriented in the East-West direction at both the Village and Pier Level (See Photos 5 and 6).
- Add new slab dowels at the shear walls oriented in the East-West direction at the Village Level (See Photos 5 and 6).
- Improve shear capacity of the gravity columns along line Y at the Pier and Arcade Levels (See Photo 7).
- Obtain recommendations from a registered Geo-technical engineer to evaluate current soil conditions and associated risk of having soil liquefaction, slope stability failure, and surface fault rupture at the garage site.

SOUTH PIER PARKING STRUCTURE

Implement a repair and protection program for the South Pier Parking Structure that will increase the long-term service life of the structure and improve the City's investment in the property.

- Repair the entire deteriorated concrete slab surfaces of the Village Level by installing a latex-modified concrete overlay.
- Partial and full depth concrete repair of all deteriorated structural slab concrete underside surfaces on the Village Level.
- Partial and full depth concrete repair of all deteriorated structural slab concrete top and underside surfaces on the Pier Level.

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

- Installation of coatings on repair areas that are affected by concrete demolition and repair.
- Replacement of all expansion joints on the Village and Pier Levels.
- Recoat the existing urethane traffic membrane on the exposed portions of the Pier Level.
- Install a urethane traffic membrane on all exposed concrete surfaces of the Village Level.
- Removal of all planters on the Village Level, install concrete as needed, followed by installation of urethane traffic membrane.
 - As an alternative, remove all soils, vegetation, etc. from the planters and waterproof with fluid-applied urethane waterproofing, with drainage and filter fabric layers.
- Install supplementary drains and incidental piping in select locations of the Village Level slab and/or at planter locations.
- Complete the replacement of the entire fire suppression system of the structure.

PLAZA PARKING STRUCTURE

Implement a repair and protection program for the Plaza Parking Structure that will increase the long-term service life of the structure and improve the City's investment in the property.

- Repair of a limited amount of deteriorated structural slab concrete top and underside surfaces and beams/girders on the Pier Level.
- Epoxy-inject select beam and slab cracks in the Pier Level of the structure.
- Recoat the existing urethane traffic membrane on the exposed portion of the Pier Level.
- Install a urethane traffic membrane on the remainder of the Pier Level.
- Install expansion joints and sealants to mitigate leakage at the elevator core, stairs, walls, and cracks of the Pier and Basin Levels.
- Waterproofing repairs at tooled joints, cracks, vertical and cove conditions
- Clean Plaza Level drains of debris.
- Provide protective paint applications on all mechanical/electrical piping, conduit, and fixtures.

PREVENTIVE MAINTENANCE

After the recommended repair program is completed, the purpose of parking facility maintenance is to assure proper and timely

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012

preventive actions to reduce premature deterioration of structural elements and equipment failures. Routine maintenance actions that include periodic repairs and/or corrective actions are necessary to maintain serviceability and facility operations.

GENERAL

Regular inspections of the structures by a qualified restoration engineer to determine if progressing deterioration poses a life safety risk to patrons or compromise the structural integrity of the parking structures.

If areas are identified as deteriorating or failing, the City should assess if warranty repairs are applicable. Notify any past contractors with current and up-to date warranties of the deterioration and schedule timely repairs.

Continued structural and non-structural concrete repair with routing and sealing of cracks throughout the structure will mitigate chloride and moisture migration through the floor slabs to the structural elements.

Timely reapplication of the all waterproofing systems includes the continued maintenance of sealants. Regular maintenance of the floor surfaces, including sweeping and wash downs if allowed, will help keep dirt and latent chlorides from collecting.

ENHANCEMENT OPTIONS

LIGHTING UPGRADE

Although a lighting study was not part of our scope of work, we observed high intensity discharge (HID) lighting was utilized for the South Pier Parking Structure. This type of lighting was popular several years ago when energy consumption was not at the forefront of our concerns. In recent years, energy efficiency and sustainability has been increasingly important from both the Owner's perspective (to lower operational costs) and the public (because it is the right thing to do).

Fluorescent lighting with electronic ballasts is generally very energy efficient. Greater efficiency is achieved when multiple lamps are circuited to one ballast unit. For example, the energy efficiency and illuminance could be greatly improved in the South Pier Parking Structure with retrofitting the existing HID fixtures with a 4 lamp T8 fluorescent fixture at the same locations as the existing fixtures or a 2 lamp T5HO fluorescent fixture. A lighting study would allow one to



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

Annual inspections are required in all facilities. Re-evaluate Condition Appraisal and CIPP maximum of every three years.

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012

fine tune existing illuminance and determine if additional fixtures would be required to meet lighting standards.

LED fixtures could also be considered although the high initial cost and high replacement cost may not result in the lowest life cycle cost and the payback period would be much longer than with the fluorescent lighting option. In any event, the replacement fixtures should be pendant mounted in some areas so the fixtures are below the structural tee stems that protrude below the ceiling soffit.

Energy costs could also be reduced by implementing lighting controls consisting of occupancy sensors and daylight sensors for the above grade garages. Both parking structures could be retrofitted with wireless lighting controls to achieve 50% to 75% savings in energy cost. The payback period would likely be less than two years.

