

REPORT TO COUNCIL ON PLAYGROUND SAFETY:

The Need for Replacement and Renovation

I. INTRODUCTION

Two playground equipment safety studies commissioned by the City of Berkeley have found that most Berkeley City park playgrounds do not meet current safety standards, and some contain severe hazards. Representatives from Berkeley's Partners for Parks brought this matter to City Council's attention on May 26, 1996, with their report entitled "Renovation of Children's Playgrounds." On June 11, 1996 Council agreed to allocate \$125,000 to a fund which would be matched by the Partners for Parks organization, under an Agreement between the City of Berkeley and Berkeley Partners for Parks. This fund would be used to begin to address a few of the most pressing needs for playground renovation and replacement.

II. MISSION

A Playground Safety Review Committee, comprised of members of Partners for Parks, the Parks and Recreation Commission, and City Staff, was formed to determine a prioritized list of the most hazardous playground sites, using current safety standards.

III. METHOD

A) Needs Assessment

A master list of all play areas in City of Berkeley parks was prepared. The list included five sites where hazardous play equipment was removed and never replaced ("missing playgrounds"). The details of that information are in Appendix A, the *Play Area Capital Improvements Project (CIP) Summary Chart*, which identifies 49 play areas in 33 City Parks. Twenty-two play areas had either been recently renovated, or were currently slated for renovation. The remaining 27 play areas were surveyed to determine whether they were compliant with current safety standards.

The geographical distribution of play areas throughout the City as well as the population of young persons was also reviewed. Appendix B, *Geographic Distribution of Play Areas* shows the distribution of play areas throughout the city, census tract data, and location of the funded play areas, non-compliant play areas and missing playgrounds.

B) Site visits

In September 1996, the Playground Safety Review Committee visited 27 play areas in order to assess current conditions. Photos, slides, and video recordings were made at each site. A checklist for each play area was used to note the condition of play equipment, the condition of the site, wheelchair accessibility to the site, potential level of use (availability of parking, size of site, location), and other comments.

C) Review of previous studies

The Committee reviewed the 1994 Playground Equipment Safety Matrix Memorandum which was created by City staff during the PERS process to rate and rank hazardous play areas. This matrix, which assigned points to each play area based on five criteria, was primarily based on findings from the two earlier playground equipment surveys. The first was a 1989 report on Playground Equipment Safety and Accessibility by Moore, Iacofano and Goltsman (M.I.G.) The second report dated from 1993, when the Bay Cities Joint Powers Insurance Authority conducted a Safety and Loss Control inspection of Berkeley's playgrounds to determine whether equipment owned or maintained by the City conformed to then-current standards.

D) Incorporation of current standards

The State of California has adopted regulations in accordance with the Consumer Product Safety Commission's Handbook for Public Playground Safety. Under sections 115725 and 115745 of the Health and Safety Code, no state funding shall be available for the operation, maintenance, renovation or supervision of a playground unless the playground conforms to these guidelines. In order to establish criteria for ranking playgrounds, the Committee used the CPSC Handbook to determine the most likely source of serious injuries. These criteria are given in Appendix C, *Hazards Rating Criteria*.

All of the criteria used in the previous studies were still applicable, however past studies had neglected "fall zones" as a separate category and "other hazards" such as swings, teeter-totters, and entrapment/entanglement hazards. These criteria were added, and some changes in point values were made in order to achieve a rating system which would more accurately reflect current safety standards and the likelihood of severe injury. The differences between past rating systems and the current system are also presented in Appendix C, attached.

E) Rating and Ranking

Of the 27 play areas visited, 22 were found to have significant needs which went beyond maintenance issues such as minor repairs. Subsequent meetings and site visits were made in order to reach consensus on the findings. The points assigned in each category were then summed to reach a total for each playground. This total was used to create a ranked list of the playgrounds. In the event of a "tie", playgrounds were listed in order of use level, with the more highly used playgrounds listed first.

A dilemma was encountered in the ranking of the missing playgrounds at Aquatic Park, Shorebird, Thousand Oaks Tot Lot, and Greg Brown Tot Lot. The aging equipment which had once been at these sites had been removed and never replaced. The committee felt that these playgrounds, while no longer "hazardous", continue to be deserving of attention due to the tremendous need in those communities. The missing playgrounds were therefore incorporated into the ranked list, using the census and geographic charts of the city to determine the areas of greatest need.

Four sites which had been included in the survey have recently received funding. These sites, San Pablo Tot, 63rd Street Mini Park, and Aquatic Park (two sites), have been removed from the ranked list of results, but the committee ratings for these parks can still be found in the detailed Appendix D. The total list of play areas needing repair or renovation has thus been reduced from 22 to the 18 referred to in section IV (a) and (b) below.

IV. RESULTS

- (a) Sixteen play areas are in need of play equipment rehabilitation with accessible resilient paving. Three of these playgrounds are currently empty lots; equipment was removed and never replaced [Shorebird, Thousand Oaks Tot, Greg Brown Tot]. Two play areas have partial funding, but require additional funding over existing allocations to complete their play area rehabilitation [Totland, Terrace View Tot].
- (b) Two play areas were identified for possible equipment removal based on the evaluation of the Committee. These sites require further evaluation by the Parks and Recreation Commission for final recommendations. [John Hinkel, Ohlone Elementary West]
- (c) Ten play areas have been renovated within the past 10 years, and comply with basic safety standards but do not necessarily have adequate resilient accessible surfacing.

- (d) Twenty-one play areas will soon fully comply with both safety and accessibility standards. Eight of these play areas have been renovated within the past five years, eight more are currently under construction, and five more are funded, with expected construction completed or in progress by December 1998.

The 18 play areas with unfunded needs are listed below in Table A in order of their total hazards rating score. The three "missing playgrounds" could not receive hazards scores since their equipment no longer exists. These parks are denoted by italics, and incorporated into the list by placing them near other high priority parks of similar potential use level. Two sites with high hazard scores, John Hinkel and Ohlone Elementary West, urgently require evaluation by the Parks and Recreation Commission due to site-specific remediation issues.

Complete scores are found in Appendix D, *Hazards Rating and Ranking Results*, attached. Detailed findings on particular playground hazards are listed in Appendix E, *Specific Playground Hazards*.

