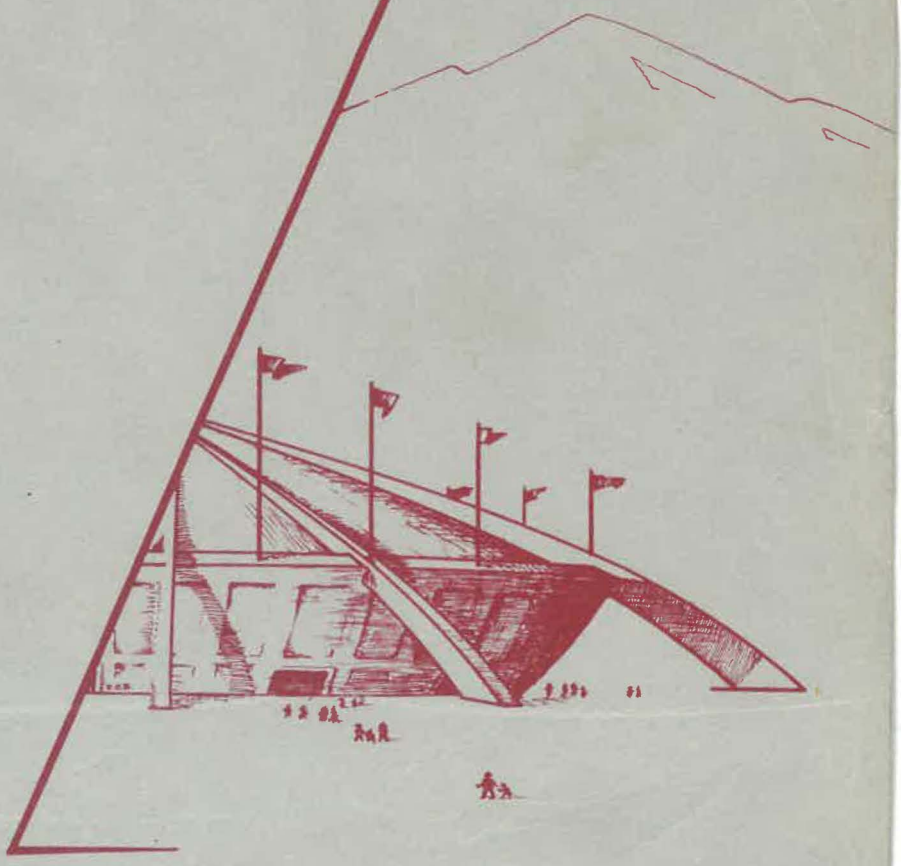
EXPOSITION RECREATION CENTER SITES



PORTLAND CITY PLANNING COMMISSION

CITY COUNCIL, CITY OF PORTLAND

Fred L. Peterson, Mayor

Ormond R. Bean
Nathan R. Boody
William A. Bowes
Stanley W. Earl

CITY PLANNING COMMISSION

J. H. Sroufe, President
L. V. Windnagle, Vice-President
Charles McKinley
Russell D. Ward
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Glenn Stanton
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EXPOSITION-RECREATION COMMISSION

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Carvel C. Linden, Vice Chairman
John T. Carson
Clyde C. Crosby
James J. Richardson

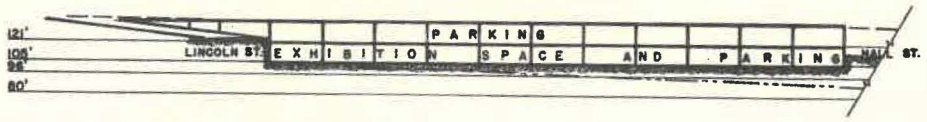
Alden F. Krieg, Executive Secretary

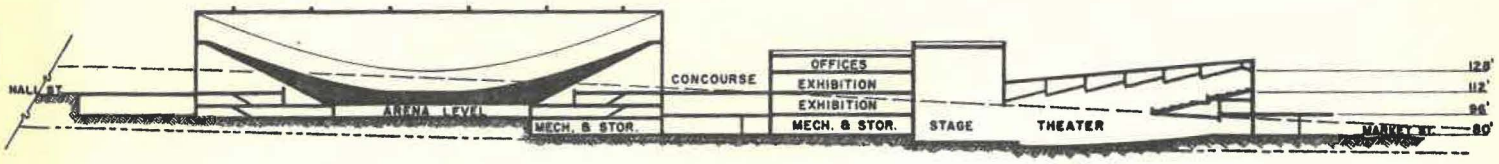
PLANNING COMMISSION STAFF

Lloyd T. Keefe, Planning Director

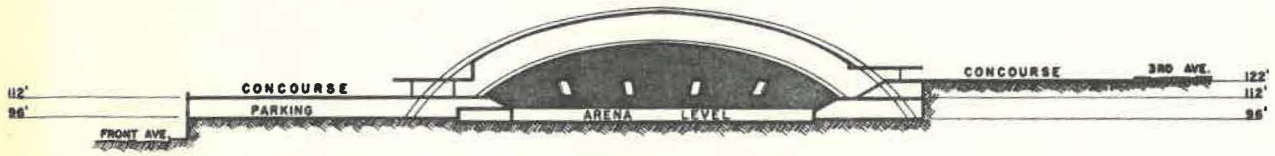
Cyrus R. Nims, Assistant Director
Robert R. McAbee, Zoning Supervisor
Kenneth Green, City Planner II
Robert E. Keith, City Planner II
Gordon K. Clark, City Planner II
Robert P. Austin, Engineer I
Donald C. Becker, Engineer I
Thomas E. McClelland, Engineer I
Louis Von der Gathen, Engineer I
Frank N. Frost, Engineer I
Cord B. Sengstake, City Planner I
Peter C. Broers, Engineering Aide
Lucille Franklin, Sr. Stenographer
Ruby R. Hazle, Stenographer-Clerk
Dolores St. John, Stenographer-Clerk

* Harlow E. Hudson, former Assistant Director, also participated in this study.





LONGITUDINAL SECTION THROUGH SITE



CROSS SECTION THROUGH COLISEUM

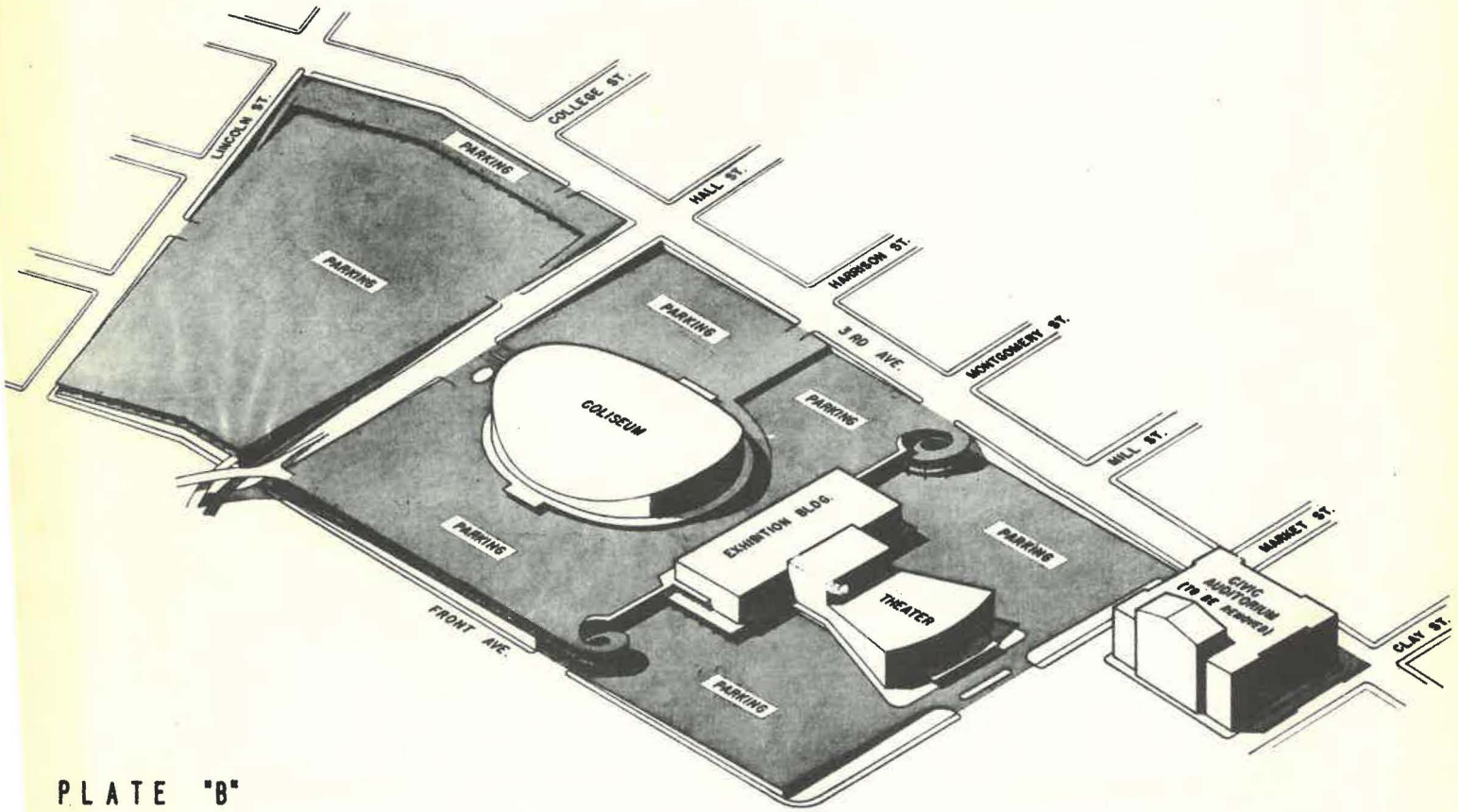


PLATE "B"

DEVELOPMENT PLAN ALTERNATIVE C

SOUTH AUDITORIUM SITE
EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

AUGUST, 1955

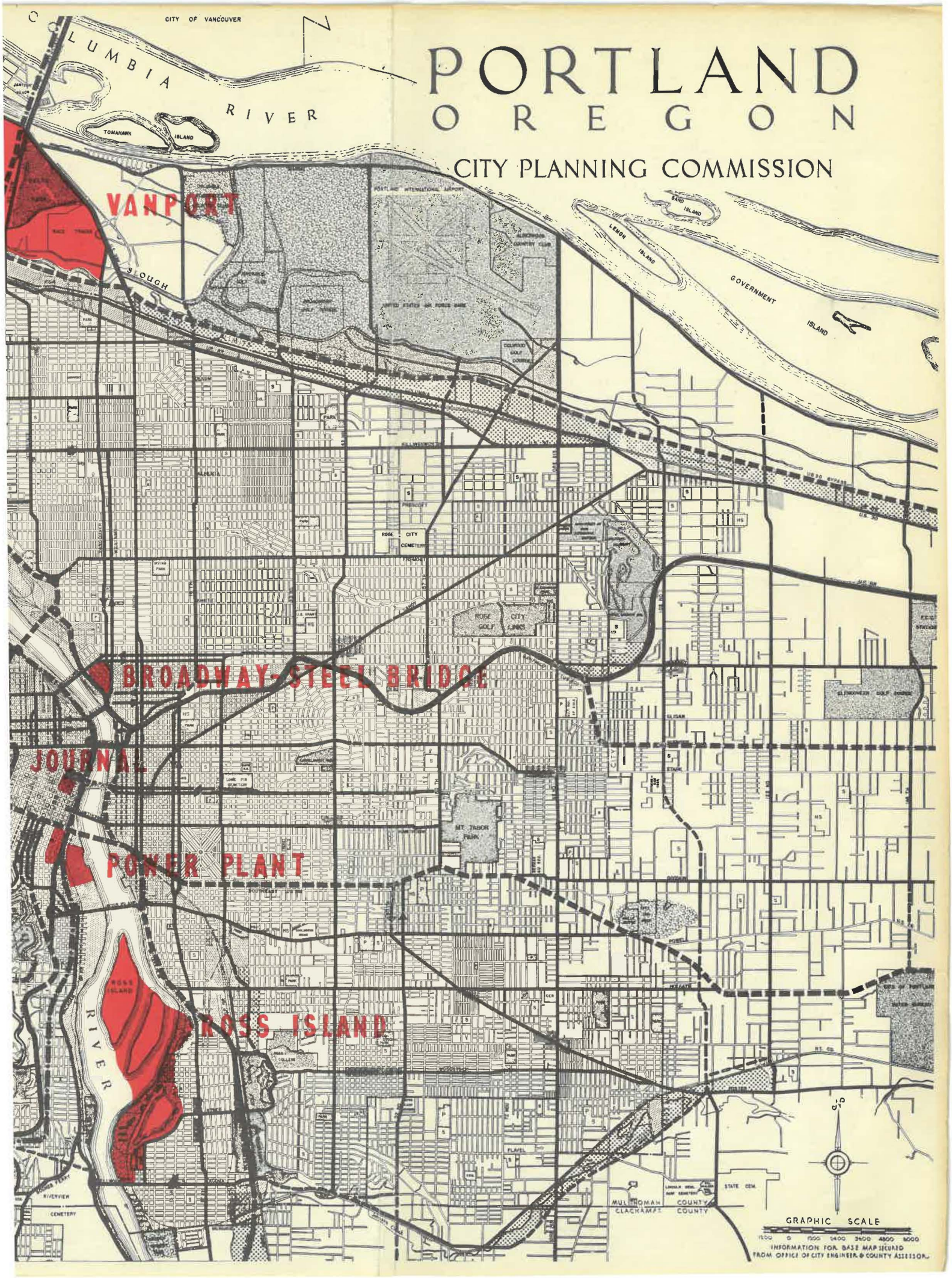
E S T I M A T E D C O S T S - S U C C E E D I N G S T A G E S

EXHIBITION BUILDING AND PARKING LOT

1.	Acquire 3 blocks (Mill, Market, Front, Third)	4.3 Acres	$ 729,000
2.	Demolition and Clearing		24,000
3.	Grade, Landscape and Pave Parking Lot	30,800 sq. yds. @ $2.70 per sq. yd.	83,500
4.	Install Meters on Parking Lot	950 @ $75	71,250
		TOTAL SITE COST	$ 907,750
5.	Exhibit Hall	72,000 sq. ft. @ $7 per sq. ft.	504,000
6.	Offices and Meeting Rooms	36,000 sq. ft. @ $15 per sq. ft.	540,000
		TOTAL BUILDING COST	$1,044,000
7.	Design and Contingencies		100,000
		TOTAL DEVELOPMENT COST	$2,051,750

LARGE EXHIBITION SPACE (P.I.) AND PARKING DECK

1.	Acquire 3 blocks (Lincoln, Hall, Front, Third)	7.3 Acres	$1,010,000
2.	Demolition and Clearing		51,000
3.	Ramp Under Hall Street	75 ft. @ $500	37,500
4.	Install Parking Meters on Parking Deck	1147 @ $75	86,000
		TOTAL SITE COST	$1,184,500
5.	Large Exhibit and Parking Structure	674,000 sq. ft. @ $4.90 per sq. ft.	$3,300,000
6.	Design and Contingencies		300,000
		TOTAL DEVELOPMENT COST	$4,784,500


CITY OF VANCOUVER
COLUMBIA RIVER
TOMAHAWK ISLAND
PORTLAND
OREGON
CITY PLANNING COMMISSION
VANPORT
SLOUGH
PORTLAND INTERNATIONAL AIRPORT
ALBERTSON COUNTRY CLUB
SAND ISLAND
LEMON ISLAND
GOVERNMENT ISLAND
COLUMBIA GOLF COURSE
UNITED STATES AIR FORCE BASE
ALBERTA
PRESCOTT
ROSE CITY CEMETERY
ROSE GOLF
CITY LINKS
BROADWAY-STEEL BRIDGE
JOURNAL
POWER PLANT
MT. TABOR PARK
ROSS ISLAND
RIVER
RIVERVIEW CEMETERY
FLAVEL
MULTNOMAH COUNTY
CLACKAMAS COUNTY
STATE CEM.
GRAPHIC SCALE
1500 0 1500 3000 3600 4800 6000
INFORMATION FOR BASE MAP SECURED FROM OFFICE OF CITY ENGINEER & COUNTY ASSESSOR