OPINION OF PROBABLE COSTS

The Combined Opinion of Costs for the 10 Year Budget is currently \$7,776,500 for repairs, in 2012 dollars on the North Pier, South Pier, and Plaza Parking Structures.



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

10 Year Repair Costs for
North Pier, South Pier, and
Plaza Parking Structure in
2012 dollars = \$7,776,500

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

On Tables 2, 3 and 4, we have provided the Opinion of Probable Costs for the North Pier, South Pier and the Plaza Parking Structures. Discussion of the estimated costs follows the tables.

TABLE 2 – OPINION OF PROBABLE COSTS

North Pier Parking Structure	
Concrete Repairs	\$611,000
Waterproofing	\$563,000
Stair/Elevator Tower	\$20,000
Mechanical/Electrical/Plumbing	\$31,000
Architectural/Miscellaneous	\$146,000
Subtotal	\$1,371,000
Contingency	\$138,500
General Conditions	\$97,500
Consulting & Engineering Fees	\$166,000
Total in 2012 Dollars	\$1,773,000
Total Projected 10-Year Budget (Future Value)	\$1,904,700

The North Pier Parking Structure Recommended Base Repairs total \$1,773,000 in 2012 Dollars. The work includes significant concrete repairs followed by applications of protective waterproofing. Currently, the CIPP cost tables located in Appendix A – Opinion of Probable Costs show a first year repair program followed by ten (10) years of projected limited maintenance on the parking structure.

A majority of the repair work requires actions to be implemented soon to mitigate safety related and structural concerns. Please reference the following section "Implementation" for a listing of factors involving the Recommended Base Repairs of the report.

TABLE 3 – OPINION OF PROBABLE COSTS

South Pier Parking Structure	
Concrete Repairs	\$2,071,000
Waterproofing	\$1,606,000
Stair/Elevator Tower	\$150,000
Mechanical/Electrical/Plumbing	\$180,000
Architectural/Miscellaneous	\$115,000
Subtotal	\$4,122,000
Contingency	\$413,000
General Conditions	\$291,500

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

Consulting & Engineering Fees				\$497,000
Total in 2012 Dollars				\$5,323,500
Total (Future Value)	Projected	10-Year	Budget	\$5,738,800

The South Pier Parking Structure Recommended Base Repairs total \$5,323,500 in 2012 Dollars. The work includes significant concrete repairs followed by applications of protective waterproofing. Currently, the CIPP cost tables located in Appendix A - Opinion of Probable Costs show a first year repair program followed by ten (10) years of projected limited maintenance on the parking structure.

A majority of the repair work requires actions to be implemented soon to mitigate safety related and structural concerns. Please reference the following section "Implementation" for a listing of factors involving the Recommended Base Repairs of the report.

TABLE 4 - OPINION OF PROBABLE COSTS

Plaza Parking Structure				
Concrete Repairs				\$73,000
Waterproofing				\$294,000
Stair/Elevator Tower				\$20,000
Mechanical/Electrical/Plumbing				\$78,000
Architectural/Miscellaneous				\$35,000
Post Tension Reinforcement Repair				\$15,000
Subtotal				\$515,000
Contingency				\$53,500
General Conditions				\$38,500
Consulting & Engineering Fees				\$63,000
Total in 2012 Dollars				\$670,000
Total (Future Value)	Projected	10-Year	Budget	\$724,000

The Plaza Parking Structure Recommended Base Repairs total \$670,000 in 2012 Dollars. The work includes significant concrete repairs followed by applications of protective waterproofing. Currently, the CIPP cost tables located in Appendix A - Opinion of Probable Costs show a first year repair program followed by ten (10) years of projected limited maintenance on the parking structure.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

A majority of the repair work requires actions that can be implemented in a phased repair program to mitigate safety related and structural concerns. Please reference the following section "Implementation" for a listing of factors involving the Recommended Base Repairs of the report.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT

AUGUST 2012

IMPLEMENTATION

Implementing the Recommended Base Repairs can be phased over several years, depending on the parking structure.

The North Pier Parking Structure and the South Pier Parking Structure require immediate actions to address structural and safety concerns.

The Recommended Base Repairs in the North Pier Parking Structure, South Pier Parking Structure, and Plaza Parking Structure can receive a phased repair program over the first few years to meet fiscal constraints, if necessary.

Prioritization of the factors listed below will be a major part of CIPP planning spreadsheets to be completed following the completion of this Condition Appraisal Report.

Various factors to consider which may affect the work are:

- Life/safety impact of existing conditions,
- Repair priorities,
- Available annual budget,
- Construction schedule and phasing
- Maintaining parking accessibility, occupancy, and revenue,
- Reducing adverse impact to the patrons and tenants of the facilities.

Phasing the work over multiple construction seasons will typically increase the costs. Most of the increases may be from inflation, remobilization, wage increases, and costs from contractor constraints due to other work.

We recommend a comprehensive restoration program be developed using restoration construction documents and specifications, followed by construction administrative services. A qualified restoration contractor can be selected through the City's standard procurement process.