Table A
1996 PLAY AREA SAFETY REVIEW COMMITTEE
HAZARDS RANKING RESULTS

Playground	Score	
La Loma Tot	21	
John Hinkel Elem	19	*further study needed*
King School Elem	16	
<i>Shorebird</i>	-	
<i>Thousand Oaks Tot</i>	-	
Ohlone Elem West	15	*further study needed*
Codornices Elem	13	
Codornices Tot	13	
Cedar Rose Tot	13	
MLK Tot	12	
Ohlone Tot East	12	
Prince Street Tot	12	
Live Oak Elem	11	
Totland	9	
<i>Greg Brown Tot</i>	-	
Terrace View Tot	8	
Berkeley Way	7	
Bateman	6	

V. RECOMMENDATIONS

Measure AA and PERS Park allocations have begun the important task of bringing the city play areas into safety and access compliance. Over the past five years approximately \$775,000 has been allocated from these sources. Nearly twice that amount has been expended from a variety of sources over the past ten years. Nevertheless, in order to bring all city play areas into compliance it is estimated that an additional \$998,000 is required (see Appendix A). This amount is far in excess of the \$125,000 currently set aside by the City Council which, when matched by Partners for Parks, will eventually reach \$250,000.

Clearly, additional funding is urgently needed in order to reduce the City's liability exposure and provide for a safe and challenging play environment for all the City's children. The matching agreement with Partners for Parks is a step toward meeting the need, but can provide for only a few play areas. City playgrounds with major hazards should not have to wait for matching funds. An ongoing funding commitment from Council is an absolute necessity to ensure the safety and well-being of our community's youngest members.

The issue of funding sources was not within the scope of the current Committee's mission. The Committee's charge was limited to the recommendations for hazard mitigation of existing play elements and site conditions, and did not include options such as relocation or master plan considerations. The approach taken by the Committee was to rank the sites based on the criteria and ranking system established, and then to allocate the funding so as to eliminate hazards within the play area. A subsequent committee, composed of representation from Staff, the Parks and Recreation Commission, and Berkeley Partners for Parks, should be charged to oversee the sequencing of projects and assist in the identification of possible funding sources.

It may be noted that most of the high priority playgrounds are located in North and East Berkeley. This geographic imbalance is due to the fact that past and current renovation efforts have for the most part been concentrated on the South and West. (See Appendix B, *Geographic Distribution of Play Areas*.) South and West Berkeley have been assisted by grants and funding sources such as Community Development Block Grants and UPARR. Indeed, in the past few months, four play areas in the South and West areas have been funded by CDBG grants [San Pablo Tot Lot, 63rd Street Mini-Park, and two sites at Aquatic Park.] The neighborhoods in the North and East, although they contain thousands of children, are not eligible for the outside sources of funding which are available to the South and West. Thus the playgrounds with some of the most significant hazards, such as La Loma Tot Lot and John Hinkel Park, have remained unremediated, and the empty lot at Thousand Oaks Tot leaves a large gap for the many children of that neighborhood.

The amount of \$998,000 represents a reasonable mid-range estimate for replacement and/or repair in order to bring playgrounds into compliance. The funding needs estimate is based on the size of the available area for play, the possibility of rehabilitating existing play elements, and known costs of developing play areas in the City of Berkeley and the Bay Area at large. The costs include renovation to existing equipment, new play equipment, minor improvements to the perimeter of the play enclosure, and safety surfaces including resilient paving for handicap access from the edge of the play area to the structures and sand. The total does not include the cost of equipment replacement at John Hinkel and Ohlone Elementary West, as these sites have disability access and/or playground surfacing constraints which would lead to very high renovation costs. Also not included in that amount is the \$143,000 necessary to provide for disability access and resilient surfacing at ten play areas (Appendix F). It would make sense to ensure that allocations set aside by Council in the budgetary process for accessibility improvements in our parks be used to provide the additional funding needed by the play area projects so that they fully meet current accessibility requirements.

Playgrounds in Berkeley's parks are a vital resource for children and their families, providing opportunities not only for play, but also for the important work of building community. Children learn to get along while taking turns on slides, parents talk to other parents, and a sense of community is constructed. Large, centrally located parks such as Totland, Shorebird and Codornices draw families from all over Berkeley, bringing together diverse communities. Smaller playgrounds provide places for neighbors to meet each other. Repair and renovation of play areas should be a major priority, not just in order to reduce the City of Berkeley's liability exposure, but because these play areas are centers of community life. The children of Berkeley deserve a safer place to take their first steps toward becoming citizens of our city.

PLAY AREA SAFETY REVIEW COMMITTEE

for Partners for Parks:

for the Parks and Recreation Commission:

for the City of Berkeley:

Natasha Beery, William Clark

Sarah Butler

Lisa Caronna

APPENDICES

- Appendix A** Play Area Capital Improvement Project (CIP) Summary
- Appendix B** Geographical Distribution of Play Areas
1) City of Berkeley Play Areas (Tot and School-Age)
2) City of Berkeley Play Areas
 • Needing Renovation
 • 1/4 Mile Walking Radius
3) Census Tract Data (Number of Children)
- Appendix C** Playground Hazards Rating Criteria and Hazards Rating Points
- Appendix D** Hazards Rating and Ranking Results
- Appendix E** Specific Play Area Hazards
1) Alphabetical List of Play Areas with Hazard Descriptions
2) Examples of Play Area Hazards (Photographs)
- Appendix F** Accessibility Needs