QUANTITATIVE COMPARISON OF SITES

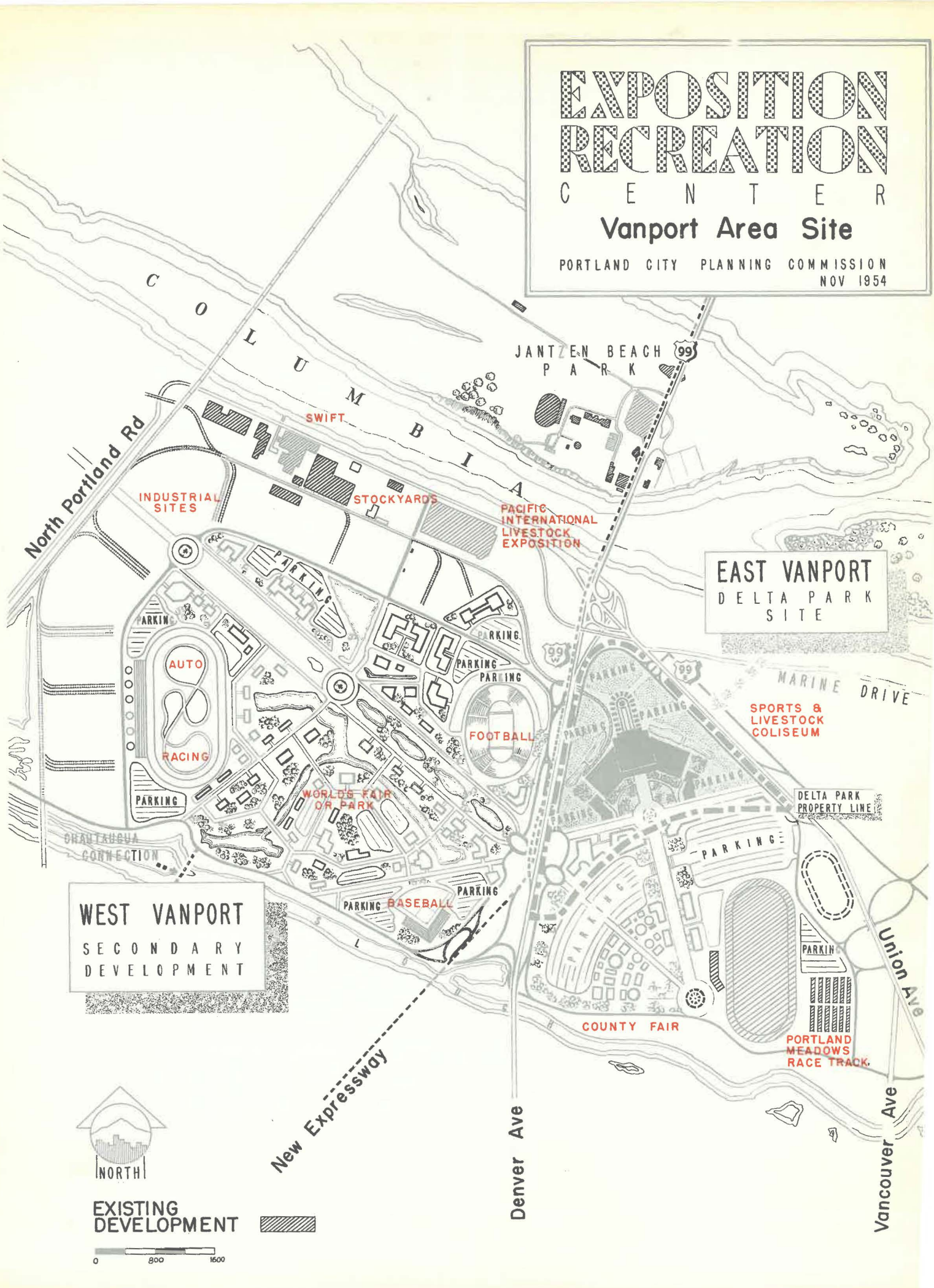
	POPULATION WITHIN 5 MILES (1950)	AREA		COSTS		MAXIMUM ON SITE PARKING SPACES IST. STAGE	DISCHARGE CAPACITY FROM SITE	
		IST STAGE	ULTIMATE	SITE ACQUISITION & PREPARATION	BUILDINGS		IMMEDIATE	FUTURE
"CAMPUS TYPE SITES"								
VANPORT	225,500	99 AC	1,054 AC	$ 1,368,000		6,100	8,000 VPH	12,000 VPH
ROSS ISLAND - OAKS	336,100	161 AC	507 AC	$ 5,916,000		3,900	6,000 VPH	10,000 VPH
OAKS - EAST BANK	277,000	72 AC	198 AC	$ 2,716,000		2,800	6,000 VPH	6,000 VPH
"IN TOWN SITES"								
SOUTH AUDITORIUM	348,000	24.2 AC * 11.9 AC +	46.7 AC * 46.7 AC +	$ 1,310,280 * $ 2,307,900 +	$ 5,938,000 * $ 4,928,000 +	3,132 * 1,348 +	11,000 VPH	15,000 VPH
POWER PLANT	348,000	22.5 AC	30.0 AC	$ 667,500		2,100	1,300 VPH	3,750 VPH
BROADWAY STEEL BRIDGE	377,000	35.3 AC * 20.5 AC +	35.3 AC * 35.3 AC +	$ 1,805,000 * $ 2,489,000 +	$ 5,018,000 * $ 5,018,000 +	3,850 * 2,480 +	7,500 VPH	9,000 VPH
BUCKMAN FIELD	365,000	20.0 AC	39.4 AC	$ 1,920,600	$ 5,441,000	2,020	6,250 VPH	8,000 VPH
JOURNAL	348,000	5.3 AC * 4.4 AC +	5.3 AC * 5.3 AC +	$ 1,630,000 * $ 3,140,000 +	$ 5,870,000 * $ 4,410,000 +	DEPENDENT ON SPACES IN NEW BRIDGE GARAGE (3500), JOURNAL BLDG (500), SURROUNDING FACILITIES (1662)	12,000 VPH	12,000 VPH

* BASED ON URBAN RENEWAL ASSISTANCE
\+ WITHOUT URBAN RENEWAL ASSISTANCE
VPH = VEHICLES PER HOUR

QUALITATIVE COMPARISON OF SITES

	DIRECT RAIL ACCESS POSSIBLE	NOT SUBJECT TO FLOODING	URBAN RENEWAL ASSIST. POSSIBLE	NO KNOWN FOUNDA. PROBLEMS	ADEQUATE SPACE AVAILABLE FOR BASIC NEEDS: COLISEUM	EXHIBITION 150,000 S.F.	WAR MEMORIAL	CONVENTION FACILITIES	THEATRE	DESIRABLE FACILITIES: P. I.	COUNTY FAIR	CENTENNIAL FAIR	FOOT-BALL STAD.	BASE-BALL STAD.
"CAMPUS TYPE SITES"														
VANPORT	X				X	X	X	X[3]	X[3]	X	X	X	X	X
ROSS ISLAND-OAKS	X			X	X	X	X	X[3]	X[3]	X	X	X	X[1]	X
OAKS-EAST BANK	X			X	X	X	X	X[3]	X[3]	X	X		X[1]	X
"IN TOWN SITES"														
SOUTH AUDITORIUM		X	X	X	X	X	X	X	X	X[2]				
POWER PLANT	X				X[1]	X	X	X		X				
BROADWAY STEEL BRIDGE	X	X	X	X	X	X	X	X[3]	X[3]	X[2]				
BUCKMAN FIELD		X		X	X	X	X	X[3]	X[3]	X[2]				
JOURNAL		X	X	X	X	X	X	X	X					

1. LIMITED ACCESS MAKES LOCATION OF THIS FACILITY ON THIS SITE QUESTIONABLE
2. CENTRAL LOCATION " " " " " " " " " "
3. OUTLYING " " " " " " " " " "


EXPOSITION RECREATION CENTER
Vanport Area Site
PORTLAND CITY PLANNING COMMISSION
NOV 1954
COLUMBIA
JANTZEN BEACH PARK
99
SWIFT
North Portland Rd
INDUSTRIAL SITES
STOCKYARDS
PACIFIC INTERNATIONAL LIVESTOCK EXPOSITION
EAST VANPORT
DELTA PARK SITE
PARKING
AUTO RACING
FOOTBALL
WORLD'S FAIR OR PARK
MARINE DRIVE
SPORTS & LIVESTOCK COLISEUM
DELTA PARK PROPERTY LINE
CHAUTAUQUA CONNECTION
WEST VANPORT
SECONDARY DEVELOPMENT
BASEBALL
COUNTY FAIR
PORTLAND MEADOWS RACE TRACK
Union Ave
New Expressway
Denver Ave
Vancouver Ave
NORTH
EXISTING DEVELOPMENT
0
800
1600


EXPOSITION RECREATION CENTER
Vanport Area Site
PORTLAND CITY PLANNING COMMISSION
NOV 1954
TRAFFIC CIRCULATION
PARKING
EXISTING ROADS
PROPOSED ROADS
COLUMBIA
JANTZEN BEACH PARK
North Portland Rd
EAST VANPORT
DELTA PARK SITE
99W
MARINE DRIVE
DELTA PARK PROPERTY LINE
CHAUTAUQUA CONNECTION
WEST VANPORT
SECONDARY DEVELOPMENT
New Expressway
Denver Ave
Union Ave
Vancouver Ave
NORTH
EXISTING DEVELOPMENT
0
800
1600

which includes and extends from Gresham to Beaverton and Vancouver to Oregon City. Only 45,800 or 20% of those within five miles lived north of the Columbia River in Vancouver and Clark County, Washington.

In comparison with the site at NE 181st and Halsey Street now obtained by the county, the county fair could render greater community services at Vanport. In 1950 only 36,700 people resided within five miles of the option site. Of the 225,500 within the same distance of Vanport, 180,000 lived in Multnomah County.

By the fastest traffic routes now existing over city streets and highways, distances from Vanport (measured from the Denver Avenue underpass) to central as well as outer points in the Portland community are as follows:

Downtown Vancouver (5th and Washington)	2.1 miles
Center of population, City of Portland (NE 15th and Holladay)	6.2 miles
New Hotel in downtown Portland (SW 6th and Taylor)	6.3 miles
Multnomah (SW 35th and Capitol)	11.1 miles
Lents (SE 92nd and Foster)	12.6 miles
Beaverton (Front and Main)	13.8 miles
Gresham (Main and Powell)	16.4 miles
Oregon City (7th and Main)	18.1 miles

Because of the convergence of arterials leading to the Interstate Bridge, Vanport is second only to downtown Portland as a focal point for traffic. This means that the peak traffic at the closing of an event can be dispersed over several routes minimizing the possibility of exceeding the capacity of any one artery.

East Vanport particularly is ideally situated for the quick dispersal of large concentrations of cars for these reasons:

1. There are ten existing exit routes with a total of 13 outbound lanes having an estimated discharge capacity of 13,000 vehicles per hour. Outbound (or inbound) lanes for each route are:

Interstate Bridge	2 lanes
North Portland Road	1 lane
Columbia Blvd. (west)	1 lane
Denver-Interstate Ave.	2 lanes
Vancouver Avenue	1 lane
Union Avenue	2 lanes
Lombard Avenue (east)	1 lane
Columbia Blvd. (east)	1 lane
Gertz Road	1 lane
Marine Drive	1 lane
	13 lanes

possible at a relatively small initial cost: $135 per acre in East Vanport and $384 per acre in West Vanport. Nevertheless, immunity from flooding cannot be guaranteed regardless of upstream dams and improved levees. Flood insurance premiums, the possibility of financial loss resulting from disruption of scheduled events, and the continuing costs of maintaining flood protection works must also be added in making a true camparison of land acquisition costs at Vanport with other sites.

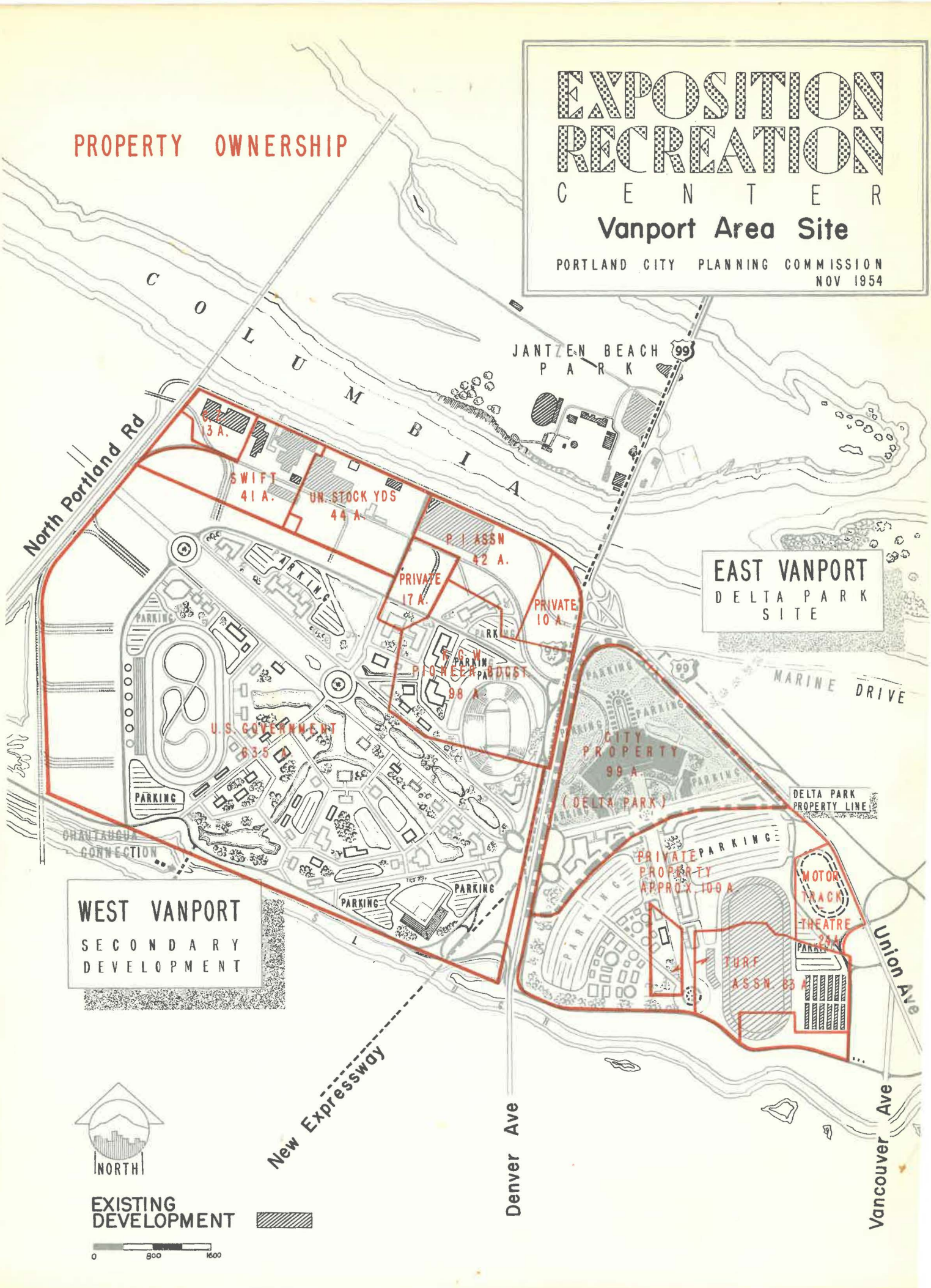
RECOMMENDED DEVELOPMENT

If Vanport is selected for the Exposition-Recreation Center, the sports and livestock coliseum should be placed in Delta Park and the Multnomah County Fair should be located between Delta Park and the Portland Meadows Race Track. Eventually West Vanport should be acquired to complete the total desirable development.

ESTIMATED COSTS

To acquire Delta Park, prepare the site for a sports and livestock coliseum, pave parking areas, and build necessary access roads will cost $1,368,900 or $13,830 per acre. Not included in this estimate are anticipated but unknown extra costs to meet the special foundation conditions on the site.

To acquire the area between Delta Park and the Meadows Race Track for a county fair site, to fill parts of this area, but not to pave parking lots and roads, will cost $425,000 or $4,250 per acre.


EXPOSITION RECREATION CENTER
Vanport Area Site
PORTLAND CITY PLANNING COMMISSION
NOV 1954
PROPERTY OWNERSHIP
COLUMBIA
JANTZEN BEACH PARK
99
North Portland Rd
SWIFT 41 A.
UN. STOCK YDS 44 A.
P I ASSN 42 A.
PRIVATE 17 A.
PRIVATE 10 A.
PARKING
U.S. GOVERNMENT 63.5 A.
PIONEER 98 A.
EAST VANPORT
DELTA PARK SITE
MARINE DRIVE
CITY PROPERTY 99 A.
(DELTA PARK)
DELTA PARK PROPERTY LINE
PRIVATE PROPERTY APPROX 100 A.
MOTOR TRACK
THEATRE
TURF ASSN 83 A.
CHAUTAUQUA CONNECTION
WEST VANPORT
SECONDARY DEVELOPMENT
New Expressway
Denver Ave
Union Ave
Vancouver Ave
NORTH
EXISTING DEVELOPMENT
0
800
1600

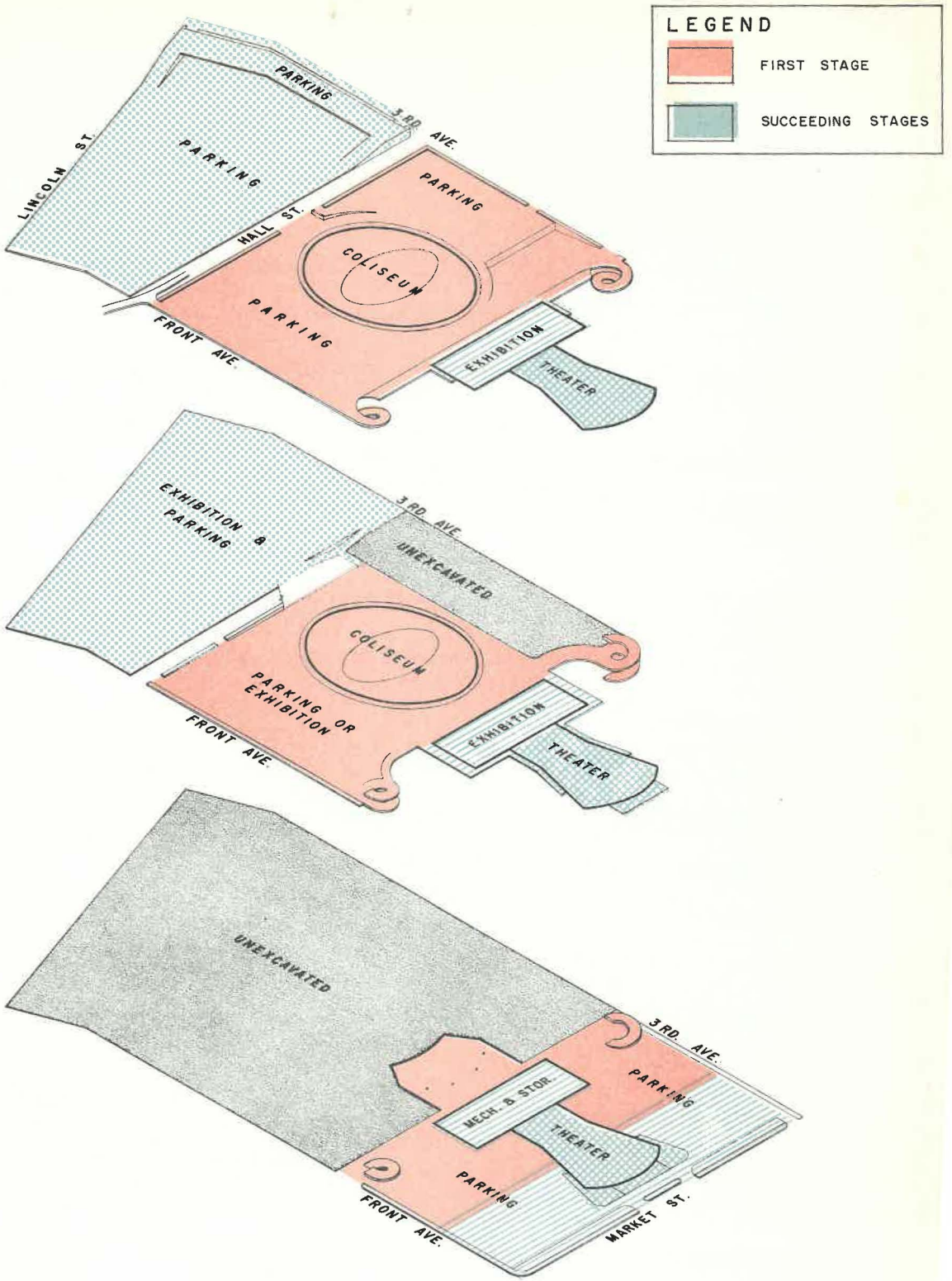
In order that the $8,000,000 is not exceeded at the present time, a progressive stage development seems advisable. As a result of a thorough study, the City Planning Commission has concluded that a development similar to that suggested on Plates A and B would be advantageous. The proposed first stage would permit the accomplishment of purposes set forth in the City Charter ammendment, with ample opportunity for future comprehensive development of additional facilities as the need and feasibility become apparent.