An engineering proposal to complete restoration design documents can be provided if the Owner authorizes the aforementioned repair options for implementation either in a complete repair project or phased repairs.



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

The Repairs in the North Pier, South Pier, and Plaza Parking Structure can be phased.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

DISCUSSION

Our primary focus was identifying long-term durability issues related to the structural members of the parking structures and determining the remaining useful service life. The three parking structures vary by age, type of construction, as well as durability properties of the concrete. Exposure to the elements is similar in all three structures. The use of the structures is typically the same with predominantly parking with some mixed-use.

The condition assessment has indicated through both observations and material testing that the parking structures are experiencing varying degrees of deterioration. By not addressing durability issues at this time, moisture intrusion and the ingress of corrosion causing chlorides will progress. This will increase the probability of future corrosion/deterioration mechanisms in the parking structures.

Yearly maintenance, appropriately budgeted and completed, will reduce future repair costs. It will also maintain an aesthetically superior facility for public use and aid in the identification of potential problems, which could then be addressed with a budgeted repair program. Future maintenance through contractor warranty, repair of concrete, expansion joints, re-coating of the urethane traffic membrane and isolated repair of joint sealants must be expected, budgeted, and scheduled.

NORTH PIER PARKING STRUCTURE

The North Pier Parking Structure is reaching the end of its useful service life. Due to a lack of documentation in the form of original design documents, past structural evaluation reports, and physical evidence of construction details, a detailed evaluation was performed of this structure to evaluate the parking structure's capability to survive a moderate earthquake.

We have concluded that the North Pier Parking Structure is adequate to provide "Basic Structural Safety Performance" under the application of code specified gravity and seismic loads.

We have not observed any structural cracking in slabs, beams, columns and walls due to an over-stress condition caused by an excessive amount of gravity and seismic loads resisted by these elements. No visible cracking in slabs, beams, columns or walls was observed that can be associated with foundation settlement or an overstress condition of foundation elements. The seismic retrofits in

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

1992 are performing well and have improved the flow of seismic forces from diaphragm to the lateral load resisting elements and subsequently to the garage foundation system. With the exception of a few structural items at select locations, the majority of structural elements meet the seismic detailing requirements of ASCE 31-03.

Useful Service Life

Timely implementation of the recommended repairs and maintenance within the next construction season will extend the useful service life of the structure to be between 5 to 10 years. With the new applications of concrete repair and waterproofing, the structural systems of the North Pier Parking Structure will be protected for this time frame. We recommend that the structure be reviewed annually by a licensed engineer to evaluate its condition over this remaining time frame.

The North Pier Parking Structure has approximately 5-10 years of remaining useful service life with repairs and maintenance.

Concrete

Village Level: The Village Level is in fair condition. A concrete overlay repair has been completed in past repair program.

Excavations and coring locations revealed limited concrete delamination however it could not be determined how the overlay was bonded to the substrate.

A limited amount of the underside and top surfaces of the Village Level slab is experiencing corrosion related deterioration particularly along the ocean exposure. In some locations the concrete surfaces are delaminating and spalling revealing portions of the unprotected mild steel reinforcement.

Concrete curbs and walkways are in good condition with limited cracking and other deterioration related issues.

Information obtained from the field observations and excavations prompted a recommendation that vehicular traffic be restricted to 6,000 pounds in addition to restricting the height of the vehicles. We observed vehicles in excess of this limit traveling on the North Pier Parking Structure.

Implementation of our Recommended Based Repairs is required to return the Village Level structural slab to its intended capacity.

Pier Level: The Pier Level structural slab is in fair condition. Concrete overlay repairs on the east half of the structure have been completed

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

approximately one year ago in order to maintain structural capacity. The completed repair programs included a protective waterproofing system which is failing. Coring locations revealed limited concrete delamination however it could not be determined how the overlay was bonded to the substrate.

SOUTH PIER PARKING STRUCTURE

The South Pier Parking Structure is in poor to fair condition varying by individual supported level. Also taken into consideration was the age and size of the parking structure, type of construction, and service life of the parking structure. Existing maintenance efforts has extended the service life of the parking structure's systems. At this time, significant structural concrete repairs and significant waterproofing restoration is required.

Useful Service Life

Timely implementation of the recommended repairs and maintenance within the next construction season will extend the useful service life of the structure an additional 15 to 20 years. With the new applications of concrete repair and waterproofing, the structural systems of the South Pier Parking Structure will be protected for this time frame. However, useful service life of the traffic membrane is ten (10) years and will need to be replaced or recoated.

The urethane traffic membranes may need to be recoated after 5 or more years of service dependent on use, location and condition. With proper warranty and maintenance, the protective systems recommended should not need to receive extensive repairs for over ten (10) years.

Concrete

Village Level: The Village Level drive lanes and portions of the parking areas are in poor condition. Extensive repairs have been completed in past repair programs in order to maintain structural capacity. The concrete repairs, however, have reached an end of their useful service life.