APPENDIX A

June 18, 1997

Play Area Capital Improvement Project (CIP) Summary

PARK NAME	REHAB	APPROX.	APPROX DATE	COMMENTS
	FUNDS NEEDED	FUNDS ALLOCATED	COMPLETION	
	INCLUDES ACCESS			
1 Aquatic Park Tot Lot		\$100,000	12/98	
2 Aquatic Park Elem		\$110,000	12/98	
3 Bateman Mall Park	\$48,000			
4 Berkeley Way Mini Park	\$80,000			
5 Cedar Rose Park Tot	\$80,000			
6 Cedar Rose Park Elem		\$53,000	8/94	
7 Charles Dorr Mini Park Tot		\$42,000	7/97	
8 Codornices Park Tot	\$60,000			
9 Codornices Park Elem	\$60,000			
10 Dorothy Bolte Park		\$32,000	7/97	
11 George Florence Park Tot		\$46,000	8/94	
12 George Florence Park Elem		\$54,000	10/96	
13 Greg Brown Park Tot	\$25,000			
14 Greg Brown Park Elem		\$9,000	91	
15 Grizzly Peak Park		Undetermined	88	
16 Grove Park Tot		\$60,000	7/97	
17 Grove Park Elem		\$103,000	7/97	
18 Halcyon Commons		\$17,000	8/96	
19 Haskell-Mabel Park Tot		\$5,000	7/97	
20 Haskell-Mabel Park Elem		\$37,000	7/97	
21 James Kenney Park Tot		\$42,000	8/94	
22 James Kenney Park Elem		\$15,000	93	
23 John Hinkel Park	see comments			Further Study Needed
24 King School Park Tot				
25 King School Park Elem - Phase1	\$60,000			Further Study Needed for Phase 2
26 La Loma Park Tot	\$80,000			
27 La Loma Park Elem		\$15,000	89	
28 Live Oak Park Tot		\$45,000	7/97	
29 Live Oak Park Elem	\$80,000			
30 MLK Memorial Civic Ctr Park	\$120,000			
31 Ohlone Park Tot West		\$50,000	12/97	
32 Ohlone Park Tot East	\$50,000			
33 Ohlone Park Elem West	see comments			Further Study Needed
34 Ohlone Park Elem East		\$45,000	8/94	
35 People's Park Play				
36 Prince Street Tot Lot	\$80,000			
37 Remillard Park		Undetermined	90	
38 Roosevelt Tot Lot		\$22,500	1/92	
39 San Pablo Park Tot		\$30,000	12/97	
40 San Pablo Park Elem		\$73,000	1/92	
41 Shorebird Park	\$60,000			
42 Sixty-third St. Mini-Park		\$80,000	12/97	
43 Strawberry Creek Park Elem		\$65,000	7/97	
44 Terrace View Park Tot	\$20,000	\$3,500	11/96	
45 Terrace View Park Elem		\$20,000	89	
46 Thousand Oaks Park Tot	\$35,000			
47 Thousand Oaks Park Elem			90	
48 Totland Playground	\$60,000	\$60,000	12/97	
49 Willard Park		\$222,000	97	
TOTAL RECENTLY FUNDED		\$1,456,000		
TOTAL REMAINING NEED	\$998,000			

Note: There are 49 Play Areas in 33 City Parks

16 Play Areas need repair, redesign, or replacement equipment and funding.

Totland and Terrace View require additional partial funding to fulfill safety requirements.

Play Areas currently funded with expected completion dates as noted.

2 Play Areas identified for further study due to special circumstances.

King Park Elementary Play Area to be evaluated following Phase 1 Improvements

**APPENDIX B |
GEOGRAPHICAL DISTRIBUTION OF PLAY AREAS**

**CITY OF BERKELEY
PLAY AREAS (TOT AND SCHOOL-AGE)**

JUNE 1997

Northwest Quadrant
12 Play Areas
(Includes 4 Measure Y Play Areas Maintained by the City)

Northeast Quadrant
14 Play Areas

Southwest Quadrant
16 Play Areas
+3 Measure Y Play Areas Maintained by BUSD

Southeast Quadrant
7 Play Areas
+2 Measure Y Play Areas Maintained by BUSD

**PLAY AREAS IN BERKELEY
EXISTING CONDITIONS**

KEY

- △ TOT PLAY AREA (EXISTING)
- SCHOOL-AGE PLAY AREA (EXISTING)

NOTES:
1. PLAY AREAS IDENTIFIED ALSO INCLUDE 8 RECENTLY REMOVED & PLANNED PLAY EQUIPMENT AREAS AT AQUATIC PARK (2 AREAS PROPOSED IN REVISD MASTER PLAN), SHOREBIRD, GREG BROWN TOT, THOUSAND OAKS TOT.
2. THOUSAND OAKS SCHOOL PARK AND KING SCHOOL PARK ARE MEASURE Y JOINT USE CITY/BUSD PARKS MAINTAINED BY THE CITY AND INCLUDED ABOVE. OTHER JOINT USE MEASURE Y PARKS MAINTAINED BY THE SCHOOL DISTRICT ARE LOCATED AT LE CONTE SCHOOL, MALCOLM X SCHOOL, JOHN MURR SCHOOL, AND WASHINGTON SCHOOL.

Total 49 Play Areas Maintained by the City of Berkeley
+5 Measure Y Play Areas Maintained by BUSD

PARKS AND RECREATION CENTERS

- | | | |
|---|--|--|
| 1 ADVENTURE PLAYGROUND | 15 FREDERICK MINN PARK | 29 KING SCHOOL PARK |
| 2 AQUATIC PARK | 16 GEORGE FLORENCE PARK | 30 KING SWIM CENTER |
| 3 BATHMAN MALL PARK | 17 GREAT STONEFACE PARK | 31 GLENDALE LA LOMA PARK |
| 4 BERKELEY ROSE GARDEN | 18 GREG BROWN PARK | 32 LE CONTE SCHOOL PARK |
| 5 BERKELEY WAY MINN PARK | 19 GRIZZLY PEAK PARK | 33 LIVE OAK PARK/RECREATION CENTER |
| 6 CEDAR ROSE PARK | 20 GROTTO ROCK PARK | 34 MALCOLM "T" SCHOOL PARK |
| 7 CESAR CHAVEZ (JAN H. WATERFRONT) PARK | 21 GROVE PARK/ALL KING, JR. REC. CTR. | 35 M. L. KING, JR. MEMORIAL (JOHN CENTER) PARK |
| 8 CHARLES BONN MINN PARK | 22 HALCYON COMMONS | 36 MARINA MALL |
| 9 OLD CITY HALL PARK | 23 HASKELL-MARTEL MINN PARK | 37 MONKEY ISLAND |
| 10 CODORNICES PARK | 24 HORSESHOE PARK | 38 MORTAR ROCK PARK |
| 11 COLUMBUS SCHOOL PARK | 25 INDIAN ROCK PARK | 39 OAK PARK |
| 12 CONTRA COSTA ROCK PARK | 26 JAMES KENNEY PARK/RECREATION CENTER | 40 OHLONE PARK |
| 13 CROMBIE ROCK PARK | 27 JOHN NIKKEL PARK AND CLUBHOUSE | 41 PEOPLE'S PARK |
| 14 DOROTHY BOLTE PARK | 28 JOHN MURR SCHOOL PARK | 42 PRESENTATION PARK |

SCHOOLS

- | | |
|--------------------------------|--|
| 1 BERKELEY HIGH SCHOOL | 11 LONGFELLOW JR. HIGH SCHOOL |
| 2 COLUMBUS ELEMENTARY SCHOOL | 12 MALCOLM "T" ELEMENTARY SCHOOL |
| 3 CROMBIE ELEMENTARY SCHOOL | 13 KING JR. HIGH SCHOOL |
| 4 EAST CAMPUS HIGH SCHOOL | 14 OXFORD ELEMENTARY SCHOOL |
| 5 EMBERSHIRE ELEMENTARY SCHOOL | 15 THOUSAND OAKS ELEMENTARY SCHOOL |
| 6 FRANKLIN ELEMENTARY SCHOOL | 16 WASHINGTON ELEMENTARY SCHOOL |
| 7 HILLDALE ELEMENTARY SCHOOL | 17 WHITTIER ARTS MAGNET SCHOOL |
| 8 JEFFERSON ELEMENTARY SCHOOL | 18 WILLARD JR. HIGH SCHOOL |
| 9 JOHN MURR ELEMENTARY SCHOOL | 19 UNIVERSITY OF CALIFORNIA |
| 10 LE CONTE ELEMENTARY SCHOOL | 20 STRAUBER CIVIL SWIM/RECREATION FACILITY |