E S T I M A T E D C O S T S - S T A G E I

COLISEUM-EXHIBITION BUILDING

Based on Maximum Acquisition Cost Appraisals (Including 50% Contingency) Without Urban Renewal Assistance

1.	Acquire 9 blocks (Hall, Mill, Front, Third)	11.9 Acres	$2,095,000
2.	Demolition and Clearing		72,000
3.	Reroute Underground Utilities		50,000
4.	Install Parking Meters On Parking Deck	550 @ $75	41,250
		TOTAL SITE COST	$2,258,250
5.	Coliseum		$3,500,000
6.	Parking Deck	275,600 sq. ft. @ $3.25 per sq. ft.	894,000
7.	Exhibition or Covered Parking	200,000 sq. ft. @ $3.50 per sq. ft.	700,000
8.	Mechanical and Storage	35,000 sq. ft. @ $4 per sq. ft.	140,000
		TOTAL BUILDING COST	$5,234,000
9.	Design and Contingencies		507,750
		TOTAL DEVELOPMENT COST	$8,000,000



	COLISEUM-EXHIBITION BLDG.	EXHIBITION BLDG.	EXHIBITION-PARKING BLDG.	THEATER
SITE COST	$ 2,258,250	$ 907,750	$ 1,184,500	$ 196,000
BUILDING COST	5,741,750	1,144,000	3,600,000	1,250,000
TOTAL COST	8,000,000	2,051,750	4,784,500	1,446,000

BASED ON MAXIMUM APPRAISAL COST ESTIMATES — INCLUDING 50% CONTINGENCIES

PLATE "A"

DEVELOPMENT PLAN — ALTERNATIVE C

SOUTH AUDITORIUM SITE
EXPOSITION RECREATION CENTER

SCALE IN FEET
0 200 400

PORTLAND CITY PLANNING COMMISSION

AUGUST, 195

S I T E S

for the

E X P O S I T I O N - R E C R E A T I O N C E N T E R

JULY 1955 [redacted]

PORTLAND CITY PLANNING COMMISSION

TABLE OF CONTENTS

LIST OF CHARTS & PLATES

PORTLAND CITY PLANNING COMMISSION

MAIL: 414 CITY HALL PORTLAND 4, OREGON OFFICE: 526 S. W. MILL STREET • ATWATER 6141

August 24, 1955

Exposition-Recreation Commission
623 Park Building
Portland, Oregon

Gentlemen:

On July 21, 1955, the Portland City Planning Commission met to consider its Subcommittee's report on the selection of a specific location for the Exposition-Recreation Center. This Subcommittee is composed of Glenn Stanton, Architect, who is the Subcommittee Chairman, Loren Thompson, Consulting Civil Engineer, and Russell D. Ward, Building Contractor. The Subcommittee, as well as our full Commission membership, had an opportunity to study the extensive report prepared by our staff, the report of the Stanford Research Institute, and information concerning pertinent phases from the State Highway Commission. After a thorough discussion of the large problems with which your Commission is confronted, the Subcommittee submitted the following motion which was adopted by unanimous vote of the seven members who were present out of our total membership of nine:

> That the Planning Commission hereby recommends the South Auditorium site as its choice, that this site be developed as completely as possible within the limits of the $8,000,000 fund; that the Pacific International Livestock Exposition, and Multnomah County be invited to share in its realization and that the Federal Government funds be utilized as far as possible to assist in the development of these exposition-recreational facilities. To this end, we instruct the staff to make additional studies for the progressive development of this site in accordance with the motion.

These additional studies are now completed. They were considered and approved by the Planning Commission at its meeting, August 24, 1955. These studies are based on the assumption that the Civic Auditorium will be removed when the proposed US26 Expressway, located between SW Clay and SW Market Streets, is constructed. If this is done, the coliseum-exhibition building can be placed further south with parking surrounding it rather than all on one side as is necessary if the Civic Auditorium is to be retained and integrated into the development. We are calling this additional possibility "Development Plan C" and it is shown on Plates A and B. Estimated costs, assuming maximum land acquisition prices, are shown on pages V and VIII, and are subdivided to indicate costs for each stage in constructing the total development.

Bound together in this report are these additional studies and the detailed conclusions and recommendations of the Planning Commission; also, our staff's analyses of eight sites having the best potential for successful construction and operation for the Exposition-Recreation Center. All of these are submitted for your consideration with the hope that they may be helpful to all concerned in determining the best location for the Center.

Thus, in accordance with your request for our advice and in accordance with the provisions of Oregon Revised Statutes 227.130 (fourth sentence) requiring a report and recommendation by the Planning Commission prior to final action on the location or design of any public building or public grounds, the Portland City Planning Commission hereby recommends the South Auditorium site as the best location for the Exposition-Recreation Center. The Planning Commission would welcome the opportunity to meet with the Exposition-Recreation Commission to discuss this recommendation.

Very truly yours,

J.H. Sroufe

J.H. Sroufe, President
City Planning Commission

CONCLUSIONS

Portland's general basic needs are briefly:

1. An all-purpose coliseum and indoor stadium for sports, shows, rodeos, etc.

2. Exhibition space for trade shows, conventions, livestock, automobile and heavy machinery shows, fairs, etc.

3. Theatre or concert hall for lectures and meetings.

4. Adequate parking and access by mass transit.

The sites considered divide themselves for practical purposes into two classifications. One, remote or rural; the second, metropolitan or city center.

The relation of the site to the city itself, is paramount. We cannot isolate or divorce it from out city's scheme. The Planning Commission firmly believes that the final selection of a site must be based primarily on the provision of maximum ultimate service to the citizens at present and in the future, rather than being based on the maximum number of facilities which can be purchased with the $8,000,000 presently available.

One remote site, East Vanport, is at first glance a very simple, beautiful site, easy to develop. It has been occasionally referred to as a site cheap in cost. We find these conclusions, however, erroneous because of details involved in its development, such as; (a) access roads supplementing those in existence; (b) soil of uncertain character as certified to the Port of Portland in 1946 by experienced foundation authorities; (c) costly filling to raise the area above possible floods, which physical characteristics have discouraged industry from location in the area; (d) its location at one corner of the city is remote from all sections except the Peninsula district itself; (e) it is served by few public transit lines.

We are convinced that the development of a center on this site would be a mistake; while its development may require the least effort, it would fall into the pattern of many other such exploitations of open fringe areas over the country; a leap-frog movement of hopping over built-up sections without regard to the community, for the sake of expediency, is never a wise procedure.

The second remote site is Ross Island and the Oaks. This area is much closer to the center of town than Vanport, and it has great potentialities. It offers a chance to realize a unique waterfront development. The soil is firm and the required fill would be substantially less than at Vanport. If it were possible to unite several agencies in the enterprise such as the Pacific International Livestock Exposition, Multnomah County, the State and possibly the little world's fair, we see great possibilities for this location. It would, however, require two or three bridges and considerable development of costly access roads and site improvements before it would be ready to be built upon. Downtown accommodations would still be required, resulting in split facilities.

The Stanford Report estimates that East Vanport would cost $285,000 a year for maintenance while the South Auditorium site would take $223,000, and by way of contrast, it is recorded that Vanport in its remote location would require $1,500 a day take to break even while a central location would require a little more than half that amount. It is obvious that it is unnecessary and unwise to divide the building facilities; costs of development and maintenance would be increased.

To be successful, the ideal location is one which will be used to the maximum with all facilities functioning to their fullest.

The rental policy and the choice of site will determine whether the center will be a financially self-sustaining operation or a burden to the taxpayers.

The need for a central location is proven by the fact that of 21 cities with arenas outside the business district, 10 have either completed or are currently building somewhat similar, though sometimes smaller, facilities on a downtown site. We note that many cities, including New York, enjoy the advantages of central location for horse shows, rodeos, prize fights and circuses; their Madison Square Garden is, of course, world famous; and now they are building a coliseum at Columbus Circle, at Manhattan's heart.

One central location of the four principal units of our group is imperative; combined usage of two or more facilities offers a flexibility that is impossible with scattered buildings.

A summation of the advantages of one site are: first, people become accustomed to patronizing the center for all events and this facilitates the planning of a full program of events; second, duplication of facilities is avoided; construction costs are reduced and operating and maintenance costs are lowered.

Convention facilities, for instance, must be near the people who come to attend the conventions. Such delegates and visitors are not content to go six or seven miles and back to reach their headquarters. They will rebel at paying high taxi fares to and from gatherings and functions. If families are involved, they want to be near the shops, hotels, restaurants, and other local activities during their visit to the city.

In reviewing the more centrally located sites, we find that Buckman Field and the Journal sites are both too limited in area.

The Broadway-Steel Bridge site has several advantages in its favor. However, its location outside of the walking radius from the business center, and inferior access and expansion possibilities make the successful development and operation of a Center on this site highly questionable.

The remaining central location is designated as the South Auditorium site. Here is an area in the heart of Portland, served by freeways from all parts of the city; it is within walking distance of thousands who reside in hotels and apartments.

The State Highway Commission's tentative studies indicate their intention of cutting through between Clay and Market Streets for the new westbound freeway, and it is possible that the auditorium will be removed rather than straddled by the freeway. The removal of the auditorium will, of course, effect the design of this site; however, if the auditorium is to remain, it can be altered for more efficient service. A progressive development of the site would be in order.

There is no trackage on this site proper for the handling of railroad shipments, but an area east of the adjacent Harbor Drive Expressway could be developed for a terminal and staging area with a ramp connection to the main site. Most truck deliveries could be made directly to the main center. Contour maps show the northeast corner to be about 70 feet lower than the high southwest corner, so there is a splendid opportunity to take advantage of this change in grade to make easy access and egress from the various decks. It is reasonable to think of two or three decks or floors below the street upper level parking; this would afford parking space for 4,000 cars.

It appears that a center with some duplicate facilities would be folly. We know that to serve the most people in Portland, and our neighbors to the east, west, north and south, we must have all facilities easily accessible in a central location; this is the only site served by our great system of existing and projected network of freeways.

To summarize its advantages:

1. The Exposition-Recreation Center would be in the center of the city.

2. The site offers accessibility from all directions and areas of the city and neighboring communities.

3. The ease of traffic dispersal is unsurpassed; east, west, north and south.

4. Its proximity to all city bus lines and to interurban and national bus lines is excellent.

5. It is served by major utilities.

6. The availability of immediate and adequate fire and police protection is important.

7. Its parking areas would be used continuously.

8. Its topography is adapted to two or more levels.

9. Improvement of the area would benefit the area and the entire city.

10. It is expansible.

We acknowledge that the development of this site will involve considerable thought and the effort of all interested agencies and Commissions. We are convinced, however, that the procedure will result in the greatest dividends to our people.

A decadent area will be transformed to the glory of all of Portland and the enjoyment of our visitors from far and near.

The South Auditorium site offers other great possibilities as a central public reclamation area, and we earnestly hope that Portland State College, through their authorities may see the potentialities and the challenge of moving from the present limited, congested, and expensive site before more money is spent on permanent buildings and before it becomes too late and increasingly costly to both the City and the State. Adequate parking and housing provisions are two real problems that cannot be brushed aside or allowed to grow haphazardly.

THEATRE-CONCERT HALL

1.	Reroute Underground Utilities	$ 196,000
2.	Theatre-Concert Hall	1,250,000
	TOTAL DEVELOPMENT COST	$1,446,000

All things considered, the South Auditorium site seems to offer the best opportunity for the development of a financially sound Exposition-Recreation Center which will fulfill the greatest number of the most critical Exposition-Recreation needs of the citizens of Portland.

R E C O M M E N D A T I O N

The Portland City Planning Commission hereby recommends that the South Auditorium site, as defined in this report, be chosen as the location for the Exposition-Recreation Center; that this site be developed as completely as possible within the limits of the $8,000,000 available; that the Pacific International Livestock Exposition and Multnomah County be invited to share in its realization and that the Federal Government funds be utilized as far as possible to assist in the development of these exposition-recreation facilities.

SUMMARY

For purposes of analysis and comparison, the sites have been grouped into two general classifications. Those which have relatively large areas and can accommodate expanded facilities such as the little world's fair, county fair, baseball and football stadiums are classified as "campus type" sites. Those which can accommodate primarily the more concentrated types of activities such as the coliseum, exhibitions, and theatre are classified as "in town" sites.

Since the two classifications are based on different concepts of the function of an Exposition-Recreation Center, comparisons of some characteristics between the two types cannot be made. For example, a site may have insufficient area for a "campus type" development, while an "in town" site having less acreage may have more than ample space for that type of development. Another dissimilarity is that the number of persons attending to cars to be parked is greater for "in town" sites than for outlying sites.

The charts on the following pages summarize the major quantitative and qualitative comparisons of the various sites studies. Other significant site comparisons are:

Mass Transit Access - The South Auditorium and Journal sites have excellent mass transit access; the Broadway-Steel Bridge, Ross Island-Oaks, and Oaks-East Bank sites have good access; while the Vanport and Buckman Field sites have fair mass transit access.

Accessibility - The South Auditorium, Journal and Buckman Field sites are easily accessible from all parts of the metropolitan area. Access from the southeast district to the Broadway-Steel Bridge site and from the west side to the Ross Island-Oaks area is poor. The Vanport site is inconveniently located for all sections except the north and northeast parts of the city and Vancouver.

Effect on Surrounding Property - The majority of Exposition-Recreation functions located on any of the sites studied would not adversely effect surrounding properties; however, extensive livestock shows might be detrimental to the neighborhoods of all "in town" sites except the Power Plant site. If the Exposition-Recreation Center were located on the South Auditorium or Journal sites, it would undoubtedly increase the value of surrounding properties and stimulate new growth in the area.

Aesthetic Value - The Vanport, Ross Island, South Auditorium, and Broadway-Steel Bridge sites can all provide a dramatic setting for the Exposition-Recreation Center which will be very impressive for residents, as well as visitors to the city.

Integration With Future Planning - Any of the three "campus type" sites can be integrated with future park, recreation and fair developments. The South Auditorium site can become a part of a future civic center development in the downtown district. It can also be integrated with expanded future facilities for Portland State College.

A R E A & O W N E R S H I P

One outstanding advantage of Vanport as a site for the Exposition-Recreation Center is space. Land, either vacant or so developed or owned as to be useable as part of the Center, totals 1054 acres. This is more than ample to accommodate a sports coliseum, P. I. facilities, outdoor baseball and football stadiums, county fair, and world's fair or a large park. Property ownership in Vanport is divided as follows:

West of Denver Avenue		East of Denver Avenue	
U. S. Government	635 acres	Delta Park (City)	99 acres
KGW Radio Station	98	Portland Meadows	63
P. I.	42	Private farms	100
Private farms	17		
	792 acres		262 acres

The minimum area for a sports and livestock coliseum with a seating capacity of 15,000 and 4,000 parking spaces is 44 acres. County officials desire 175 acres for the county fair. This includes area for a race track as well as 100 acres for parking. It is evident that East Vanport alone is sufficiently large for the coliseum and the county fair even without inclusion of the Portland Meadows Race Track.

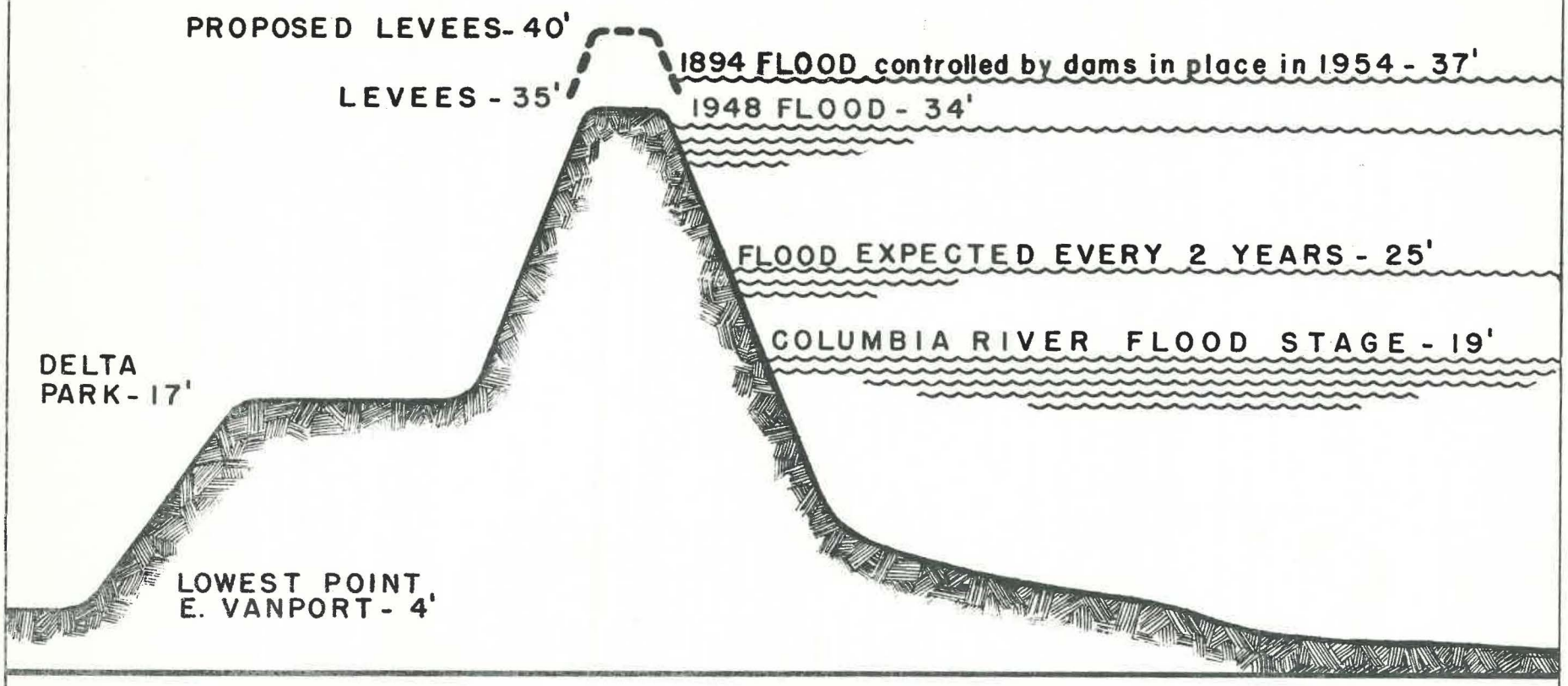
The 1933-34 Chicago World's Fair occupied 442 acres. A similar area can certainly be assumed for planning purposes at this time for a Portland World's Fair.