Excavations and coring locations revealed extensive concrete delamination in many areas of the drive lanes from the Village Level entrance ramp to the entry of the South Parking Structure. The delamination is extensive and is as much as 2" in depth. The primary cause of the delamination is a result of corrosion activity on the

The South Pier Parking Structure has approximately 15-20 years of remaining useful service life with repairs and maintenance.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

unprotected mild steel reinforcement. Materials testing revealed low concentrations of chloride ion content in the repair material but excessively high concentrations of chloride ion content in the original structural concrete that remains. This excessive chloride ion content is contributing to the continued corrosion activity in the slab.

An extensive amount of the underside and top surfaces of the Village Level slab is experiencing corrosion related deterioration. In some locations the concrete surfaces are delaminating and spalling revealing portions of the unprotected mild steel reinforcement.

Underside slab areas have received repairs and coatings but are continuing to leach moisture from above. Allowing moisture to continue to leak without addressing the primary cause of the leakage from above will promote continued corrosion activity of the structural slab elements.

The lower parking levels have a lesser degree of deterioration, but the corrosion activity is still occurring and is active at the level of the unprotected mild steel reinforcement.

The areas adjacent to the expansion joint located at the center of the structure is experiencing significant concrete delamination and spalling. This is due to a combination of service load from vehicle traffic and chloride ion content causing corrosion of the mild steel reinforcement.

Concrete curbs and walkways are in good condition with limited cracking and other deterioration related issues. These curbs and walkways have received periodic applications of coatings. The coatings do not bridge any of the moving cracks thereby allowing moisture to penetrate to the unprotected slab below. If cracks are present in the structural concrete slab, any moisture that gets to this level will penetrate to the Pier Level below.

Information obtained from the field observations and excavations prompted a recommendation that vehicular traffic be restricted to 6,000 pounds in addition to restricting the height of the vehicles. We observed vehicles in excess of this limit traveling on the South Pier Parking Structure. Considering a reduced effective section of the structural concrete slab due to delamination, we felt it prudent to limit the service load to mitigate potential punch-through of the slab.

Implementation of our Recommended Based Repairs is required to return the Village Level structural slab to its intended capacity.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

Pier Level: The Pier Level structural slab is in good condition. Extensive repairs have been completed in past repair programs in order to maintain structural capacity. The completed repair programs included protective waterproofing systems. The concrete repairs appear to be performing as intended on the top surface.

The underside areas of the Pier Level continue to deteriorate due to leakage from compromised protective waterproofing applications. Allowing moisture to continue to leak without addressing the primary cause of the leakage from above will promote continued corrosion activity of the structural slab elements.

Waterproofing

Village Level: This Village Level has received waterproofing applications to mitigate leakage to the levels below. The waterproofing applications have reached the end of their useful service life. Significant leakage and deterioration is occurring at the expansion joints of this level. Metal cover plates are loose and noisy when vehicles are driven over the joint.

A significant problem of water ponding is occurring around the Village level planters and commercial buildings. The commercial buildings are built on concrete slabs that appear to be trapping moisture due to the camber of the parking structure slab. Moisture is accessing locations underneath the buildings and leaking into the levels below through old cracks and penetrations in the structural concrete slab.

The existing planters do not have adequate waterproofing capability. Cracks in the structural slab continue to leak and the existing mastic waterproofing is not adequate to bridge these cracks. The planters have limited drainage and consistently are drained through weep holes in the planter walls to the structural slab. This contributes to the ponding water condition. Ponding in this manner will contribute to long-term corrosion related deterioration of the structural slab.

Installation of supplemental floor drains and associated drain pipes are recommended in select locations of the Village Level. These drains and pipes will require removal of slab-on-grade concrete, trenching for drain pipe and connection to the existing under slab drainage pipes.

Applying a complete new urethane traffic membrane in the areas of the removed planters, drive lanes and parking areas is necessary to contribute to the improvement of the useful service life of the parking structure.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

Pier Level: This Pier Level has received waterproofing applications to mitigate leakage to the levels below. The waterproofing applications have reached the end of their useful service life. Significant leakage and deterioration is occurring at the expansion joints of this level. This parking level experiences a considerable amount of patron use.

The traffic bearing membrane is in poor to fair condition depending on use and location and is approaching the end of its useful service life. Conditions observed include wear from high traffic areas and aggregate roll-out and degradation from ultraviolet exposure.

It is more effective to recoat the level with a top coat of compatible urethane traffic membrane. This new surface can be warranted for five (5) years from acceptance of the application.

Installation of a urethane sealant into control joints and routing and sealing of cracks on the concrete slabs on all levels will help mitigate moisture infiltration into the slab and mitigate active leaks to the parking levels below.

Other

The stair and elevator towers, mechanical/electrical/plumbing, and the architectural items discussed in the recommendations are necessary to promote the intended useful service life of the parking structure. This includes the installation of drains, piping, painting, etc.

PLAZA PARKING STRUCTURE

The Plaza Parking Structure is in good condition, for the size, type of construction, and service life of the parking structure. Existing maintenance efforts have extended the service life of the parking structure's systems. At this time, minor structural concrete repairs and significant waterproofing restoration is required.