PARKS, RECREATION CENTERS, & SCHOOLS

DEPARTMENT OF PARKS & WATERFRONT
CITY OF BERKELEY

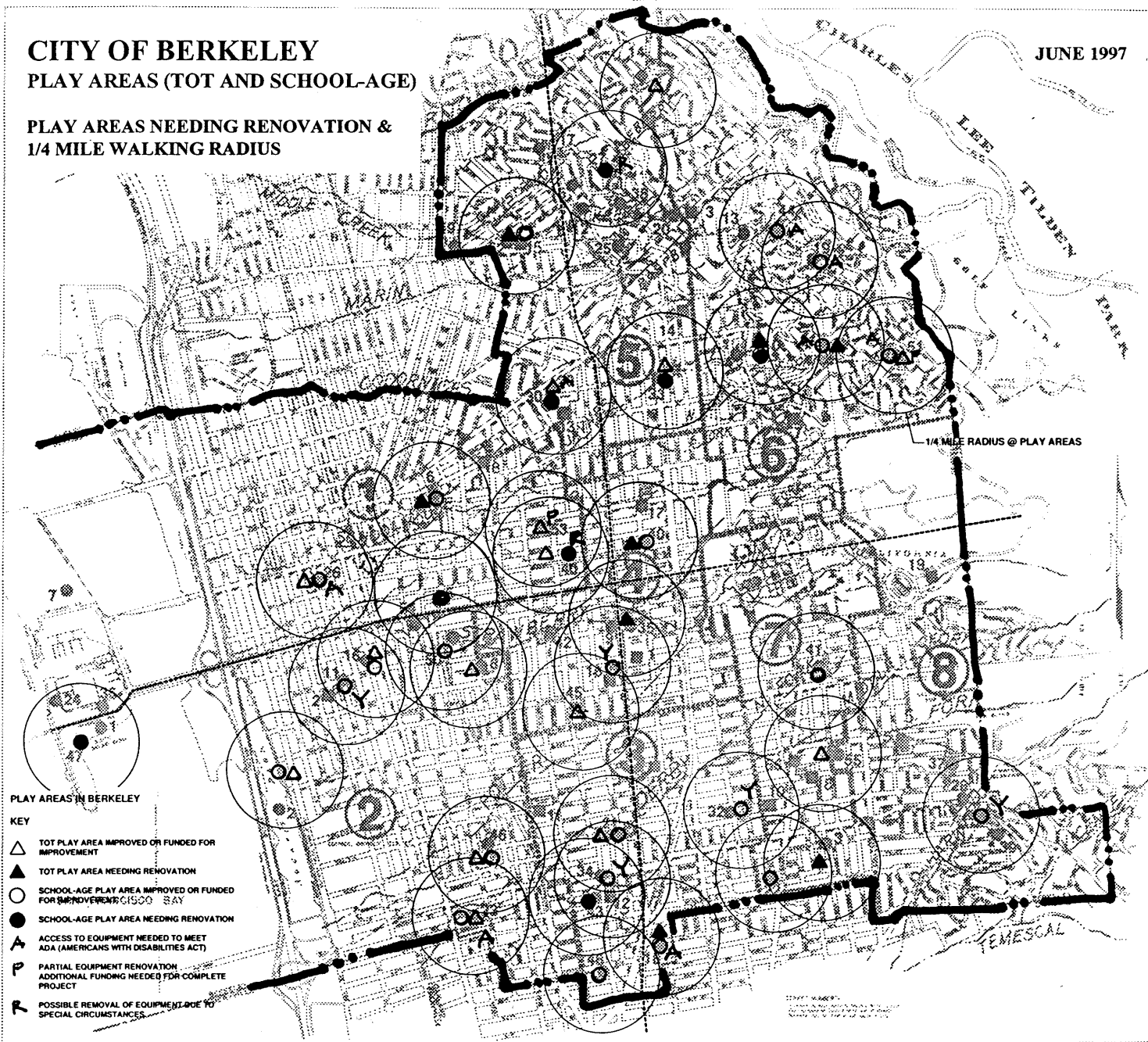
JUNE 1996

**APPENDIX B 2
GEOGRAPHICAL DISTRIBUTION OF PLAY AREAS**

**CITY OF BERKELEY
PLAY AREAS (TOT AND SCHOOL-AGE)**

JUNE 1997

**PLAY AREAS NEEDING RENOVATION &
1/4 MILE WALKING RADIUS**



PARKS AND RECREATION CENTERS

- | | |
|---|---|
| 1 ADVENTURE PLAYGROUND | 15 FREDERICK SWM PARK |
| 2 AQUATIC PARK | 16 GEORGE FLORENCE PARK |
| 3 BATEMAN MALL PARK | 17 GREAT STONEFACE PARK |
| 4 BERKELEY ROSE GARDEN | 18 OREG BROWN PARK |
| 5 BERKELEY WAY SWM PARK | 19 GRIZZLY PEAK PARK |
| 6 CEDAR ROBE PARK | 20 GROTTO ROCK PARK |
| 7 CESAR CHAVEZ (AKA N. WATERFRONT) PARK | 21 GROVE PARK (ILL. KING JR. REC. CTR.) |
| 8 CHARLES DORN SWM PARK | 22 HALCYON COMMONS |
| 9 OLD CITY HALL PARK | 23 HASKELL SHARPE SWM PARK |
| 10 COODINICES PARK | 24 HORSESHOE PARK |
| 11 COLUMBUS SCHOOL PARK | 25 INDIAN ROCK PARK |
| 12 CONTRA COSTA ROCK PARK | 26 JAMES KENNEDY PARK RECREATION CENTER |
| 13 CRAGMONT ROCK PARK | 27 JOHN HINDEL PARK AND CLUBHOUSE |
| 14 DOROTHY BOLTE PARK | 28 JOHN MUIR SCHOOL PARK |