F L O O D S

The highest land in both East and West Vanport is 20 feet below the maximum flood of record which occurred in 1894. If this flood came today, it would still be two feet above the levees protecting both East and West Vanport. Although dams already constructed upstream on the Columbia River and its tributaries would reduce the 1894 flood two feet, confinement between levees on the lower Columbia offsets this reduction. The same volume of water would thus rise to the original level of 37 feet above sea level, City of Portland datum.

ELEVATIONS OF LAND & FLOODS AT VANPORT

HEIGHTS IN FEET ABOVE SEA LEVEL
CITY OF PORTLAND DATUM



Portland City Planning Commission
DECEMBER 1954

The 1948 flood, which was three feet lower than the 1894 flood, breached the dikes rather than topping them. A flood as high as 1948 can be expected once in 31 years. The 1894 flood can be expected to occur only once in 92 years. There have been two floods so far of record which have exceeded the 1948 flood--1876 and 1894. A third flood, in 1849, of which there is no authentic record, is also supposed to have been higher than 1948.*

The risk of flooding is ever present to any improvement located in the natural flood plain of any river. Unquestionably weather conditions could cause floods greater than 1894 in spite of protective dams and dikes. Considering the relatively short period of record--only 96 years--it is quite likely that the 1894 flood has been exceeded in the past.

The issue is what measures at what costs can be taken to prepare for flooding, and to minimize losses resulting therefrom. At Vanport there are two alternatives: (1) raising and strengthening levees, or (2) filling.

In 1952, the U. S. Army Engineers proposed strengthening and raising of the levees to three feet above a controlled but confined 1894 flood or generally about five feet above existing heights. Congress has not, to date, appropriated money for this work. If the improvement as proposed should be done, estimated share of the cost to property protected would be $135 per acre in Peninsula Drainage District No. 2, which includes East Vanport and $384 per acre in Peninsula Drainage District No. 1, which is conterminus with West Vanport. The Federal Government assumes a very large share of the total cost. According to the approved plan, its share would be 84% in East Vanport and 69% in West Vanport. Total cost of the work is $836 per acre in East Vanport and $1248 per acre in West Vanport. Maintenance and pumpage costs are expected to run about $10 per acre per year.

In contrast to improving the levees, there is no Federal aid for raising the land by filling. About 1700 cubic yards of fill are required to cover one acre one foot deep. Prevailing costs of hydraulic fill approximate 40¢ per cubic yard. When placed more than one-half mile from the stream, the Oregon State Land Board charges another 10¢ per cubic yard. At 50¢ per yard the cost per acre of a one-foot fill is $850. To raise the highest land in Vanport (about elevation 17) to a safe level above another 1894 flood (elevation 40) the cost per acre would be $23,000. To the level of the present levees (elevation 35), would cost $15,300 per acre.

Raising and strengthening the levees is the obvious choice in meeting the threat of flooding at Vanport.

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* U. S. Geological Survey, Water Supply Paper 1080, p.337

MAJOR FLOODS ON THE COLUMBIA RIVER

YEAR	HEIGHT VANCOUVER GAGE	CITY DATUM	EXPECTED RECURRENCE INTERVAL
1849 (a)	33.9 (a)	37.8 (a)	(a)
1862	28.9	32.8	23 years
1876	30.8	34.7	46 years
1880	28.2	32.1	18 years
1894	33.6	37.5	92 years
1948	30.2	34.1	31 years

(a) record from hearsay
Source: U. S. Geological Survey and U. S. Army Engineers

F O U N D A T I O N S

As problematical as the flood situation are foundation conditions at Vanport. The area is a former river bed and is now covered in part by swamps and sloughs. It is underlain by mud, silt, sand, and gravel which tend toward differential movement under pressure, especially when saturated with water. Foundation engineers engaged by the Port of Portland in 1946 found no bed rock after exploring to a depth of 121 feet. These engineers state not only are unusual and expensive foundations required but that special structural features must be included in buildings to allow for expected differential settlement. (Excerpts from this engineering report are quoted starting on page 28.)

It is not possible to estimate extra costs necessary to meet these foundation problems until at least a hypothetical building is analyzed. The situation is especially critical for a sports coliseum because of long, clear roof spans which concentrate exceptional loads where structural supports bear upon the sub soil.

RECOMMENDED DEVELOPMENT

There is sufficient area at Vanport to build in the years ahead a vast, multi-function recreation and exposition area for the enjoyment as well as the economic gain of the whole Portland community. The map opposite shows one suggested scheme of development. The sports and livestock coliseum, which is the immediate objective of the Exposition-Recreation Commission, together with the Multnomah County Fair would constitute the first stage in this development. In succeeding stages, a world's fair replaced later by a large park, stadiums for outdoor sports, and industrial development are envisioned. As authorized in the charter amendment voted in May 1954, the Exposition-Recreation Commission has the powers necessary to develop, own and operate such a vast undertaking as well as lease ground or facilities to other agencies, public or private. The $8,000,000 bond issue is, of course, not sufficient to finance more than the coliseum and its accessory facilities.

First Unit on Delta Park

If Vanport were chosen as the site for the Exposition-Recreation Center, it is recommended that the sports and livestock coliseum be located on the 99 acres comprising Delta Park. By choosing Delta Park, the county fair could then be located on the farm land between Delta Park and Portland Meadows Race Track. The fair could thus utilize the coliseum, the race track and such P. I. facilities as are appropriate. By minimizing capital outlay, each of these enterprises should achieve and maintain a sounder financial balance sheet.

Other significant reasons for selecting Delta Park--with or without county fair participation--for the coliseum building are:

1. Highway access superior to West Vanport.
   (By being bordered on <u>two</u> of its three sides by limited access, multi-lane highways an ideal condition for rapid and balanced dispersal of vehicular traffic exists. Moreover, direct connections without stop lights by means of two grade separations to Union Avenue and one to Denver Avenue are already in place.)

2. Highest ground in all of Vanport, excepting the present P. I. area.
   (Less filling required to minimize flood risk. Also better foundation conditions are thought to exist at Delta Park.)

3. Minimum of time to get construction underway. (Since Delta Park is city-owned and as yet little developed, time consuming delays in negotiating with the U. S. Air Force for West Vanport or in condemnation proceedings on other property can be avoided.)

Considering the P. I. only, a better location is in West Vanport on or near its present site adjoining the stockyards, on the railroad siding and near the Swift packing plant. Even though the railroad siding would have to be extended under Denver Avenue and animals trucked longer distances to and from the stockyards and packing plant, the first and third reasons cited above make Delta Park superior for a coliseum which will be used the majority of the time by events other than the P. I.

If Delta Park is selected, it should be stressed that the Exposition-Recreation Center should not expect a free gift of this land from the City Park Bureau. The nuisance type of recreational activities provided for in Delta Park must be taken care of elsewhere. If the county fair does not locate adjoining Delta Park on the south, then this 100-acre farm area should be acquired for the Park Bureau. Otherwise, Delta Park should be replaced on a site in the Vanport vicinity or elsewhere deemed suitable by the Park Bureau.

Functions which can be accommodated adequately on Delta Park are:

1. Sports and livestock coliseum
   Seating capacity to be determined by financial feasibility.
2. Accessory buildings for Pacific International Livestock Exposition
   Such space can probably be designed and maintained so as to be useable as exhibit space for other types of shows.
3. Dormitories
   For 4-H Club members or exhibitors or participants in sporting events or shows.
4. War Memorial
   A garden, court, fountain or other feature can be made an integral part of the development in or near the coliseum.
5. Parking
   42 acres, capacity 6100 cars, is shown on the suggested plan. Using the ratio determined by experience in other cities, one space per four spectators, a capacity crowd of 24,400 people could thus be accommodated.

County Fair

It seems most logical to assume that the county fair should join in the development of the Exposition-Recreation Center, particularly on sites where the P. I. is included. The fair and the P. I. are such similar events that separate facilities--if the public is to finance them--can hardly be justified. Basically the reason the P. I. must seek public assistance at this time is that the relative capital outlay is too great for the shortness of use. The county fair is in the same position. The Portland Meadows Race Track also has a very short period of use in relation to capital investment. And certainly there is every reason to expect a sports coliseum and exhibition hall as far from the downtown area as Vanport to have difficulty in attracting sufficient events to meet fixed charges. All four of these enterprises can profit by joining resources and sharing facilities. In fact, it may be the only way all can continue operating.

An obstacle to placing the county fair at Vanport is the desire by some county officials for a rural setting and that rural interests should be the objective of the fair. In a county as urban as Multnomah, there is a grave question that the fair should be rurally oriented so exclusively. Agriculture is rather a minor part of Multnomah County's life. In 1950, only 6,277 people or 1.3% of the county's population were classed as rural farm. Only 1.9% of all those employed in the county were engaged in agriculture. The value to products added by manufacturing in the county was 25 times greater than the value of farm products sold. The dollar volume of wholesale trade was 147 times greater. The acreage harvested was just 55% of the area of the City of Portland. Even in the four counties of Multnomah, Clackamas, Clark, and Washington, constituting the Portland Metropolitan District, only 6.1% of those employed were engaged in agriculture.

In recommending that the new county fair become a part of the Exposition-Recreation Center at East Vanport, a fair exhibiting all phases of Multnomah County's economy is envisioned. A permanent agricultural-industrial-trade exposition open almost daily should be considered a possibility.

In its report of July 14, 1954, the Multnomah County Planning Commission strongly recommended that the county fair join the P. I. and the sports coliseum in a unified development on one site. East Vanport was one of two sites recommended. The other was Ross Island.

In the area between Portland Meadows Race Track and Delta Park, up to 100 acres of vacant land could be developed for the needs of the county fair. A parking area of 60 acres is shown on the plan opposite page 11. This combined with the 42 acres at the coliseum would give 102 acres, or sufficient for a peak attendance of 59,000 people.

Second Stage--Development of West Vanport

No proposals are made for the immediate utilization of West Vanport except the extension of the railroad spur, now ending at the P. I., into Delta Park. If, however, East Vanport is chosen for the sports and livestock coliseum, purchase of West Vanport from the U. S. Government should be made as soon as possible and held in reserve for completion of the total proposed development. Also it may be necessary to control West Vanport in order to insure strengthening and raising of its encircling levees. Without this work East Vanport will remain vulnerable to floods because both the S. P. and S. Railroad enbankment and the Denver Avenue fill are a responsibility of Peninsula Drainage District No. 1 and not Peninsula Drainage District No. 2 where East Vanport is situated.

Other Functions

Providing for convention facilities or the state armory at Vanport does not appear advisable. Both should have more central locations. Full statement of the site needs of an armory are given on page 28. The main point is that armories now exist at Gresham, Oregon City, and Beaverton. The purpose of a new armory is to serve National Guard personnel residing primarily in Portland. The Vanport site is too far off center to do this properly. Also in times of emergency, the need for an armory functioning as a headquarters for the Guard is more critical than ever. If the headquarters itself were flooded, operations by military units would be severely handicapped, if not impossible.

The success of convention facilities at Vanport is a matter for Stanford Research Institute to judge based on its study of attendance characteristics and economic aspects. However, an obvious serious disadvantage is the decentralization or scattering of essential auxiliary facilities--housing, eating, entertainment. Transportation to overcome such dispersion would be a major problem for the management of each convention. Present taxi fares from Vanport to downtown Portland average $2.80. One-way bus fare is 20¢ and the trip takes 20 minutes on the Portland-Vancouver bus line. As soon as the parallel Interstate Bridge is opened, there will be a bridge toll for travel to and from the City of Vancouver.

A C C E S S

Within five miles of Vanport, 225,500 people lived in 1950, or 38% of the 600,000 who lived in the Portland urban community

2. With the completion of the second Interstate Bridge one more outbound lane will be available, increasing the total to 14.

3. Within 10 to 15 years the State Highway Commission intends to build a new expressway from the Interstate Twin Bridges to Downtown Portland crossing the peninsula in the vicinity of Delaware or Greeley Avenues. This expressway will parallel Denver Avenue through Vanport. It will undoubtedly be 3 lanes in each direction, increasing the total outbound lanes to 17. The total discharge capacity direct from East Vanport when this new expressway is built will become 21,000 vehicles per hour.

4. Traffic from all parking areas will be able to approach or leave without traffic light interference as Union and Denver Avenues where they border East Vanport have already been designated by the State as limited access highways. Two grade separations and two ramps at other locations already are in place permitting direct access from parking areas in East Vanport to Union Avenue, Vancouver Avenue, Gertz Road, and Marine Drive without stops at traffic lights. One ramp is already in place permitting direct access from parking areas north of the proposed coliseum to Denver Avenue.

5. Some modifications in the old underpass serving as a main entrance to West Vanport are necessary before traffic can be routed through it to and from Denver Avenue from East Vanport.

6. Another grade separation for flow to and from Denver Avenue can be made when the railroad spur is extended from the present P. I. buildings under Denver Avenue to the Delta Park Area.

7. The existing interchange where Union and Denver meet at the south end of the Interstate Bridge allows traffic to and from the Bridge and North Portland Road to move continuously without traffic lights.

8. Of considerable advantage in dispersing traffic from Vanport are Columbia Boulevard and Lombard Street. These two arteries intersect and distribute traffic to all main north-south streets on the East Side--where 80% of the city's and county's population live.

E S T I M A T E D C O S T S

TO EXPOSITION-RECREATION COMMISSION
for Delta Park acquisition and site preparation

	ITEM	QUANTITY	COST
1.	Purchase or replacement of Delta Park	99 acres @ $4000 per acre	$396,000
2.	Raising and strengthening levees of Peninsula Drainage District No. 2	$135 per acre	13,400
3.	Flood gates at two Denver Avenue underpasses		5,000
4.	Sanitary sewer to city system at N. Montana and Columbia Blvd.	5200 lin. ft. @ $5.20 per lin. ft.	27,000
5.	Pumping station for sanitary sewage		7,000
6.	Paving parking areas	42 acres @ $1.75 per sq. yd.	356,000
7.	Additional on-site roads	17,000 lin. ft. @ $12 per lin. ft.	204,000
8.	Extend railroad from present P. I. buildings	5000 lin. ft. single track @ $10 per lin. ft.	50,000
9.	New Denver Avenue underpass for railroad and vehicular access		50,000
10.	Modify existing Denver Avenue underpass (old West Vanport entrance) to connect to East Vanport		20,000
11.	Hydraulic fill to raise site of buildings to elevation 24	481,000 cu. yds. @ 50¢ per cu. yd.	240,500
			$1,368,900*

* Does not include extra costs due to anticipated foundation problems.

Explanation of Costs

Item 1 — The estimate of $4000 per acre based on costs necessary to replace Delta Park and make improvements at another site is made by Mr. Harry Buckley, Supt. of Parks, City of Portland. Delta Park is the best land in the Vanport area. It has certain improvements: a well, probably capable of supplying all the water needed by the coliseum building and grounds; sewers and water mains left over from East Vanport war housing are in place and have been rehabilitated by the City Park Bureau; a warehouse building on the site has been repaired; the area seeded has cost $500 an acre for this work alone.

Item 2 — If the Federal Government did not choose to participate in raising and strengthening the levees, the total cost to insure flood protection for the coliseum could run considerably higher. If Peninsula Drainage Districts Nos. 1 and 2, undertook the complete job by themselves, the total cost to raise levees three feet above an 1894 flood height would be $2,315,000. The share assignable on an acreage basis to Delta Park would be at least $98,000 and probably several times this amount because owners of vacant or farm land would hardly agree to a $1000 per acre assessment.

Item 3 — This is a generous estimate. Flood gates may be provided by the Drainage District as a whole or by the State Highway Commission without expense to the Exposition-Recreation Commission.

Items 4 & 5 — The State Sanitary Authority will not permit sewage to be dumped into Columbia Slough or Columbia River. The nearest connection point to the city system is at N. Montana and Columbia Boulevard.

For a 22-foot bituminous pavement @ $6.51 per linear
inch curb with 12-inch gutter both sides of
linear foot, and a 6-foot side-
linear foot.

ommission would share in
mined at this time. To
re included in the estimate.

by the coliseum is raised
lowest floor would be below
948. Whether an expenditure of

ESTIMATED COSTS
explanation of costs.

$240,500 to provide this immunity to a 31-year flood would be wise cannot be determined until detailed construction plans are drawn. Ordinarily, heating, ice-making, and other mechanical equipment which would suffer the greatest flood damage would be placed on the lower floor or basement. Again to be on the safe side, this cost is included.

E S T I M A T E D C O S T S

TO COUNTY COMMISSIONERS
for a county fair site at East Vanport

As a basis for decision between East Vanport and other sites for the county fair, the primary cost consideration is the over-all difference, including both land and buildings, between a shared site and a separate site. The advantage in sharing or leasing the coliseum or the Meadows Race Track cannot be estimated without considerably more detailed design of buildings and cost analysis. Only relative site acquisition and preparation costs can be compared at this time.

Based on present assessed values, the area in Vanport selected for the fair, between Delta Park and the Meadows should be available for $750 per acre or $75,000 for the 100-acre vacant tract. No buildings need be purchased. About 60 acres is low and should be filled at least six or seven feet bringing it to elevation 10. This requires approximately 600,000 cubic yards costing $300,000. Added to this should be $50,000 for the county's share of flood protection, trunk sewer, and underpass improvements. The total estimated cost is thus $425,000 or $4250 per acre.

It is understood that the raw land cost is $1500 per acre or $285,000 for the 190-acre tract now under option at NE 181st and Halsey Street.

Areas allocated for the fair and coliseum, of course, may be shifted from the plan suggested in this report after detailed plans are made prior to actual construction. However, the difference of $140,000, which a fair site at East Vanport is apt to cost more than at the option site, does appear to be the maximum to expect. The question is whether the county can realize greater savings than this by sharing buildings, parking areas, and other facilities at East Vanport.

ESTIMATED COSTS AT WEST VANPORT

Although no immediate development is suggested in West Vanport, relative costs should be evaluated as a factor in the decision to establish the first unit in an over-all Exposition-Recreation Center at East Vanport.