Useful Service Life

Timely implementation of the recommended repairs and maintenance within the next construction season will extend the useful service life of the structure an additional 30 to 40 years of useful service life with substantial restoration cycles of 10 to 12 years. With the new applications of concrete repair and waterproofing, the structural systems of the Plaza Parking Structure will be protected for this time

The Plaza Parking Structure has approximately 30-40 years of remaining useful service life with repairs and maintenance.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

frame. However, useful service life of the traffic membrane is ten (10) years and will need to be replaced or recoated by that time.

The urethane traffic membranes may need to be recoated after 5 or more years of service dependent on use, location, and condition. With proper warranty and maintenance, the protective systems recommended should not need to receive extensive repairs for over ten (10) years.

Concrete

Plaza Level: The Plaza Level concrete beams were experiencing deteriorating conditions along the west elevation. This is due to the extensive exposure from the marine environment. Delaminated concrete is caused by corrosion of the mild steel reinforcement in the beam. There were several locations, relatively small in size, which require removal of potentially loose concrete. Once the areas are repaired a limited application of waterproofing coating will be required.

The underside surfaces of the Plaza Level were in good condition.

Pier Level: The supported slab surfaces were in good condition. A limited amount of spalled concrete was observed. From spalled cavities of concrete it was noted that a lack of concrete cover exists over a small section of the Pier Level. This area was limited in dimension and is not a concern structurally.

Waterproofing

Plaza Level: The Plaza Level was found to be in good condition. The observations from the excavations completed on the landscaped areas indicated the protective waterproofing system was in good condition. The entire system appeared to be performing as intended.

The paver surface area consisted of grouted masonry tile. A very small amount of grouted mortar joints were deteriorating, but this was very limited in quantity. The paver surface appeared to be performing as intended.

Plaza level drains were clogged with leaves and debris.

There were minor cracks that were leaking along the planters. The planters appear to be in good condition except for minor leakage at

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

cracks. Only minor repairs at specific locations are recommended at this time.

Pier Level: Cracks that are present in the Pier Level slab were likely from original construction. It was reported that these cracks appeared during original construction tensioning of the post tensioning strands. The supported slab appears to be performing as intended.

Cracks in the supported slab of the Pier Level allowed leakage to occur but has been previously sealed with urethane sealant. Some of the sealant is in poor condition. Evidence of previous leakage was observed in limited areas from the Basin Level below. The existing sealants have reached the end of their useful service life and should be replaced. Sealants should be replaced with urethane sealant that is compatible with any additional traffic membrane applications.

In order to mitigate the penetration of chloride ions into the structural slabs, additional protective systems can be applied. Materials testing results indicated high levels of chloride ion content in the top one-inch of the supported slab directly below the Plaza level. This section of the Pier Level is relatively unprotected. This section does not have a protective waterproofing coating. Test results did not reveal if this section of the Pier Level has ever received a protective coating. We recommend this entire unprotected section of the Pier Level receive a urethane traffic membrane.

In the exposed section of the Pier Level, existing urethane traffic membrane is present. The membrane was experiencing aggregate roll-out and degradation from ultraviolet exposure. The membrane is performing but is approaching the end of its useful service life. It is more effective to recoat the exterior section of the Pier Level with a top coat of compatible urethane traffic membrane. This new surface can be warranted for five (5) years.

Other

The stair and elevator towers, mechanical/electrical/plumbing, and the architectural items discussed in the recommendations are necessary to promote the intended useful service life of the parking structure. This includes the installation of drains, piping, painting, etc.

ROUTINE MAINTENANCE

For the City's parking structures we recommend a proactive program of warranty inspections of waterproofing systems and exposed overhead concrete surfaces to identify unsafe conditions and fall hazards.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

Routine maintenance repairs are required to ensure the integrity of all waterproofing systems and correcting concrete and/or structural deficiencies in a timely manner. With regular inspection, timely actions can be scheduled that will minimize the premature deterioration of structural elements and equipment failure. The more common maintenance repairs consist of spot patch replacement of deficient urethane sealants and traffic coatings, along with patching shallow concrete surface damage. If completed in a timely fashion, potential damage from corrosion related mechanisms can be minimized from developing into larger, more expensive repairs.

Routine maintenance also consists of tasks that enhance the durability and aesthetic appeal of the parking structures.

For all parking structures, we recommend the following routine maintenance on a periodic schedule:

- Cleaning by either sweeping or washing the deck from the top down to remove collected debris and dirt. At times, this includes ceilings, columns, and walls.
- Continue partial depth concrete repairs in selected areas of the structural slabs, columns, and ceilings where delaminated concrete occurs.
- Routing and sealing cracks with urethane sealants that occur over time, on supported levels only.
- Replacement of nonperforming urethane sealants.
- Continued periodic engineer appraisals, to monitor the structures for structural deficiencies.
- Small expansion joint repairs or complete replacement when adequate performance cannot be maintained.

Please reference Appendix G which contains further information as a guide to assist in developing a routine maintenance program.