- | | |
|--|--|
| 29 KING SCHOOL PARK | 43 PRINCE STREET TOT LOT |
| 30 KING SWM CENTER | 44 REBALLARD PARK |
| 31 OLEDALE LA LOMA PARK | 45 ROOSEVELT TOT LOT |
| 32 LE CONTE SCHOOL PARK | 46 SAN PABLO PARK/FRANCIS ALBURN REC. CTR. |
| 33 LIVE OAK PARK RECREATION CENTER | 47 SHOREBIRD PARK |
| 34 MALCOLM "T" SCHOOL PARK | 48 SIXTY-THIRD STREET SWM PARK |
| 35 M. L. KING JR. MEMORIAL (OVC CENTER) PARK | 49 SOLANO-PERLATA PLAZA |
| 36 MARINA MALL | 50 STRAWBERRY CREEK PARK |
| 37 MONKEY ISLAND | 51 TERRACE VIEW PARK |
| 38 MORTAR ROCK PARK | 52 THOUSAND OAKS SCHOOL PARK |
| 39 OAK PARK | 53 VIRGINIA-MCGEE TOTLAND |
| 40 OHLONE PARK | 54 WEST CAMPUS SWM CENTER |
| 41 PEOPLE'S PARK | 55 WILLARD PARK |
| 42 PRESENTATION PARK | 56 WILLARD SWM CENTER |

SCHOOLS

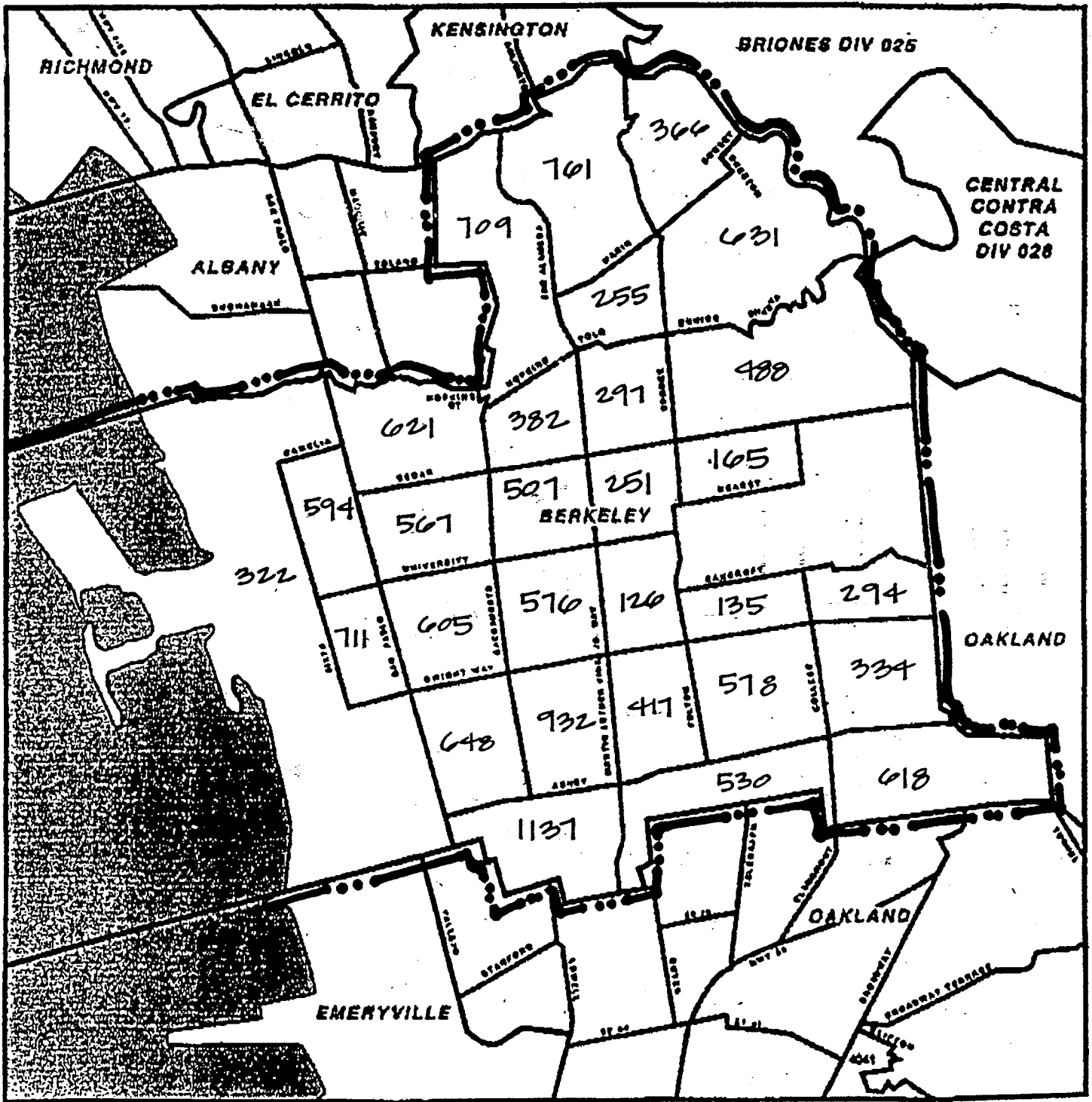
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| 1 BERKELEY HIGH SCHOOL | 11 LONGFELLOW JR. HIGH SCHOOL |
| 2 COLUMBUS ELEMENTARY SCHOOL | 12 MALCOLM "T" ELEMENTARY SCHOOL |
| 3 CRAGMONT ELEMENTARY SCHOOL | 13 KING JR. HIGH SCHOOL |
| 4 EAST CAMPUS HIGH SCHOOL | 14 OSFORD ELEMENTARY SCHOOL |
| 5 EMERSON ELEMENTARY SCHOOL | 15 THOUSAND OAKS ELEMENTARY SCHOOL |
| 6 FRANKLIN ELEMENTARY SCHOOL | 16 WASHINGTON ELEMENTARY SCHOOL |
| 7 HILLSIDE ELEMENTARY SCHOOL | 17 WHITTIER ARTS MAGNET SCHOOL |
| 8 JEFFERSON ELEMENTARY SCHOOL | 18 WILLARD JR. HIGH SCHOOL |
| 9 JOHN MUIR ELEMENTARY SCHOOL | 19 UNIVERSITY OF CALIFORNIA STRAWBERRY CTR. SWM/RECREATION FACILITY |
| 10 LE CONTE ELEMENTARY SCHOOL | |

PARKS, RECREATION CENTERS, & SCHOOLS

DEPARTMENT OF PARKS & WATERFRONT
CITY OF BERKELEY

JUNE 1996

APPENDIX B 3
 CENSUS TRACT DATA
 NO. CHILDREN UNDER 18 YEARS PER TRACT



City of Berkeley Planning Department - 1984

City Boundary
 Census Tract Boundary



Appendix C

PLAYGROUND HAZARDS RATING CRITERIA

Fall Height

Falls from play equipment are among the most likely and most severe hazards. Almost 60% of all injuries are caused by falls to the ground.