Based on assessed values on adjoining properties, the 635 acres now owned by the U. S. Government should be obtainable at no more than $1000 per acre. Flood protection, with Federal participation, will add another $384 per acre to the true acquisition cost. This tract plus the KGW radio station property and the 17-acre private farm should cost a total of $1,229,000.

To prepare the western and northern boundaries for eventual industrial development by filling will cost $850 per acre for each foot of fill added. To raise to the present level of the Swift Company, Union Stockyards, or P. I. properties will require 20 feet of fill on the average or $17,000 per acre in addition to estimated raw land cost of $1384 per acre.

POSSIBLE SUPPLEMENTARY SOURCES OF FINANCING

Possible advantages to the Exposition-Recreation Commission by the participation of the county fair and assistance by the Federal Government for flood protection have already been mentioned. The other important supplementary financial source is the offer by the P. I. to turn over its assets to the city if "adequate" substitute facilities are constructed and be made available for its shows at regular rental rates.

The P. I. has offered in writing to transfer to the city its 11-acre building and 42.76 acres upon which it is built. A reasonable minimum rental for the building would be 2½¢ a square foot or $105,600 per year. Operation and maintenance of the building would amount to approximately $40,000, leaving approximately $65,000 per year net.

In addition to the above, the P. I. has accumulated over $30,000 for a 4-H and Future Farmers of America dormitory. This is included in the transfer to the city if used to construct a dormitory building.

The 42.76 acres of property is worth approximately $5,000 per acre or $213, 500 on a low value sale.

The P. I. building has an insurance appraisal replacement value of approximately $1,800,000 and is included in the assets to be turned over to the city.

In years to come, continuing investment in the West Vanport area for a world's fair, outdoor stadiums, or industry will add additional roads, parking, buildings, and increase the influx of people which should brighten the coliseum's financial prospects.

ADVANTAGES OF A COMMUNITY-WIDE NATURE

The principal community-wide advantage in locating the Exposition-Recreation Center in Vanport is that it would be the means of improving this otherwise disreputable front door to Portland. The park-like development of magnificent distances envisioned ultimately would be most impressive to the traveler approaching the City of Roses. Portland is unquestionably among the top two or three most beautiful large cities in America. But the highway as well as railway approaches through Columbia Bottoms are seriously spoiling Portland's rating. Practically all tourists visiting us must pass Vanport. The mountains and the location of the Interstate Bridge leave few other alternatives.

OTHER PERTINENT INFORMATION

Weather Conditions

Vanport has been questioned as a site for the Exposition-Recreation Center because of fog, dampness, and cold. The accompanying charts do demonstrate that night temperatures are consistently lower and there is more fog at the Airport, the nearest weather station to Vanport, than in downtown Portland. These differences are not really significant, except for one type of event--night football or other outdoor spectator events occurring in the Fall months.

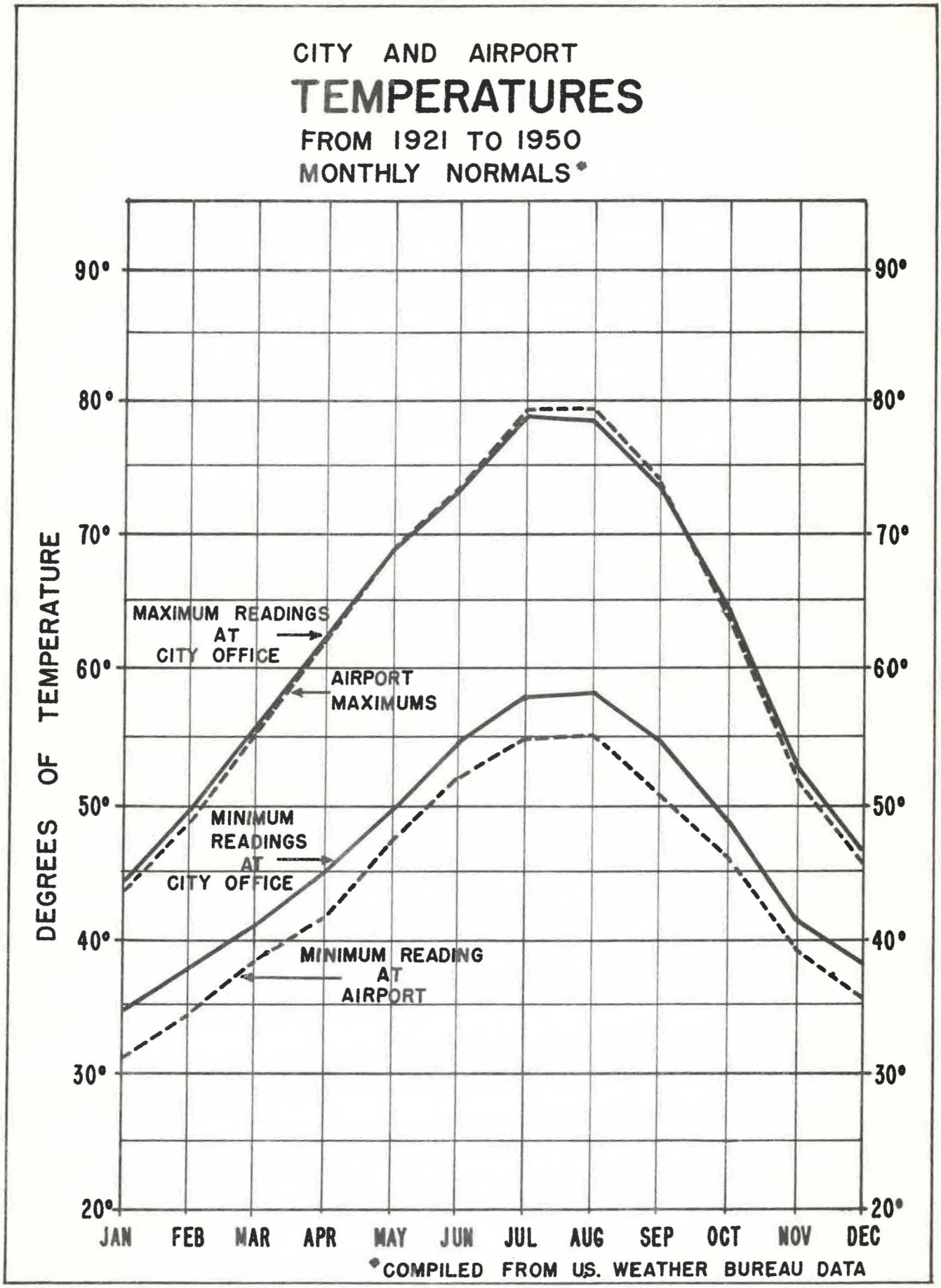
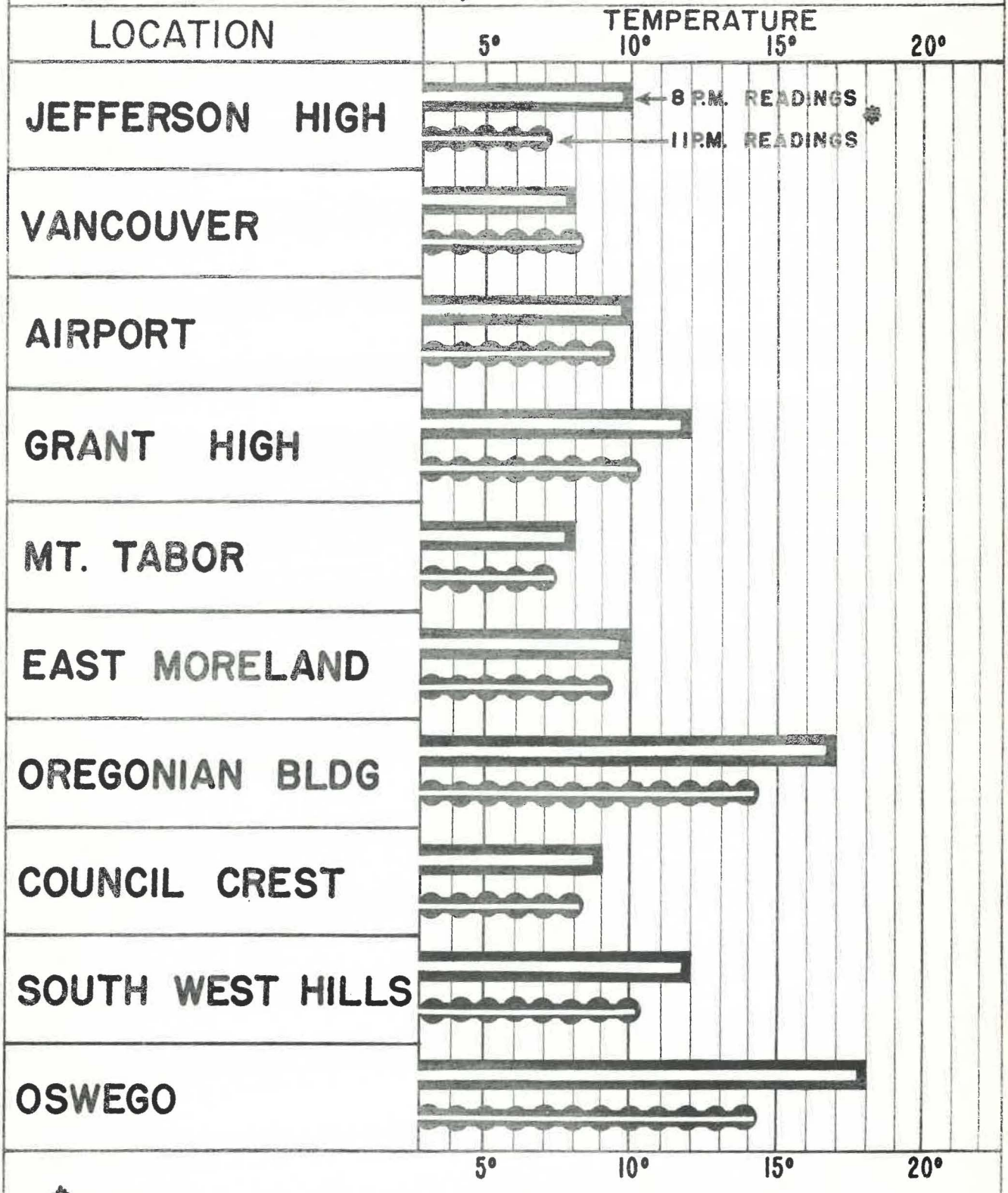

CITY AND AIRPORT
TEMPERATURES
FROM 1921 TO 1950
MONTHLY NORMALS*
DEGREES OF TEMPERATURE
90°
80°
70°
60°
50°
40°
30°
20°
MAXIMUM READINGS AT CITY OFFICE
AIRPORT MAXIMUMS
MINIMUM READINGS AT CITY OFFICE
MINIMUM READING AT AIRPORT
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
*COMPILED FROM US. WEATHER BUREAU DATA

CHART I

TEMPERATURES AT TEN LOCATIONS

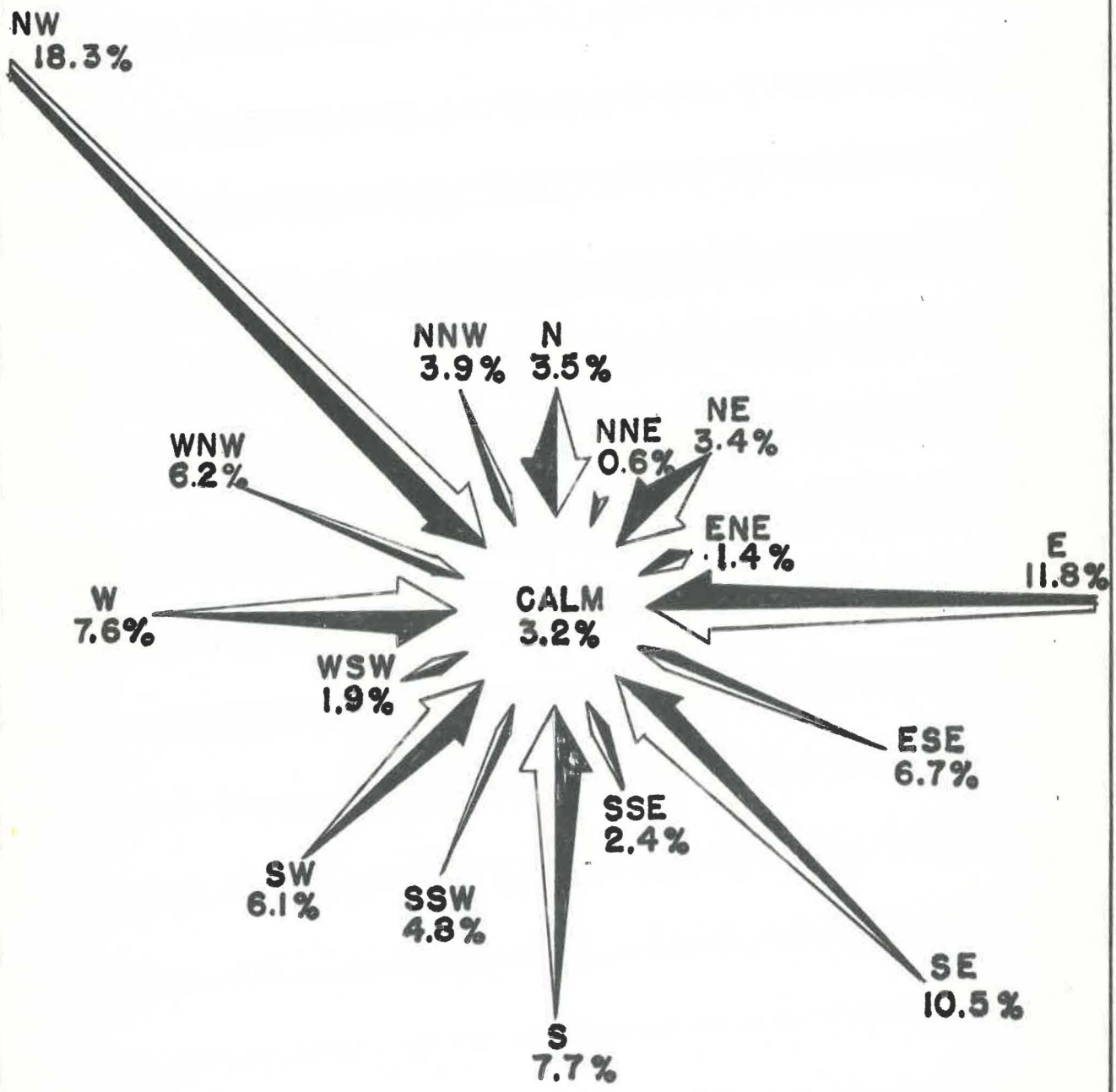
TAKEN FEBRUARY 3, 1950 BY THE OREGONIAN *



* Recorded on ten identically calibrated thermometers, sheltered from wind and away from buildings and heat sources.

CHART 2

WIND DIRECTION IN THE PORTLAND AREA



RECORDED AT PORTLAND AIRPORT
JANUARY 1937 - MAY 1940

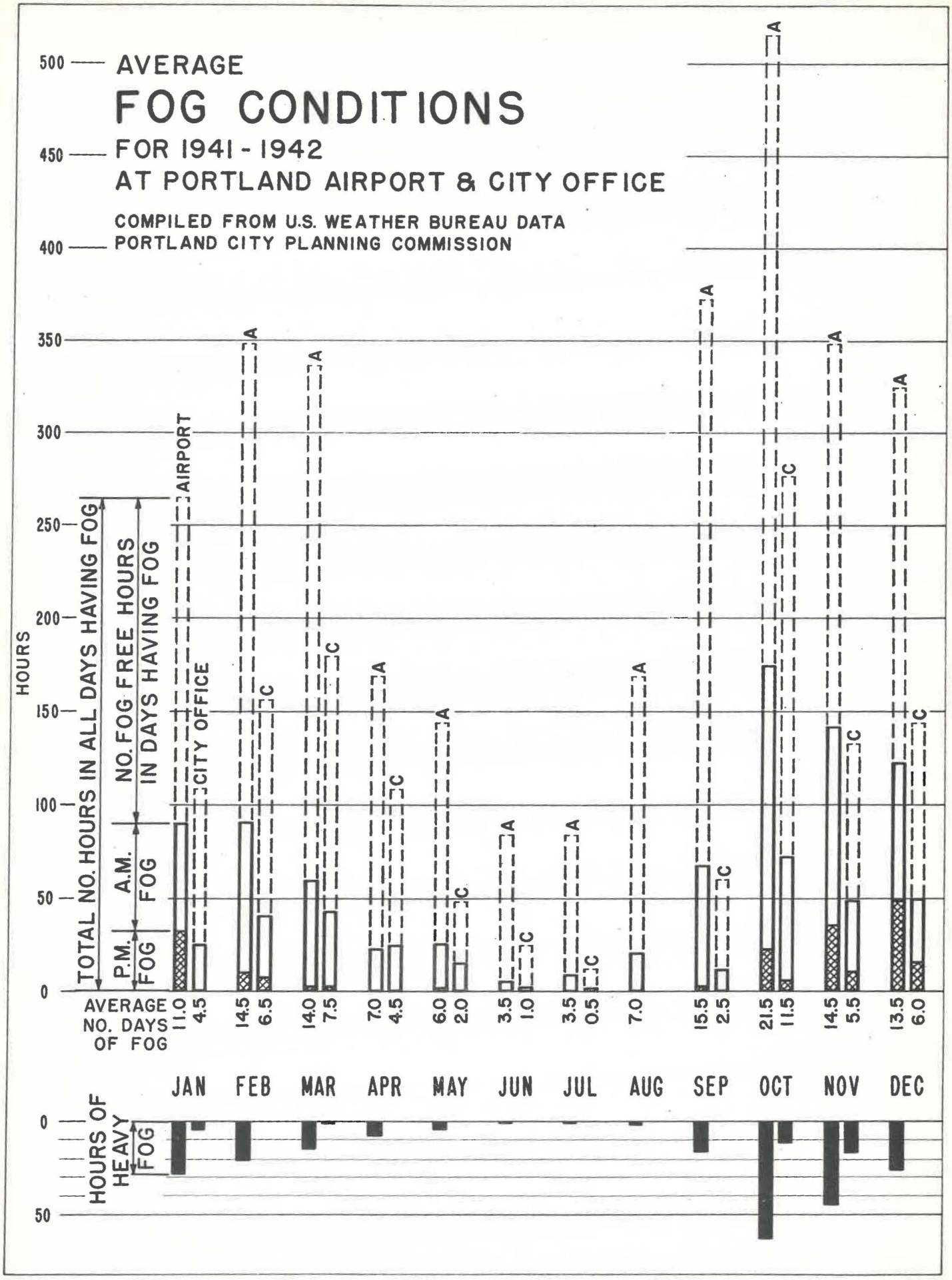

AVERAGE
FOG CONDITIONS
FOR 1941 - 1942
AT PORTLAND AIRPORT & CITY OFFICE
COMPILED FROM U.S. WEATHER BUREAU DATA
PORTLAND CITY PLANNING COMMISSION
HOURS
TOTAL NO. HOURS IN ALL DAYS HAVING FOG
NO. FOG FREE HOURS IN DAYS HAVING FOG
A.M. FOG
P.M. FOG
AIRPORT
CITY OFFICE
AVERAGE NO. DAYS OF FOG
11.0 4.5
14.5 6.5
14.0 7.5
7.0 4.5
6.0 2.0
3.5 1.0
3.5 0.5
7.0
15.5 2.5
21.5 11.5
14.5 5.5
13.5 6.0
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
HOURS OF HEAVY FOG

CHART 4

Conclusions of Dames and Moore, Foundation Engineers, on Conditions in West Vanport, prepared for Port of Portland, 1946.