SUMMARY

OBSERVATIONS

NORTH PIER PARKING STRUCTURE

Basin Level

CITY OF REDONDO BEACH PARKING STRUCTURES

CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

- The Basin Level (lowest) comprises mixed use commercial space and is currently occupied by a restaurant and an arcade. Access to the structure was limited.
- There was no moisture leakage from the overhead Pier Level observed at the time of our visit. Some previous repair locations were observed.
- Concrete floor (slab-on-grade) appeared to be in good condition for the limited areas observed.

Pier Level

- A 2" thick concrete topping was observed on the west parking bay, closest to the water.
- A newly applied epoxy-based waterproofing coating and parking striping was observed in fair condition on the entire Pier Level. The coating was beginning to fail in adhesion in the drive aisles. This coating has not have an embedded aggregate and becomes extremely slippery when wet or coated with vehicle greases and/or oils. This could result in a potential slip and fall hazard.
- Drainage piping was installed at select locations of the concrete topping to allow drainage of moisture from the east bay across to the west elevation of the structure.
- From the sounding survey, it is suspected that approximately 10% of the west bay of the Pier Level concrete overlay is debonded. The concrete was not cracked and the epoxy coating appeared to be performing. The overlay should be monitored for potential deterioration such as cracking and spalls.

Village Level

- A 2-3/4" thick concrete topping was observed on the entire Plaza Level.
- A urethane traffic membrane was applied to the entire horizontal surface of the Plaza Level. The membrane was in poor condition with cracking and worn conditions observed.
- From the sounding survey, there was debonded concrete overlay on approximately 90% of the entire Pier Level. During our structural analysis one concrete core was evaluated for shear bond between the original precast and overlay concrete. The value of 890 psi well exceeds the minimum acceptable shear bond strength but does not reflect a representative quantity to make a conclusive determination, therefore, we recommend that the overlay should be monitored for potential deterioration such as cracking and spalls.
- Concrete curbs were deteriorating in select locations (Photo 25).

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

- Underside surfaces of beams, slabs, and walls of the Village Level had previous repairs, cracks, and spalled concrete (Photo 1).
- Electrical conduit and mechanical fire suppression system piping were corroding and in deteriorating condition (Photo 23).

SOUTH PIER PARKING STRUCTURE

Basin Level

- The slab-on-grade concrete generally appeared to be in good condition.
- Columns appeared to be in good condition.

Pier Level

- Concrete was delaminating at many wall locations on the Pier Level (Photo 18)
- Underside concrete surfaces were observed to be previously repaired and painted. Many of the location indicated continued leaching and leaking conditions (Photo 19).
- Beams, especially along the west elevation were deteriorating with delaminating and spalling concrete (Photos 5, 6, and 7).
- Underside surfaces of the Pier Level had previous repairs and actively delaminating and spalling concrete (Photo 2).
- Underside concrete surfaces were observed to be previously repaired and painted. Many of the location indicated continued leaching and leaking conditions (Photo 19).
- Urethane traffic membrane was observed in poor to fair condition on the entire Pier Level. A majority of the high-traffic turning radii has worn surfaces with aggregate roll-out observed.
- Underside drain piping and fire suppression piping paint was failing and the piping was corroding (Photo 22).
- Some of the underside soffit surfaces of the Pier Level and columns have received fiber reinforcing wrap.

Village Level

- The concrete drive lanes of the Village Level (Photo 8) have many sections of delaminating and spalling concrete (Photos 9, 10, 13, and 14).
- Some locations of the drive surfaces have been repaired however the repaired locations are under corrosion distress and are actively spalling (Photos 4, 11, and 12).
- Some locations of stamped curb and walkways were cracked, allowing moisture to penetrate to the levels below.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

- Adequate planter waterproofing was lacking in most of the planters excavated. Mastic waterproofing was hard, brittle, and not bridging cracks. Fiberglass reinforcement material was deteriorated or nonexistent (Photo 26).
- Underside surfaces of the Pier Level had previous repairs and actively delaminating and spalling concrete (Photo 3).
- Underside drain pipe and fire suppression piping was corroding in locations of high concentrations of moisture, especially along the west elevation (Photo 22 and 24).
- Expansion joints and cover plates were failing. Bolts were loose or missing and openings were larger than 4" allowing unwanted access to the levels below. Leaking to the levels below was observed (Photos 15, 16, 17, and 20).
- Underside soffit surfaces of the Village Level and columns have received fiber reinforcing wrap.

PLAZA PARKING STRUCTURE

Basin Level

- Slab-on-grade concrete appeared to be in good condition.
- Moisture leakage was observed at one retaining wall on the north-west elevation. It appears to be coming from irrigation of a landscaped area to the west of the parking structure.