Resilient surfacing

Protective surfacing under and around all playground equipment is "the most critical safety factor on playgrounds." according to the CPSC. In some Berkeley playgrounds, equipment is placed over grass or turf, which are poor shock absorbers compared to loose fill such as sand or wood mulch.

Fall zone

A fall zone, covered with a protective surfacing material, is essential under and around equipment where a child might fall. This area should be free of other equipment and obstacles onto which a child might fall.

Severe Equipment Wear

Equipment tipover or structural failure, as well as protrusions or projections on playground equipment can contribute to serious injury.

Other Hazards

Other hazard patterns reported by the CPSC involved impact by swings and other moving equipment, entanglement in ropes, and head entrapment in openings.

Designed for users

Preschool and school-age children differ in both physical size and ability. Therefore, age-appropriate playground designs should accommodate these differences with regard to the type, scale, and the layout of equipment.

Level of use

A hazardous playground which is used by dozens or even hundreds of children a day will be a more likely site of injuries than a small, lightly used playground.

HAZARDS RATING POINTS

Rating criteria	1989-1994 Points	1996 Points
Equipment fall height	1	5
Resilient surfacing	2	5
Fall Zone	N.A.	3
Severe equipment wear	5	5
Other hazards	N.A.	3
Designed for users	1	1
Level of use	5	5

APPENDIX D

HAZARDS RATING AND RANKING RESULTS

PLAYGROUND	Fall Height	Surface	Fall Zone	Wear	Design	Other	TOTAL	Use Level
La Loma Tot	5	5	2	5	1	3	21	4
John Hinkel	5	5	1	4	1	3	19	2
King School Elem	5	5	1	1	1	3	16	4
Ohlone Central	5	5	0	3	0	3	16	3
Codornices Elem	3	3	2	4	0	3	15	5
Codornices Tot	3	0	2	4	1	3	13	5
Cedar Rose Tot	3	3	1	3	1	2	13	4
MLK Tot	3	0	1	5	1	2	12	4
Ohlone East	2	0	1	5	1	3	12	3
Prince Street Tot	3	5	2	0	1	1	12	1
Live Oak Elem	5	0	2	1	1	2	11	5
San Pablo Tot*	2	0	1	3	0	3	9	5
Totland	1	0	2	4	0	2	9	5
63rd St Mini Park*	4	0	2	2	0	1	9	1
Terrace View Tot	0	0	2	4	0	2	8	1
Berkeley Way	0	5	1	0	0	1	7	1
Bateman	2	0	1	0	1	2	6	3

"MISSING PLAYGROUNDS"

	Potential Use
Shorebird	5
Thousand Oaks Tot	4
Aquatic Site #1*	4
Aquatic Site #2*	4
Greg Brown Tot	2

*Received funding from CDBG after the Hazards Committee survey.

APPENDIX E
Specific Play Area Hazards

(Playgrounds are listed in alphabetical order)

Bateman

Teeter-totter is non-conforming and inappropriate design for tots. Wooden climber is not an age-appropriate design. Slide is non-conforming, access difficult.

Berkeley Way

Compacted dirt surfacing under swings. Inadequate fall zone.

Cedar Rose Tot

Large wooden play structure is over-scaled for tots. Fall height is excessive, design is not at all age-appropriate. Posts on bridge are fall hazard to cement.

Codornices Elementary

Fence too close to equipment (inadequate fall zone), elements of tower too high. Teeter-totter is extremely heavy log, no hand-hold, crush danger. Swinging beam is rotting. Climbing posts have large rocks in fall zone. All elements are non-compliant with CPSC.

Codornices Tot

Train needs adjustments to prevent children from climbing on roof. Rounded logs are not appropriate climbing surfaces for tots. Slide structure has steep ramp and steps which are non-compliant (slip hazard). Teeter-totter is extremely heavy log, no hand-hold, crush danger.

John Hinkel Elementary

All equipment very unsafe. Surfacing is compacted dirt. Sloped area under swings, excessive swing height, trapeze bars are inappropriate for a park setting. Trees within fall/collision zones. Exposed concrete footings. No new play area appears to be feasible on site due to substantial access problems.

King School Elementary

Platform is too high; potential fall. Fire pole is non-conforming (dangerous to access). Teeter-totter is extremely heavy log, no hand-hold, crush danger. Surfacing under swings is inadequate. Some tires need to be removed or replaced.

La Loma Tot

Site-built climbing structure far exceeds safe height (potential 20 foot fall). Potential for head trap between rails. Climbing structure and train are constructed with nails, wood is rotting away. Train is poorly designed and unstable. Climbing fence is age-inappropriate. Inadequate fall zones throughout (falls onto cement). Exposed concrete footing on slide.

Live Oak Elementary

Climbing structure has excessive fall height. Fire pole is non-conforming (dangerous to access). Slide has inadequate fall zone and is a non-compliant design.

MLK Tot (aka Civic Center Tot)

All equipment is extremely worn. Slide is a non-conforming design, steps are bent and slippery; inadequate fall zone. Poor layout.

Ohlone Elementary West

No resilient surfacing - hard ground beneath equipment. Equipment height is excessive. Slide is non-conforming to CPSC guidelines.

Ohlone Tot East

Extremely worn and rotting wooden play structure. Non-compliant components of play structure. Protruding bolt in slide path. Spring animals sunken and tilted. Leftover tires.

Prince Street Tot

Wooden climber not age-appropriate for tots, steps missing. Swings have inadequate fall zone. Surfacing is dirt.

Terrace View Tot

Swings too close to fence. Play elements are poorly laid out, made of cement.

Totland

Resilient surfacing, swings and other freestanding equipment have inadequate fall zones. (Climbers were not evaluated due to pending replacement.)

Missing Playgrounds

Greg Brown Tot

Park is currently locked. Newer elementary structure adjacent. Tot area is small, but some equipment could be sited here.

Shorebird

High use by school programs and on weekends. "Creatasaurus" structure put in after equipment removal - poor use of space, unusable by tots.

Thousand Oaks Tot

High use area adjacent to school. One of the few playgrounds sites in the area. The nearest tot area is nearly a mile away.

Funded after Committee's visit

Aquatic Park

No equipment at site. Possibility of two sites for play equipment.

San Pablo Tot

Slide is a non-conforming design, height exceeds CPSC standards for tots, cement climber is non-compliant.