"1. The determination, by the survey, of rate and magnitude of settlement indicates that fifteen feet of fill will, in the most favorable soil conditions, settle twelve to fifteen inches during the first three years--then stablize. In the least favorable soil tested, the amount of settlement would equal eighteen inches the first three years, and could settle thirty--six inches in twenty years. If lateral drainage from compressible deposits to sand strata occurred, the rate of settlement would be accelerated.

2. Spread Foundations will not prove satisfactory for the support of any but (1) very flexible structure which can safely withstand severe differential settlements of (2) structures which if rigid, possess sufficient strength to successfully resist tendencies toward differential deflections within the structures. Spread foundations supported directly on the surface of "Compressible Deposits" should be limited to bearing values of ½ ton per square foot or less. Sand fill over "Compressible Deposits" may support loads up to 1½ tons per square foot.

Building codes rate soil types for bearing capacity as follows:

Soft or wet clay. . . .	1 ton per sq. ft.	(Compressible)
Sand and clay mixed . . or in layers.	2 tons per sq. ft.	(Compressible)
Clay in thick beds. . .	3 tons per sq. ft.	(Compressible)
Gravel.	4 tons per sq. ft.	
Gravel (well cemented).	8 tons per sq. ft.	
Rock.	16 tons per sq. ft.	

3. Piling driven in clusters would probably develop sufficient bearing capacity, but the difficulty with this system lies in the extreme differences in composition of soil in a given area and a variable water table which makes the rate of settlement almost impossible to calculate, or if calculated to remain constant. For example: In a fifteen foot fill, under most favorable soil conditions, a fifty foot pile placed 1½ years after the fill and loaded with 33 tons will have a limiting settlement of 3½ inches. Under the least favorable soil conditions, a one-hundred ten foot pile of 25 ton capacity, placed five years after the fill, will settle 5½ inches. Sheet steel piling may aid in stabilizing soil movement under specific buildings."

Site Needs For An Armory

June 24, 1954 two staff members of the Multnomah County Planning Commission and one staff member of the Portland City Planning Commission met with Commander Carl Cover in his office at the Oregon National Guard Headquarters in Salem.

The purpose of the meeting was to enable the County and City Planning agencies to compile a list of site requirements of an Armory construction program as contemplated by the Oregon National Guard.

There is a need for armory facilities in the area between Vancouver on the north, Oregon City on the south, Beaverton on the west and Gresham on the east. This need is recognized by the state legislature which has given the program a near top priority.

By an action of Congress, the Federal Government will meet 75% of the cost with the state contributing 25%. If local agencies wish additional facilities over and above the regular Guard needs, they may add to the state's share of the total cost. It was understood that the intention is to provide about a two million dollar facility to handle essential Guard activities; with construction to start by July 1, 1956.

The specific site must be owned by the State of Oregon. To encourage local participation the community is, however, urged to acquire a site.

Existing laws specify that National Guard personnel must be in charge of the building, with operation and maintenance determined by an Armory Staff Board. An Advisory Board composed of members representing participating agencies establishes program and policy. In general, an Armory may be used for any program of community benefit. Its use may be leased or donated.

When construction is completed the Federal Government turns the facility over the State, which, through the Guards, assumes thereafter all cost of maintenance.

The exception to this complete control and use by state and local agencies is in the event of national emergencies involving mobilization of all military units. In the past this has happened two or three times for a few days each time.

The National Guard program is largely oriented toward local citizen participation. Since the training units assigned to the facility will use it only three nights out of the week and because

the Adjutant General has indicated that arrangements will be made to take care of conventions or events which meet the criteria of community benefit, there is every reason to believe that participation in an armory program is possible by local agencies.

It was understood that specific needs for a site are as follows:

A minimum area of at least ten acres which would not include parking space for the automobiles of trainees, or for outdoor drill space.

An important aspect of the location must be its proximity to highway arterials. Rail transportation is not so vital.

The members of the thirty four guard units which will use the facility should not have to travel more than eight miles to get to the Armory from their homes.

The general staff of the Oregon National Guard prefers a large single armory building containing 120,380 sq. ft. or approximately 3.5 acres. Such a building will provide for 34 guard units including infantry, arterillery, communication, and motor repair. Seven to ten units a night will meet three times a week in class-rooms, service areas, and on the main floor. This main assembly room should be at least 140 ft. x 250 ft. with a seating capacity of 5000 people on portable chairs or 3500 people on bleachers for floor games. These figures do not include balcony seating which would occur over the auxiliary rooms located around the assembly room. These rooms would be used for class work, utility rooms, kitchen, boiler room, supplies, toilets, etc.

In addition to the single building there is need of a motor repair building 60 ft. by 120 ft. in connection with an enclosed, but not covered, vehicle storage area with a minimum parking space for 160 vehicles and special equipment

It would be desirable to have parking space for the 350 members that would attend classes in one evening as well as additional public parking space.

In the course of the conversation a number of sites under consideration were mentioned and commented upon. A strong impression was received that the Federal Government would insist on a site where a rock based foundation was available, and the State, on the other hand, would not consider a site where flooding was a possibility.

Needs of Multnomah County Fair*

FACILITIES	USE
1. Industrial Buildings	The largest building on the grounds would be composed of booths to show and sell commercial articles.
2. Agricultural Buildings	For grange activities and other agricultural displays.
3. Women's Building	For domestic arts such as canning and handicraft.
4. Art Building	To show paintings, drawings, sculpture, photography, slides, and including a small theatre.
5. Floral Building	For nursery stock, flower displays by garden clubs, etc.
6. Poultry Building	For display of chickens, ducks, rabbits, etc.
7. Livestock Building	Stalls and other areas for livestock display. There would be exhibit rings in the building. Approximate size two acres.
8. Junior Fair Building Group:	(a) Exhibit building (b) Demonstration area inside and out. (c) Small barn--FFA and 4-H Dormitory to house participants.
9. Concessions	To be built by others

* County Fair Study, Multnomah County Planning Commission, July 14, 1954, page 17.

10.	Grandstand	Covered Grandstand to seat two to three thousand people in conjunction with a race track, with facilities for mutual betting and saddling paddock underneath.
11.	Horse Barns	Space for 300 horses.
12.	Shops	Maintenance buildings: (a) Electical equipment (b) Equipment storage
13.	Carnival Area	Approximately 250' by 800'.
14.	Parking	Ultimate estimated need, 100 acres.
15.	Race track	Horse racing, rodeos, etc.
16.	Landscaping	(a) Screening and buffer area. (b) Park and recreation area for year-round use. (c) General grounds, pools, gardens, etc.

17. Adequate and convenient rest rooms, drinking fountains, walks, etc.

AREA REQUIREMENT BY INDIVIDUAL FUNCTIONS

TYPE OF GROUP	Parking 1000' off site	GROUNDS IN ACRES (ex.Bldgs.)					AREA OF BUILDINGS IN ACRES											Total Acres in Building and Grounds
							SEATING				ACTIVITIES			SERVICE				
		Circulation on site	Parking on site	Outdoor activities	Concessions, Service	Total in Acres	Fixed	Temporary	Total	Meetings, Museums, etc.	Arena	Stage	Exhibit	Utilities	Storage	On site Living	Total in Acres	
SPORTS COLI-SEUM	4000 spaces 28. acres	.50	0	0	.30	.80	15000 2.41 acres	3000 .48 acres	18000 seats 2.89	.26	.40	(	(	.50	)	0	3.57	4 blks. incl. streets 4.85
P. I.	0	4.00	25.0	0	1.00	30.0	15000 2.41	3000 .48	2.89	0	40	(	10.00	)	)	.50	13.79	43.79
CONVEN-TIONS	4000 spaces 28. acres	.20	0	0	0	.20	acres 15000 2.41 acres	acres 3000 .48 acres	18000 2.89	15 meetg. rm. 2.44	0	(	(	.10		0	5.33	5.53
MEMORIAL MUSEUM	0	.50	0	0	0	.50	0	0	0	.50	0	(	(	.10	)	0	.60	1.10
COUNTY FAIR	0	10.00	65.0	20.00	5.00	100.0	1.5	0	1.5		See Folt Report					.50	75.00	175.00
STATE ARMORY		3.34	incl. equipment Storage			3.34	0	0	0	0	Assemb-bly 1.00	(	(	(	.54	)	3.50	10.00 6.5 minimum acres
WORLD'S FAIR																		400
FOOTBALL STADIUM		10	103	0	0	113	60000	0	6	0	2.2	0	0	0	0		8.2	121.2
BASEBALL STADIUM		7	52	0	0	59	30000	0	3	0	4.6	0	0	0	0		34.6	93.6

Revised

ROSS ISLAND - OAKS

SUMMARY

This portion of the report deals with the physical characteristics and feasibility of the Ross Island-Oaks area as a site for the Exposition-Recreation Center.

Included in the study area are Ross, Hardtack, Finger and Toe Islands, as well as the low land lying east of the secondary channel and extending to the bluff. Sellwood Park to the south on top of the bluff is also included.

As a basis for comparison with other sites, the significant advantages and disadvantages of the Ross Island-Oaks site are:

ADVANTAGES:

1. Central Location--Over one-half (56%) of the Portland urban area population lives within five miles of the site. Ross Island is three road miles from the center of the westside business district and three miles from the center of population.

2. Outstanding Marine Development--This development would utilize the river as a unique cultural and recreational asset, providing a most dramatic setting for an exposition-recreation activity and related functions. Ross Island offers an opportunity for the citizens of Portland to have public access to water frontage, a condition which is practically non-existent at present. The location of proposed facilities on this site would constitute a prominent impressive development to visitors and citizens, particularly when seen from the new expressway, Barbur Boulevard, or Terwilliger Boulevard.

3. Potential Space--With an average fill of seven feet, Ross Island would have 160 flood free acres available for development. Additional fill would bring the total area to 507 acres, which is adequate to accomodate the sports and livestock coliseum, parking area, outdoor sports stadiums, county fair, and world's fair or large park.

4. Minimum Conflict With Existing Environment--Water areas and differences in elevation provide natural buffer conditions separating existing residential areas from the site.

5. Adaptability to Multi-Stage Development--Separate areas within the total site may be developed and used as the program expands and other agencies become interested.

DISADVANTAGES:

1. Difficult Access--Highway connections will be expensive and may in some cases overload existing trafficways.

2. High Acquisition Costs--The potential mineral value of this site may make acquisition costly and difficult.

3. Costly Land Preparation--Relatively large amounts of fill would be required to provide flood protection. Ross Island is on the average of 7 feet below the 1948 flood and 11 feet below the 1894 flood levels.

4. Utilities Costly--Sewage will need to be pumped approximately 4,500 feet, which will necessitate a new pumping station and mains. Approximately 2,000 feet of 12 inch water line will be necessary to serve the island.

Since a gravity flow line from Ross Island to the Oaks is not practical, future developments in the Oaks-East Bank area would require another pumping station and additional mains.

RECOMMENDED DEVELOPMENT:

If the Ross Island-Oaks site is chosen for the Exposition-Recreation Center, the sports and livestock coliseum and the county fair should be placed on Ross Island, with the remainder of the Islands and Oaks area scheduled for later acquisition and development.

ESTIMATED COST:

To acquire Ross Island, prepare the site for a sports and livestock coliseum and county fair, pave parking areas, and build necessary access roads and utilities will cost approximately $5,916,000. Obviously, the $8,000,000 available to the Exposition-Recreation Commission is not sufficient to acquire and prepare the site and construct buildings to satisfy minimum needs. Assurance of additional financial assistance must be secured from the County Fair, Pacific International Livestock Exposition, Worlds Fair, etc. before development of this site for exposition-recreation purposes is possible.

EXISTING CONDITIONS

Location

The Ross Island-Oaks site, as considered in this report, consists of the group of islands located in the Willamette River south of the Ross Island Bridge, and a part of the mainland to the east and southeast of the islands.

South and east of Ross Island, the main island of the group, are Hardtack and Finger Islands. Toe Island, the smallest of the group, is located to the southwest of Ross Island. The Oaks-East Bank area is located to the southeast of the islands and lies between the bank of the river and the Sellwood Bluffs, from SE Spokane Street to SE Holgate Boulevard extended.

Physical Characteristics

Geologically, the islands are comprised of relatively recent alluvium stream deposits of Clackamas and Portland Terrace gravels over 100 feet deep. The cutting action of the river has sifted the sand and gravel so that the downstream ends of the islands are composed of finer sand and silt. This makes the downstream parts more desirable for beaches and recreational uses but decreases the potential of these areas as a commercial gravel source.

Natural vegetation on the islands consists largely of willows, cottonwoods and oaks. However, most of the trees on the northern part of Ross Island were killed when hydraulic fill from a channel deepening operation was pumped onto the island during the 1940's. Some brush covered open areas exist on the southern end of Ross Island. A large grove of mature oaks exists in the present Oaks Amusement Park area. All vegetation on this site will undoubtedly be killed by necessary fill unless some protective measures are taken.

The main stream of the Willamette River flows to the west of the island group and maintains its greatest depths in this channel, which has rather precipituous under-water banks. The greatest natural depths in the channel average 22 feet. Hydraulic dredging has deepened the channel to approximately 37 feet for a thousand yards southward from the northern end of Ross Island.

Secondary channels to the east between Hardtack Island, Finger Island, and the mainland are relatively shallow, particularly near the southern end. The channel between Ross and Hardtack Islands has been blocked off at the southern end to protect present sand and gravel operations on the north end of Hardtack Island during flood periods.