Pier Level

- Concrete beam delamination and corrosion activity was observed at beams on the Utility Building at the north end of the parking structure. (Photos 33).
- Urethane traffic membrane was present on the exterior exposed portion of the Pier Level. The coating was in fair condition but was worn in some high traffic locations.
- Control joint sealants in the supported slab were deteriorating.
- Slab cracking was observed parallel to a majority of the beams of the Pier Level. The cracks have been routed and sealed. The sealant was in poor to fair condition.
- In a limited area of the Pier Level, reinforcement steel could be observed. There was very limited delamination or spalling concrete conditions observed.
- Drain pipe and fire suppression piping were corroding in spot locations in areas of high concentrations of moisture, along the west elevation.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT

AUGUST 2012



WALKER
RESTORATION CONSULTANTS

PROJECT # 37-8243.00

Plaza Level

- The Plaza Level consists of a combination of landscaped sod and bonded/grouted pavers over a protected waterproofing membrane system (Photo 26 and 27).
- Excavations revealed the waterproofing membrane system was in good condition and performing properly.
 - The protected membrane system in the landscaped areas consisted of bituthane rolled membrane, protection board, insulation board, 3" of crushed gravel, filter fabric, light weight soil fill, and landscaping.
- Concrete beam delamination and corrosion activity was observed at beams on the west elevation.
- Leakage and corrosion at a slab crack along the planters of the west elevation.
- Curbs along the west elevation had limited deterioration.
- Sealant failure and leakage along with limited corrosion activity at the elevator on the underside of the Plaza Level.
- Drains were plugged with leaves and minor amount of trash.

MATERIAL TESTING

Materials testing consisted of several methods. Each of the parking structures was tested to obtain results for chloride content, petrographic analysis, and non-destructive concrete cover testing. The North Pier Parking Structure and the South Pier Parking Structure were tested for compressive strength of select locations of the supported concrete slabs. The samples were obtained at locations representative of observed conditions and for establishing baseline criteria of the material properties. Excavations in the Plaza Parking Structure were completed in both the landscaped planters and the concrete overlays to reveal conditions for visual observation. This was necessary to confirm the type and condition of the hidden waterproofing systems and substrate.

Subsequently in the follow up North Pier Structural Analysis, the following tests were completed:

- Additional concrete compressive strength testing
- Exploratory test wells of concrete reinforcing
- Non-destructive ground penetrating radar for concrete reinforcing location and spacing
- Shear bond strength between original concrete substrate and concrete overlays.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

Samples of concrete from concrete slabs of the parking structures were collected on site per ASTM and ACI guidelines and sent to an independent laboratory, Universal Construction Testing, LTD (UCT) for testing and analysis.

A list of the concrete core samples and locations as well as the results can be referenced in Appendix C and the attached Structural Analysis report for the North Pier Parking Structure.

LIMITATIONS

This report contains the professional opinions of Walker Restoration Consultants based on the conditions observed as of the date of our site visit and documents available to us. This report is believed to be accurate with the limitations of the stated methods for obtaining information.

We have provided our opinion of probable costs from visual observations, limited testing, and field survey work. The opinion of probable repair costs is based on available information at the time of our evaluation and from our experience with similar projects. There is no warranty to the accuracy of such cost opinions as compared to bids or actual costs. This condition assessment and the recommendations therein are to be used with additional fiscal and technical judgment.

It should be noted that our renovation recommendations are conceptual in nature and do not represent changes to the original design intent of the structure. As a result, this report does not provide specific repair details or methods, construction contract documents, material specifications, or details to develop the construction cost from a contractor.

Based on the proposed scope of services, the evaluation was based on certain assumptions made on the existing conditions. Some of these assumptions cannot be verified without expending the scope of services or performing more invasive procedures on the structure.

The recommended repair concepts outlined represents current available technology for parking facilities and other structures. This report does not provide any kind of guarantee or warranty on our findings and recommendations. Our evaluation was based on and limited to the proposed scope of work. We do not intend to suggest or imply that our appraisal has discovered or disclosed all latent conditions or has considered all possible improvement or repair concepts.

CITY OF REDONDO BEACH PARKING STRUCTURES
CONDITION APPRAISAL REPORT



WALKER
RESTORATION CONSULTANTS

AUGUST 2012

PROJECT # 37-8243.00

A review of the facility for compliance with the Americans with Disabilities Act (ADA) requirements was not part of the scope of this project. However, it should be noted that whenever significant repair, rehabilitation or restoration is undertaken in an existing structure, ADA design requirements may become applicable if there are currently unmet ADA requirements.

Similarly, we have not reviewed or evaluated the presence of, or the subsequent mitigation of hazardous materials including, but not limited to, asbestos, lead, and PCB.

This report was created for the use of The City of Redondo Beach and use of this report by others is at their own risk.



Administrative Report

Commission Action Date: July 8, 2013

To: MEMBERS OF THE HARBOR COMMISSION

**From: PETE CARMICHAEL, WATERFRONT AND ECONOMIC
DEVELOPMENT DIRECTOR**

Subject: MOONSTONE PARK MASTERPLAN UPDATE

RECOMMENDATION

1. Receive and file this report

EXECUTIVE SUMMARY

In January, 2012, The City Council approved a master plan for the redevelopment of the Moonstone Park area on Mole B. The plan called for the construction of an enhanced Moonstone Park, new storage and launch facilities for the City's two Outrigger Canoe Clubs, a sailboat dry storage area, and a boating and paddling center with classroom space and locker room facilities. The plan was based on a design produced by King Harbor Marina, the City's ground lessee for the property adjacent to Moonstone Park. The master plan was based on a commitment by King Harbor Marina to build the sailing and paddling center as well as the sailboat storage area on their leasehold property, with the City committed to the construction of the park and outrigger facility on City property.