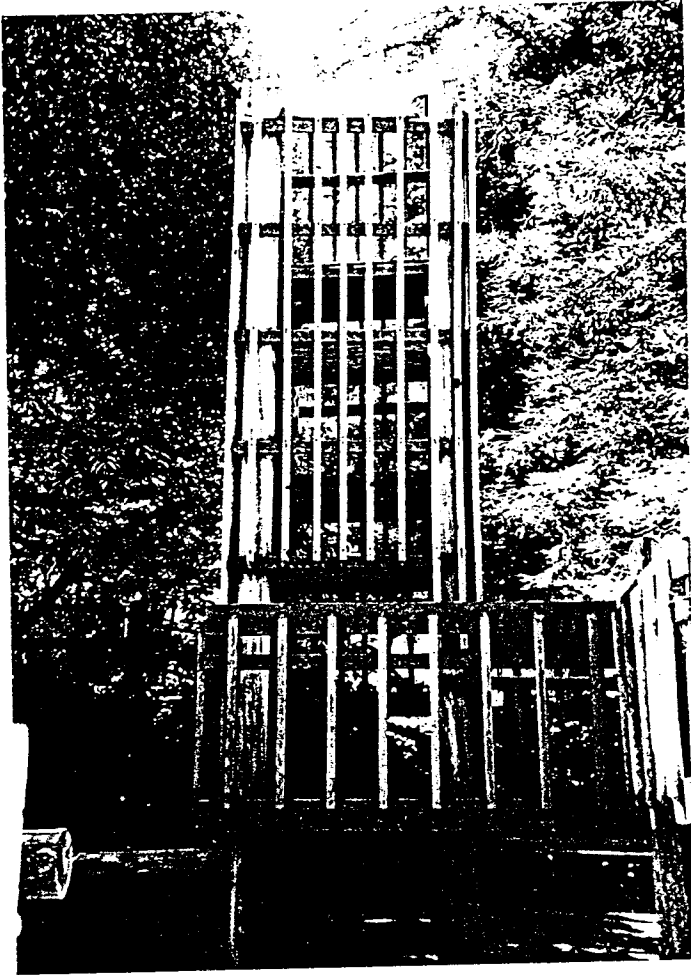
63rd St Mini Park

Fall height of slide is excessive. Design of slide is non-forming. Swings are hazardous, fall zone inadequate, exposed concrete footings. Wooden climber inappropriate and non-conforming design.

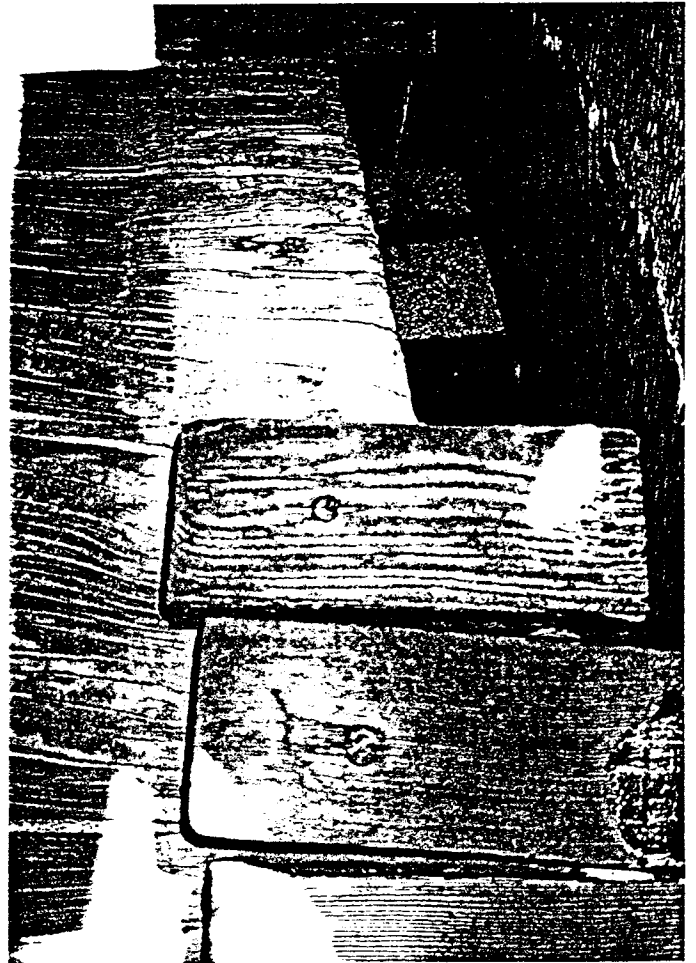
Appendix E.2
Examples of Play Area Hazards

La Loma Tot

Site-built climbing structure far exceeds safe height (potential 20 foot fall). Potential for head trap between top rails; lower rails inadequate. Climbing structure is constructed with nails rather than bolts. Rotting plywood elements.