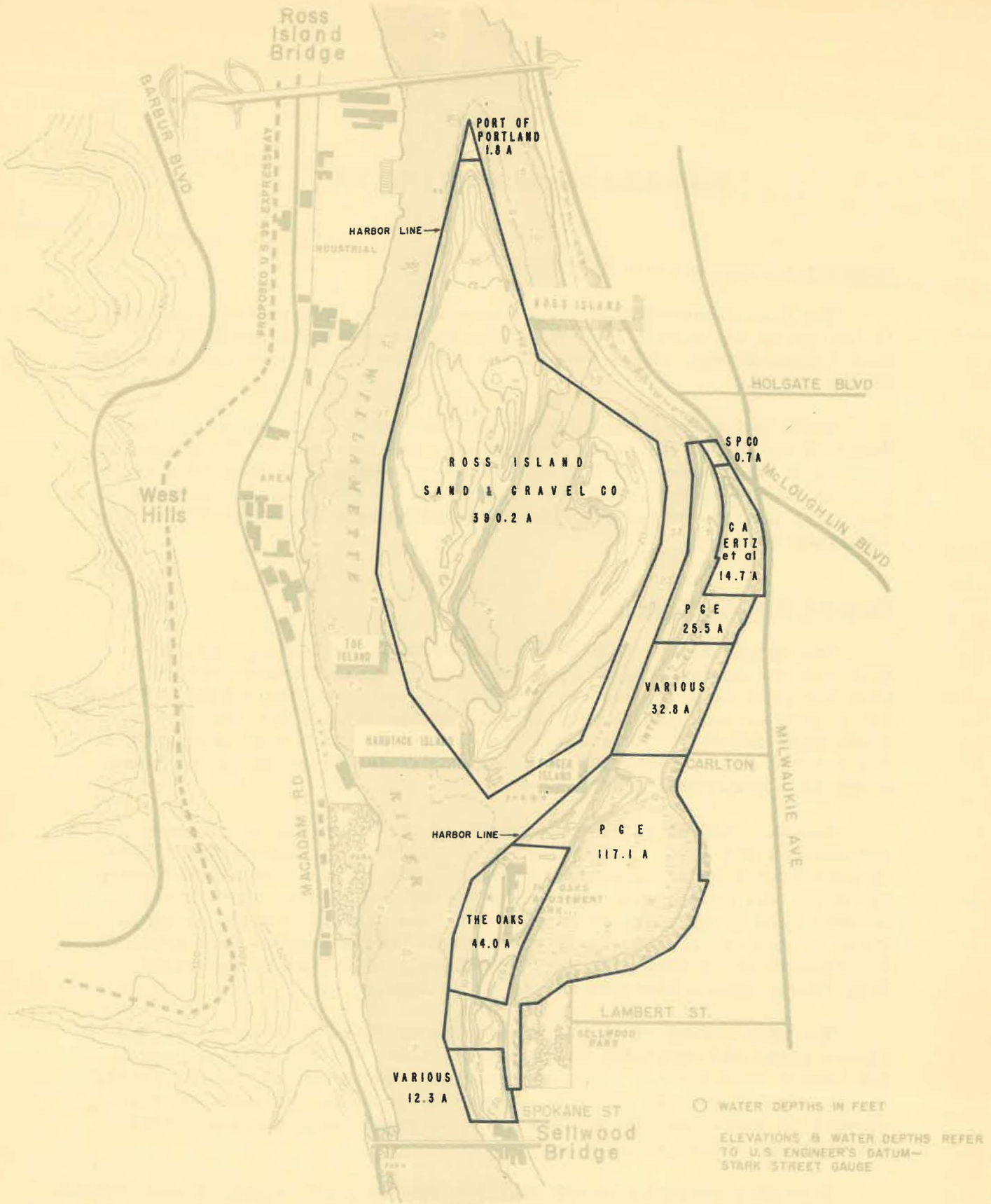


PLATE 7

PROPERTY OWNERSHIP

ROSS ISLAND - OAKS SITE

EXPOSITION RECREATION CENTER

NORTH

SCALE IN FEET

0 800 1600

PORTLAND CITY PLANNING COMMISSION APRIL 1955

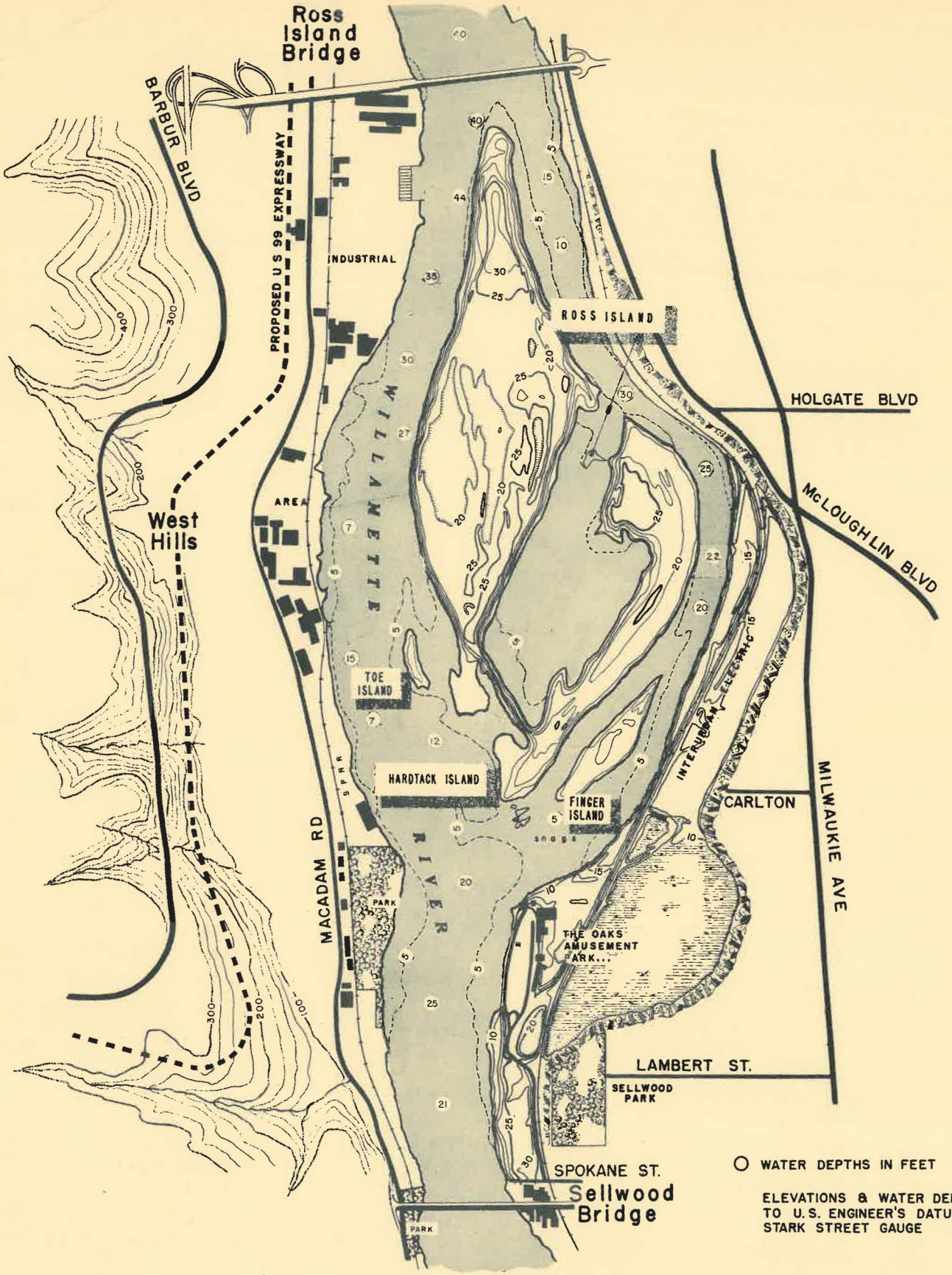


PLATE 6

EXISTING CONDITIONS

ROSS ISLAND - OAKS SITE

EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION APRIL 1955

NORTH

SCALE IN FEET

0 800 1600

The elevation of the islands varies from 3 feet to 37 feet (city datum) and the Oaks-East Bank area varies from 3 feet to 29 feet. The top of the bluff to the east is approximately 100 feet above the average level of area at the foot of the bank.

Area and Ownership

All of the area inside the harbor line of the islands is under the ownership of the Ross Island Sand and Gravel Company with the exception of 1.8 acres on the northern tip of Ross Island, which belongs to the Port of Portland. The total area inside the harbor line is 392 acres, but only 252.6 acres are above the mean high water level (elevation 7.7 feet city datum). Of this total acreage above high water, 161 acres are on Ross Island, 75 acres are on Hardtack Island, 14 acres are on Finger Island and 2.6 acres are on Toe Island.

The Oaks-East Bank area consists of approximately 247 acres inside the harbor line, of which 215 acres are above the mean high water level. The right-of-way of the interurban tracks through the area contains 17 acres. The majority of this site is owned by the Portland General Electric Company and the Oaks Amusement Park.

Existing Uses

At present, the Ross Island Sand and Gravel Company is excavating about 300,000 cubic yards of sand and gravel per year from the channel along the western side of Hardtack Island, stockpiling the material on the northern tip of the island, and transporting it by overhead cable conveyor to its premix concrete plant on the eastern bank of the river. As the channel gravel is exhausted portions of Hardtack Island are being removed to a water depth of 35 feet, always keeping the upstream and eastern edge of the island intact for flood protection.

Ross Island, Finger Island and Toe Island are unoccupied and are being held by the Ross Island Sand and Gravel Company as a source for future raw materials for its operations. The perimeters of the islands are being rented for log raft storage purposes.

The Portland Traction Company interurban electric line extends the length of the east bank area in a north and south direction. The Oaks Amusement Park occupies approximately 37 acres at the southern end of the area between the tracks and the river. The remainder of the Oaks-East Bank area, with the exception of an old storage warehouse fronting on Tacoma Street, has no specific use.

Foundations

Since there are gravel deposits over 100 feet deep under the islands no foundation problems should be anticipated. The type and amount of fill required might alter these conditions somewhat, but inasmuch as the minimum fill would be required in proposed building areas and since the type of fill will be primarily sand and gravel, the foundation problems arising from filling should be insignificant.

It is impossible to state what the subsurface soil conditions of the Oaks-East Bank are since no test borings have been made there. It is known, however, that a considerable amount of sawdust fill exists in the area south of the Oaks Amusement Park deposited by a former sawmill located there.

Weather Conditions

The conditions of cold, dampness and fog are indicated on charts 1, 2, 3, 4 of the preceding section. It is probable that the conditions at the Ross Island-Oaks site are between the recordings at the airport and the city weather offices.

Since the island is well protected from the southwest winds by the west hills and from the cold east winter winds by the Sellwood bluff, it does not experience the extremes of local weather conditions that the relatively unprotected Vanport area does.

However, as previously stated, the differences in local weather conditions at various locations are not great enough to be a critical factor in site determination.

Floods

All ground elevations mentioned in the text of this report are referred to the City of Portland Datum. However, since the only contours available for the Ross Island-Oaks area are based on the U.S. Engineers-Stark Street Gage Datum, the contours indicated on plate 6 refer to that datum. Add 3.22 feet to the Stark Street Gage elevations to get elevations referred to the City of Portland Datum.

As shown on page 7, the 1948 flood reached a height of 34 feet and the 1894 flood reached approximately 37 feet. The only part of the islands that was above the 1948 flood level was a small portion of the northern end of Ross Island. It is probable that another flood reaching the 1894 high water level would completely cover the islands. In the Oaks-East Bank area the 1948 floor waters came up to the level of the Portland Traction Company tracks, which means that almost all of this area was also under water.

Of the two methods of insuring against floods, constructing a levee or filling, a levee around the islands seems impractical because such a solution would mean the location of activities at a lower level behind the levees, cutting off the view of the river and obviating one of the major advantages of this location. Although considerable filling is necessary to bring the islands above predicted flood levels, this seems to be the best method of achieving protection from floods.

It is recommended that all fills should be sufficient to protect building areas from a flood equal to the 1894 flood, and parking lots and less critical areas to 31.5 feet. A flood of this height has an expected recurrence interval of once every ten years. Since parking areas would need resurfacing after ten years anyway, flooding of these areas once every ten years would not be serious.

RECOMMENDED DEVELOPMENT

The entire Ross Island-Oaks site is adequate for an ultimate development including a sports and livestock coliseum, county fair, baseball and football stadiums, a yacht harbor, a boating lake and a probable world's fair. The proposed development as shown on plate 8 contains 507 acres and is suitable for accomplishment by stages. The first stage as indicated would include the construction of a sports and livestock coliseum and county fair facilities. The remainder of the functions could be developed in later stages.

First Stage of Development

If the Ross Island-Oaks site is chosen as the location for the Exposition-Recreation Center, it is recommended that the first stage of development, consisting of the sports and livestock coliseum and the county fair, should take place on Ross Island. The 160 acres comprising this island are sufficient to accommodate the most urgently needed recreation and exposition functions.

The major reasons for recommending Ross Island as the location for the first development are:

1. Less fill is required to bring sufficient area above predicted flood levels than any other location on the site. A total of 213 acres could be made available by filling the Oaks Park area and constructing a levee parallel to the interurban tracks, but the majority of this total would be below the levee and thus not as desirable as Ross Island.

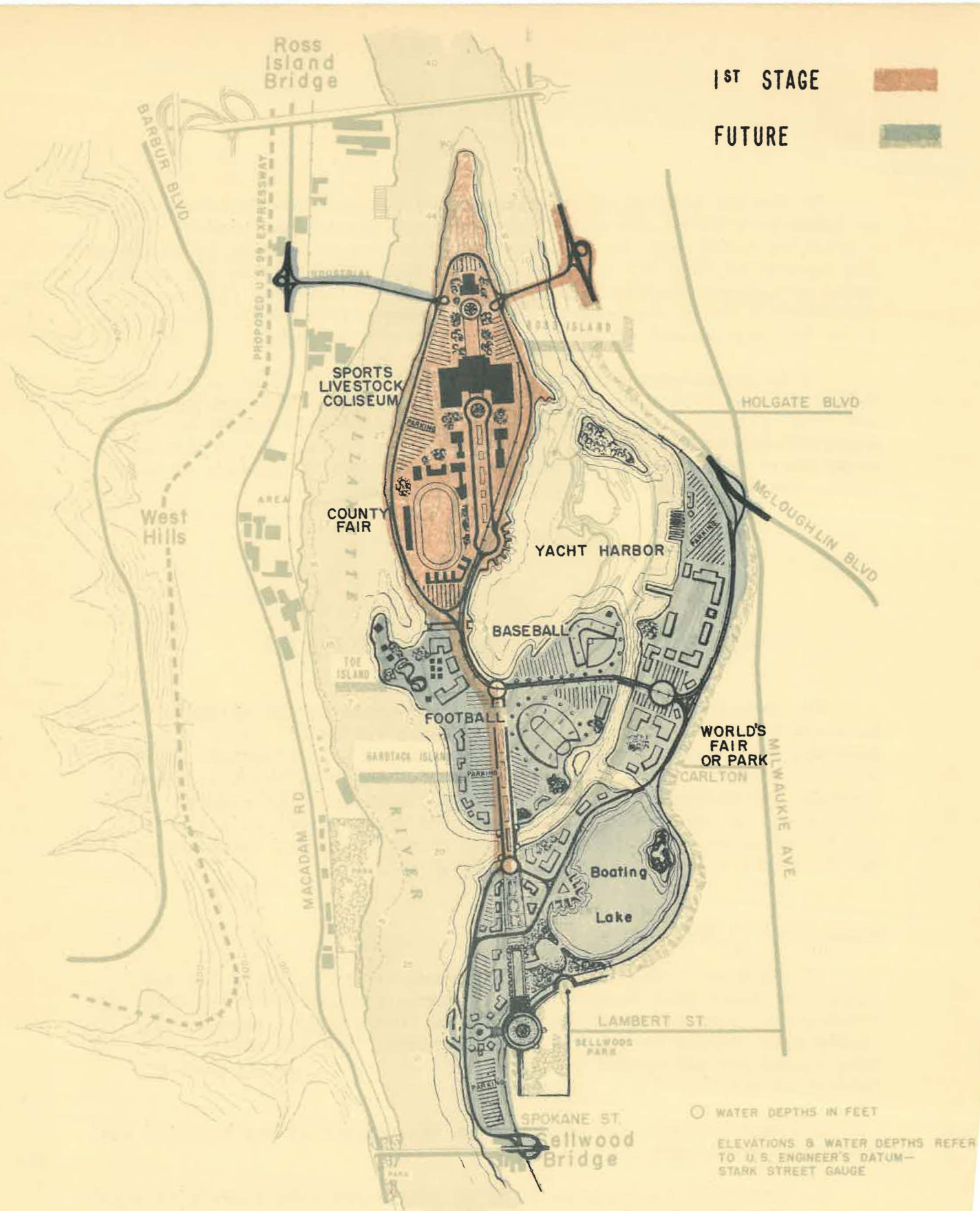


PLATE 8

RECOMMENDED DEVELOPMENT

ROSS ISLAND - OAKS SITE

EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION APRIL 1955

NORTH

SCALE IN FEET

0 800 1600

2. Present operations of the Ross Island Sand and Gravel Company would not be interefered with.

3. Views and access to the river are better from Ross Island.

If Ross Island is selected as a site for first development, it is recommended that the entire 160 acres of the island and the off-shore waters be acquired to permit joint development of the coliseum and county fair. It is undesirable to purchase less than the entire island, since the present owner's proposed use of parts of the island for anchoring log rafts and gravel excavation would be incompatible with the exposition-recreation function. As indicated in the memorandum following this section, some acquisition difficulties can be anticipated in the purchase of this site.

It should be stated that other premix concrete companies do not agree that the withdrawal of this source of sand and gravel would indirectly "effect a major price raise in building construction in this area." Other companies have stated that such action would have very little or no effect on the price of concrete to the citizens of Portland. Present sources of gravel in the main stream of the river are adequate and could be used by the Ross Island Sand and Gravel Company for the standard ten cents per cubic yard royalty to the State Land Board plus a small increase in barging costs. The methods of mining, handling and processing the gravel would not be materially affected.

Functions Which Can Be Accommodated Adequately on Ross Island

1. Sports and livestock coliseum

   Seating capacity to be determined by financial feasibility.

2. Accessory buildings for the Pacific International Livestock Exposition

   Space for convenient location of related buildings for multiple use is available.

3. Dormitories

   For 4-H Club members, exhibitors or participants.

4. War memorial

   The physical characteristics of the northern end of the island are particularly adaptable for a memorial museum, park or other feature.

5. Theatre and convention facilities

Ross Island is relatively near the downtown district, hotels, housing, etc. However, the feasibility of this location for theatre and convention facilities must be based on a further analysis of attendance and economic characteristics.

6. County fair

The broader aspects of the location of a county fair are set forth on page 13 of this report. As mentioned therein, this site was one of two recommended by the Multnomah County Planning Commission for the location of the county fair. The environmental factors of the river and the Sellwood bluff make possible the maintenance of an isolated rural park character very close to the population center of the county. The initial development proposal meets the area needs of a fair except for a full scale "midway" or a concession area for commercial entertainment and its parking needs.

7. Parking

An area of 20 acres, not including minor parking areas around buildings, with an approximate capacity of 2900 cars is indicated on the proposed plan. With a ratio of one space per four spectators, a crowd of 11,600 persons could be accommodated. An additional 1000 cars could be parked in the covered exhibition space for coliseum events. If more parking area is required it can be provided in the next stage of development to the south.

Later Stages of Development

As money becomes available and as demand and needs become apparent additional functions can be provided on the remainder of the site. With considerable amounts of fill, approximately 507 acres could be available for development as shown on plate 8. However, the memorandum quoted at the end of this section indicates a possibility that the proposed ultimate development may be economically prohibitive.

Other Functions

Although the state armory space needs could be easily met in the proposed first stage of development, the danger of floods and the difficulty of maintaining access in case of emergencies make the location of this facility on Ross Island appear unfeasible.

ACCESS

Within a five mile radius of Ross Island there was a 1950 population of 336,100 or 56% of the 600,000 who lived in the Portland urban area at that time.

The only existing direct access road to any part of this site is a road extending from Spokane Street north to the Oaks Amusement Park. However, major north-south highways (Milwaukie Avenue, McLoughlin Boulevard, Macadam Road, and the proposed US99 Expressway) pass this location on both east and west river banks. There are also two east-west river crossings nearby, Ross Island bridge one-fourth of a mile to the north and Sellwood Bridge one mile to the south.

The first stage of development as indicated on plate 8 contemplates the construction of a causeway connecting the south end of Ross Island to the Oaks-East Bank area in the vicinity of the Oaks Amusement Park and continuing to Spokane Street and the Sellwood Bridge. Also proposed for the first stage of development is the construction of a bridge connecting the northern part of Ross Island to McLoughlin Boulevard near SE Rhone Street. Since neither of these access roads propose high level or draw bridges, it would be necessary to close the channel east of Ross Island to navigation, which requires a congressional act following a recommendation by the Army Engineers. However, this channel is relatively shallow and does not seem particularly valuable as a navigable waterway. The bridge connecting the northern part of Ross Island to McLoughlin Boulevard would have to be at least 60 feet above the water to permit clearance for masts of sailboats entering the yacht basin.

Both of the above roads would have two lanes of traffic in each direction, but it would be possible to utilize three lanes in each direction from the center during peak periods. If Tacoma Street were widened east of the Sellwood Bridge, the south access road could accommodate two lanes from the east on Tacoma and one from the bridge. As shown on the recommended development plan, one northbound and one southbound lane would be provided onto McLoughlin, and two eastbound and one westbound lanes would be provided onto Tacoma. The total discharge capacity from the site with these conditions would be approximately 6,000 cars per hour. At this rate it would take approximately 29 minutes to empty the parking lots of a capacity crowd of 11,500 attending a coliseum event. It is probable that a large majority of the people coming to the site would approach across the new bridge from McLoughlin because of the better access from that point to other major traffic arteries.