Late in 2012, Chevron Products Company agreed to fund a significant portion of the construction costs in exchange for the temporary use of the Mole B area for transport of some heavy equipment. In 2013, with the funds now available, the City Council authorized a contract with Hirsch Landscape Architects to develop the plans and specifications for the project. The schedule called for a return to the City Council with finalized plans and specifications in September, 2013.

In May, 2013, King Harbor Marina informed the City that they would no longer be building the sailing and paddling center on Mole B as specified in the master plan. They determined that building the center on Mole A, adjacent to the King Harbor Yacht Club, rather than Mole B, was less expensive and freed up dock space for more profitable slip tenants. Given the late stage of the planning work on the project, this has required a significant adjustment. City staff and the consultant team are now evaluating several options for moving the plan forward without the sailing and paddling center, including potential modifications to the layout of the other uses. Staff is working with the leaseholder to better understand their revised plan for the site and anticipates that a

solution will be developed by late summer or early fall. Attached to this Report is a May 21st letter from Maryann Guthrie of King Harbor Marina outlining their position relative to the Moonstone Park Master Plan.

FISCAL IMPACT

There is no fiscal impact associated with the development of this report.

Submitted by:

A handwritten signature in black ink, appearing to read 'Pete Carmichael', written over a horizontal line.

Pete Carmichael
Waterfront & Economic Development Director

May 21, 2013

Mr. Pete Carmichael
Waterfront & Economic Development Dept.
City of Redondo Beach
415 Diamond Street
Redondo Beach, CA 90277

Dear Pete,

This letter is to confirm our discussion last week and add some additional thoughts regarding our joint efforts to improve Mole B.

We know that you and others have put in considerable time on this project and are sorry that our announcement will change some of the City's current efforts.

Since our meeting, there have been some rumors circulating about changes to the planned improvements. In order to quell misinformation to the public, please note the following:

- A. Marina Cove Ltd. is still fully committed to building a Sailing and Paddling Center but because the costs have ballooned to over \$3 million dollars, we are now working on a much lower cost alternative that could be realized far sooner. This alternative would be to relocate the Sailing Center portion to Mole A by enhancing and expanding the existing King Harbor Youth Foundation sailing instruction program currently operating at the King Harbor Yacht Club, a similar arrangement that exists in other recreational harbors.
- B. Marina Cove Ltd. is still prepared to sign a long term agreement for the City to provide an equal amount of marina tenant parking spaces now located on its leasehold that will be displaced by the planned improvements onto the City-controlled portion of Mole B. Even with relocating the Sailing Center portion to Mole A this still makes sense for all the remaining uses planned on Mole B, especially to better accommodate the existing outrigger canoe clubs and new small sailboat mast-up dry storage facilities.
- C. Marina Cove Ltd. is evaluating alternative options for building the new small sailboat mast-up dry storage and adjoining hand launch ramp facilities. However, understanding now that there are significant issues and substantial costs associated with constructing any new ramp facilities either for launching small sailboats or large outrigger canoes it would be most beneficial for us to collaborate in possibly developing one to serve both uses. To this end, we would like to explore a new idea with the City at the earliest possible date.

King Harbor Marina
apartments ■ offices ■ boat slips

Pg. 1 of 2 - 0521-1nr

We hope that with the above clarifications the City will realize that the only proposed change to the planned improvements is the relocation of the Sailing Center portion. The primary objective remains, develop better instructional facilities to provide greater access to sailing and in turn help fill vacant boat slips at all four marina operations.

We look forward to our future work together on making these improvements to Mole B a reality.

Sincerely,

A handwritten signature in cursive script, appearing to read "MC Guthrie".

Maryann Guthrie
President
MCL Marina Corporation
General Partner, Marina Cove Ltd.
(310) 376-6926, ext. 128
(310) 374-6067 (fax)

Copy: Mayor Gin
City Council
Sean Guthrie



Administrative Report

Commission Action Date: July 8, 2013

To: MEMBERS OF THE HARBOR COMMISSION

**From: PETE CARMICHAEL, WATERFRONT & ECONOMIC DEVELOPMENT
DIRECTOR**

Subject: DIRECTOR'S REPORT

RECOMMENDATION

Receive and file a report from the Waterfront & Economic Development Director on current and upcoming waterfront projects and activities.

EXECUTIVE SUMMARY

An oral report will be provided by the Waterfront & Economic Development Director at the Commission meeting on current and upcoming waterfront projects and activities.

BACKGROUND

Periodic reports from Waterfront & Economic Development staff help keep members of the Commission informed of the status of general waterfront operations. The Director's report will provide information on current and upcoming department projects and activities.

COORDINATION

Department staff collaborated on the development of this report.

FISCAL IMPACT

The cost for preparing this report is included within the Waterfront & Economic Development Department's adopted FY2012-13 annual budget and is part of the department's annual work program.

Submitted by:

Pete Carmichael
Waterfront & Economic Development Director