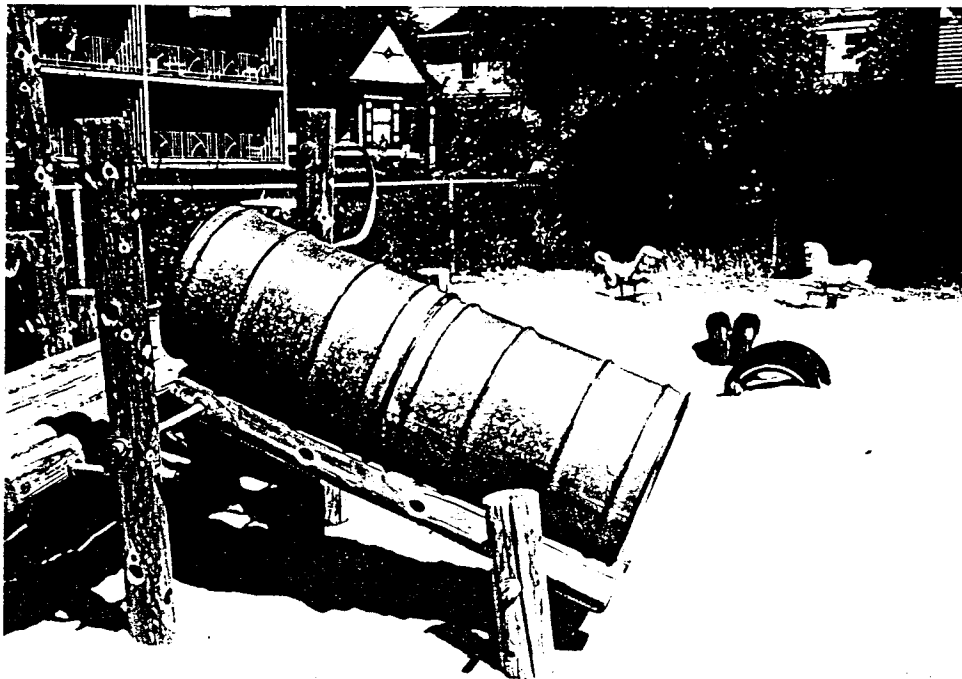
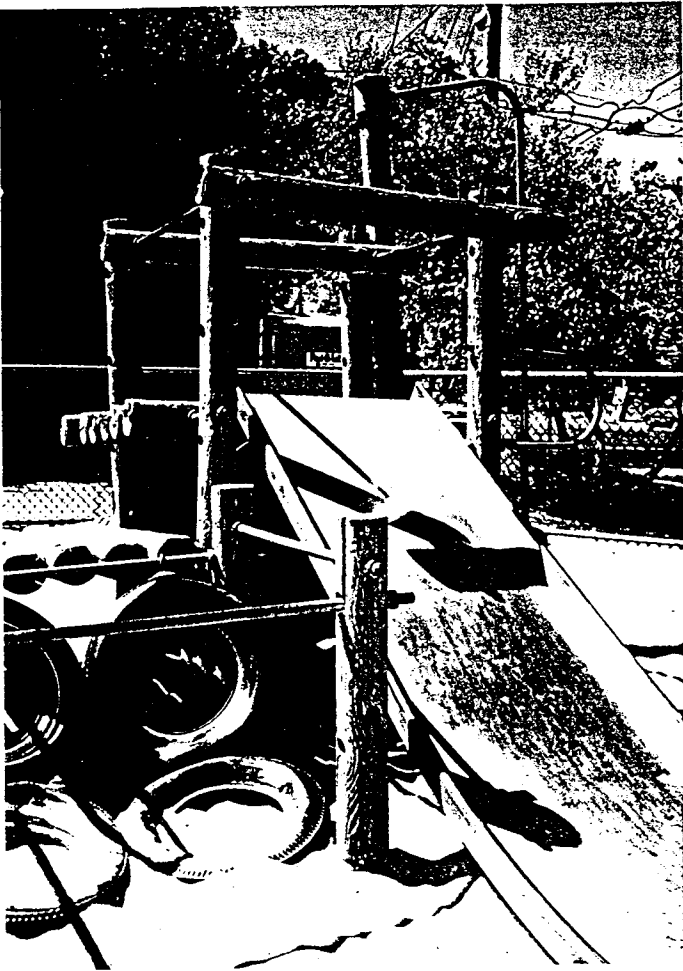
Closeup of rotting wood, exposed nails, and unstable elements of train. Train is poorly designed and unstable; can easily be rocked from side to side. Considerable wood rot, exposed nails, missing pieces.



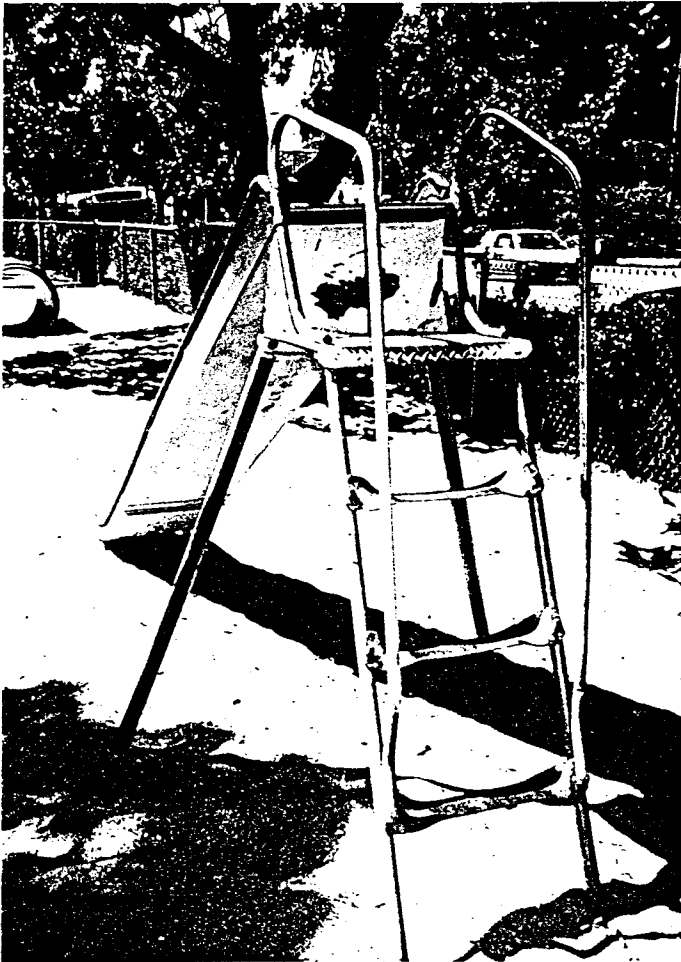
Appendix E.2
Examples of Play Area Hazards

Ohlone Tot East

Extremely worn and rotting wooden play structure. Non-compliant components of play structure. Protruding bolt in slide path. Spring animals sunken and tilted. Leftover tires.



Appendix E.2
Examples of Play Area Hazards



Martin Luther King Tot
(aka Civic Center Tot)

All equipment is extremely worn. Slide is a non-conforming design, steps are bent and slippery; inadequate fall zone. Poor layout.



**APPENDIX F
ADDITIONAL PLAY AREA ACCESSIBILITY NEEDS**

June 2, 1997

PARK NAME

PLAY AREAS	ESTIMATED COSTS
NEEDING ACCESSIBLE	
RESILIENT SURFACE	

1	Greg Brown Park Elem	\$7,000
2	Grizzly Peak Park	\$7,000
3	Haskell-Mabel Park Tot	\$7,000
4	James Kenney Park Elem	\$15,000
5	King School Park Tot	\$15,000
6	La Loma Park Elem	\$15,000
7	Remillard Park	\$25,000
8	Roosevelt Tot Lot	\$7,000
9	Terrace View Park Elem	\$15,000
10	Thousand Oaks Park Elem	\$30,000
	Resilient Surface Need Only	\$143,000

NOTES

- 1 Refer to Play Area CIP Summary Chart, Appendix A, for required rehab funds which include accessible surfacing.
- 2 Parks identified above do not have significant play equipment safety concerns.
However, in the review of the sites, projects were identified where accessible surfacing material was not currently in place. These are noted above.
- 3 Costs represented do not include access requirements for "path of travel" to the play areas if required.