Future proposed developments include two additional vehicle access connections to the site. One would be a bridge from the north end of the main island across the main channel of the river to the west and connecting with Macadam Road. This would shorten the travel distance between the westside downtown district and the site by approximately two-thirds of a mile and would be a more convenient access for residents of the northwest district of the city and the Oswego area. However, because of the steep hillside to the west of Macadam it is probable that a majority of the people in the southwest district would continue to use the Sellwood or Ross Island Bridges. The proposed development plan also contemplates the future relocation of the interurban tracks at the base of the bluff.

A second access proposed for future development is an interchange on McLoughlin Boulevard near Milwaukie Avenue connecting to a new road angling down the face of the bluff and leading to Ross Island by means of a second causeway located to the north of the first stage causeway. Since topography makes it impractical to connect this interchange with southbound traffic, the total outflow from this access would be two lanes to the north.

The total discharge capacity from all access roads as shown on plate 8 is approximately 10,000 cars per hour. It would take approximately 18 minutes to empty the parking lots of a capacity crowd of 11,500 attending a coliseum event.

The nearest existing mass transit lines are the Sellwood bus on Milwaukie Avenue and the interurban electric line which goes through the Oaks area. Direct mass transit access to the site would necessitate routing buses across new bridges to the island or extending the electric line across the causeway to the site. Passengers disembarking from the interurban line at the east end of the proposed new bridge near Rhone Street would have to walk approximately one-fourth of a mile to reach the proposed coliseum site. Since the interurban lines do not cross the river, some means must be provided for passengers arriving by this means to cross the river. Such a pedestrian crossing might be accomplished in one of three ways: a separate low-level draw bridge, steps up the bluff to a walk parallel to the roadway of the vehicular bridge, or a walkway constructed at the level of the bottom of the structural members of the vehicular bridge.

The interurban line is capable of moving relatively large numbers of people in a short time. Single cars (130 carrying capacity) running at one minute intervals can carry 7,800 passengers per hour. This figure might be increased by shortening the headway or by double headers as long as a distance of 1000 feet between sections is maintained.

Based on present taxi fares the cost to travel by taxi from the proposed new hotel location to this site would cost approximately $1.30.

If rail access is necessary in the first stage of construction it can be provided across the first stage causeway connecting to the Oaks Amusement Park area. If rail access is not an immediate necessity it can be provided as shown on plate 8 by constructing a spur across the second causeway and connecting to the relocated interurban tracks at the foot of the bluff on the east bank.

By the fastest traffic routes existing and proposed in the first stage of development, distances from Ross Island to various points in the community are as follows:

New Hotel in Downtown Portland (SW 6th & Taylor	2.8 miles
Milwaukie (McLoughlin & Washington)	2.9 miles
Center of Population, City of Portland (NE 15th & Holladay	3.1 miles
Multnomah (SW 35th & Capitol Highway)	5.3 miles
Lents (SE 92nd & Foster)	5.4 miles
Oswego (State & A)	6.4 miles
Beaverton (Front & Main)	9.5 miles
Downtown Vancouver (5th & Washington)	9.8 miles
St. Johns (N Jersey & Philadelphia)	10.8 miles
Oregon City (7th & Main)	10.8 miles
Gresham (Main & Powell)	12.8 miles

ESTIMATED COSTS

To Exposition-Recreation Commission
for Ross Island acquisition and site preparation

FIRST STAGE

	ITEM	QUANTITY	COST
1.	Purchase of Ross Island and right-of-way for causeway to Oaks Park area	165 acres	$2,475,000
2.	160 acres of fill (average 7' deep)	1,665,000 cu. yds. @ 40¢ per cu. yd.	666,000
3.	East approach		
	Bridge	1300 lin. ft. of 54' road deck @ $20 per sq. ft.	1,404,000
	Underpass and access		220,000
	East end right-of-way acquisition		61,000
4.	South approach		
	Right-of-way from south end of causeway to Tacoma Street	8½ acres @ $4,000	34,000
	Fill material	348,800 cu. yds. @ 40¢	140,000
	Surfacing of road	6900 lin. ft. of 50' rdwy. @ $2 per sq. yd.	77,000
	200' bridge across channel		50,000
	Interchange at Sellwood Bridge		50,000
5.	Sewer		
	Force main, gravity trunk, laterals on Ross Island, and storm lines		125,000
	Pumping station		85,000

	ITEM	QUANTITY	COST
6.	Water mains		105,000
7.	Paving parking areas	20 acres @ $1.75 per sq. yd.	169,000
8.	On-site roads	15,000 lin. ft. @ $12 per ft.	180,000
9.	Revetment along west bank		75,000
	TOTAL		$5,916,000

EXPLANATION OF COSTS

Item 1. In the absence of recent comparable sales it is extremely difficult to estimate a cost for the acquisition of Ross Island. The figure used is based on a value statement by the owner (see memorandum following this section) for 100 acres pro-rated for the entire island. The owner has estimated the value of 100 acres of the island at $4,450,000, but has stated that he would be willing to sell this area for $1,500,000. The assessed value of $478 per acre is in sharp contrast to this stated price of $15,000 per acre (31 times the assessed value). Records of actual sales in other areas of the city show that sales prices average from 2 to 5 times the assessed values. It is apparent that either the stated price of this site is unreasonable high or the assessed value is unreasonably low. Consequently the estimate used may be subject to change after further appraisal studies.

Item 2. Based on a recent survey of Ross Island by the Port of Portland approximately 2,125,000 cubic yards of fill are necessary to raise the area under the proposed buildings to elevation 37 feet and the remainder of the island to 31.5 feet. These elevations allow for one foot of settlement of the fill and will protect the buildings from a flood equal to that of 1894 and the rest of the island from the flood level to be expected at ten year intervals.

Because of the nature of available hydraulic fill material (sand and gravel), it is probable that fill costs will approximate 40¢ per cubic yard. This cost is based on the assumption that sufficient material is available in the river nearby.

Item 3. This is the estimated cost of a steel girder bridge from the north end of Ross Island to a point on the top of the bluff near McLoughlin Boulevard and Rhone Street.

Item 4. The south approach causeway and road cost is based on a 50 foot road width from the southern tip of Ross Island to the Oaks area and then south to Spokane Street. Right-of-way 100 feet wide and 3700 feet long from the south end of the causeway to Spokane Street amounts to 8.5 acres. The estimated cost of this right-of-way is five times the assessed value of the land ($832 per acre). A low level fixed span approximately 200 feet long would be necessary where the causeway crosses the secondary channel of the river. The cost estimate was made by the County Roadmaster's Office. The fill (3200 linear feet from Ross Island to the Oaks area and 3700 linear feet from that point to Spokane Street) would raise the roadbed to elevation

31.5 feet and would provide flood-free access. Since the road would be on top of the sand and gravel fill no grading or drainage problems would be encountered and the improvement cost would be only the cost of surfacing. No curb or gutter is necessary.

The cost of the Sellwood Bridge interchange consists of $20,000 for land acquisition and $30,000 for paving and structure under the bridge.

Item 5. Information from Bureau of Sewage Disposal, City of Portland. Estimates are based on a sewer to handle 15,000 people and 1,000 animals.

Pump station based on hanging pipe underneath bridge to McLoughlin Boulevard	$ 85,000
Sewer force main--Ross Island to McLoughlin	15,000
Gravity trunk--approximately 6500 feet to run length of Ross Island and from McLoughlin Boulevard to 16th and Center	40,000
Laterals on island	20,000
Storm lines	50,000
	$210,000

Item 6. Information from Bureau of Water Works, City of Portland.

12 inch line from McLoughlin Boulevard.
12 inch main running length of Ross Island.

Item 8. Cost of on-site roads does not include railroad connections to the existing interurban line. If rail service is provided in the first stage of development, 7200 feet of trackage would be necessary at a minimum cost of $10 per linear foot.

Item 9. Cost based on a stone revetment 2000 feet long along the critical part of the west bank of Ross Island. Revetment would be 18 inches thick and approximately 50 feet high. Costs were estimated by the office of the U.S. Army Engineers.

An item of cost that cannot be determined as yet is the cost of bringing in top soil for the planting of grass and shrubs.

POSSIBLE SUPPLEMENTAL SOURCES OF FINANCING

Obviously, the available $8,000,000 is not sufficient to acquire Ross Island, prepare the site, and construct buildings to satisfy minimum exposition-recreation needs. The Exposition-Recreation Commission cannot adequately develop Ross Island with available funds without supplemental assistance of from $3,000,000 to $3,500,000 from other sources.

As mentioned on page 21 of the Phase I report, the assets of the P.I. are available to the Exposition-Recreation Commission if substitute facilities are constructed and made available for its shows at regular rental fees. Although the P.I. assets are not immediately available for construction purposes since they consist of buildings and grounds which would have to be sold first, it should be possible to borrow a percentage of the appraised value of the property for construction purposes. Since the P.I. would undoubtedly require concrete assurance of the availability of other facilities before releasing their present properties, some contracted agreement would be necessary between the City of Portland and the P.I. before funds derived from P.I. properties could be used for the construction of an Exposition-Recreation Center.

Another important supplementary source of financing is the participation by the Multnomah County Fair. The amount of financial responsibility would have to be determined by mutual agreement.

ADVANTAGES OF A COMMUNITY WIDE NATURE

The long-range development of a self-contained cultural area near the center of the city would bring to a focus many now unrelated entertainment and recreational programs. The location of the site in a body of water gives it a prominent position which can be seen from the bridges as well as from innumerable view points on both banks of the river and along the hills to the west. Its dramatic setting provides an opportunity for the citizens of Portland to enjoy in a much more intimate way a great natural resource that is now only a nuisance and a barrier.

This location can provide an ideal environment for activities such as water sports, water pageants, boat races, fireworks displays, etc. which cannot be found in any other site.

Unquestionably, one of the most desirable assets Portland has which is not possessed by many other cities is a clean, high volume river flowing through the heart of the city. Today, a small park on the west side of the river south of the Sellwood Bridge is the only city owned property where a citizen of Portland can avail himself of this valuable and desirable asset. Other great cities have utilized the presence of bodies of water to give pleasure to the population and attract and impress visitors.

There seems to be a tendency to consider the river as a barrier to traffic circulation and in terms of potential industrial sites. Obviously, access to deep water shipping has major advantages for industry which is vital to Portland's economy, but it seems unreasonable to allow the entire river frontage to be developed for this purpose without developing a portion of this unique natural attribute to satisfy important recreational needs of the people. Few opportunities remain for the acquisition, development and beautification of the waterfront for public purposes.

A comprehensive development on the Ross Island-Oaks area would not only serve exposition, recreation and fair needs for Portland, but would provide an impressive setting second to none when viewed from such vantage points as the new US99 Expressway (a major tourist route), Barbur Boulevard, Terwilliger Boulevard, Ross Island Bridge or the Sellwood Bridge. Ross Island can be much more beneficial to the City of Portland as a public development than as a source of sand and gravel.

The initial costs would be relatively high, but from a long-range standpoint the construction of an Exposition-Recreation Center on the Ross Island-Oaks site could be the beginning of a unique development which could well be one of the most impressive of its kind.

The following is a memorandum received from Alden F. Krieg, Secretary of the Exposition-Recreation Commission.

February 2, 1955

MEMORANDUM

"I am submitting the following information for your edification and report to Mr. Alden F. Krieg, Secretary of the Exposition-Recreation Commission.

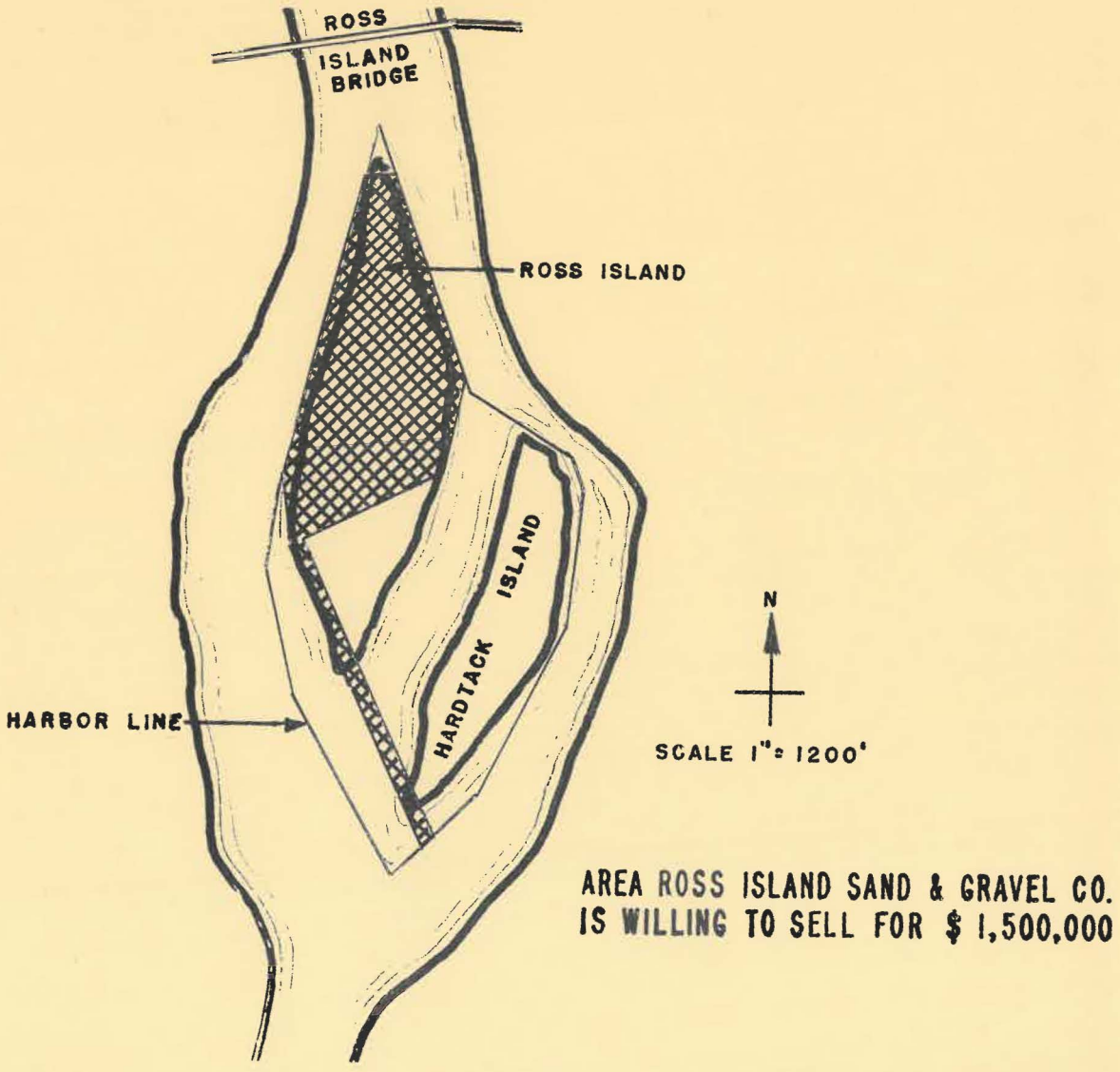
Our preliminary discussions with Mr. Walter H. Muirhead, President of the Ross Island Sand and Gravel Company, Inc. regarding possible acquisition of his property, have developed the following:

The subject Company is not interested in selling; however, if the area is absolutely required, they have offered this suggestion--that the Exposition Commission study the possibility of buying the main portion of Ross Island proper consisting of about 100 acres, including the necessary strip of right-of-way to fill across to what is commonly known as Hardtack Island, and on south-easterly of subject Company's property to a point where it would be necessary to bridge the channel on to the Oaks Amusement Park or the low area east of the railway line which is owned by the Portland Railroad and Terminal Division of the Portland Traction Company. This would not take any of the quiet water area at the south easterly portion of Ross Island lying to the north-west of Hardtack Island. This arrangement would allow the subject Company to continue without disturbance or interruption to their sand and gravel operation on which they have just recently spent some $600,000 for new facilities. Under this arrangement, they would still maintain all off-shore lands to low water for their own occupancy and use, except the approximate down river one-half length of the Island lying out in the river channel to the west of the main island.

Under this proposal, it would be necessary to plan access streets and/or bridges to this site and it was suggested that this could be done by bridging across from the down stream end of the Island across the channel to intercept McLoughlin Boulevard south of the Ross Island Bridge. This would, I understand, necessitate clearance from the various port authorities to bridge at this point.

This 100-acre portion of the Island is estimated to contain 122,000 yards or more of saleable material per acre at an in-place value of some 25¢ per yard, and that, together with the estimated average per acre land price of some $14,000, indicates the seller's estimated value to be $4,450,000. For this section, as indicated on

the attached Plat, Mr. Muirhead has indicated that they would cooperate with the Exposition Commission by selling at approximately $1,500,000. If this type of plan were acceptable to the Commission, it would be on the basis that there would be no limitations placed on their operation, present or future. If the whole property were to be purchased, it might meet with some resistance because they have a very financially strong company with prospects of heavy earnings for some estimated 40 years to come, and therefore would have to be priced out on the basis of this earning power on a complete buy-out basis including all rolling stock, shore facilities, land holdings, and so forth. Due to the central, close in location of this sand and gravel source, the Committee might well take into consideration, in the interests of the community as a whole, the effect that taking Ross Island Sand and Gravel Company, Inc. out of the sand and gravel picture could conceivably raise the price of mixed concrete in this area some 50¢ a yard, which would have the effect of a major price raise in building construction in this area which, at present, enjoys a low per yard cost as compared to similar cities around the country, according to Mr. Muirhead."



OAKS—EAST BANK

SUMMARY

This section of the Phase I report is concerned with the possibilities for Exposition-Recreation development on the Oaks-East Bank site.

The area has been discussed previously as a part of the total development of the Ross Island-Oaks site. However, the Oaks-East Bank area has qualities which justify its individual consideration as a possible location for the Exposition-Recreation Center.

The principle advantages and disadvantages of this site are as follows:

ADVANTAGES:

1. Potential Space--With an average fill of 10 feet on the Oaks Amusement Park area and a levee along the tracks to the north, a total of 198 acres would be available for development.

2. Low Acquisition Cost--Because the majority of the property is undeveloped, it should be possible to acquire the total 198 acres for approximately $3,400 per acre.

3. Marine Development--It is possible to utilize the river as a cultural and recreational asset.

4. Good Mass Transit Access--The interurban electric line, which connects with a majority of the city bus lines, runs through the center of the site.

5. Minimum Conflict with Environment--Water area and differences in elevation provide a natural buffer from surrounding uses. However, the use of this site for recreational purposes would eliminate the possibility of obnoxious future industrial encroachment into this waterfront area which might be detrimental to surrounding residential developments

6. Adaptability to Multi-Stage Development--Various parts of the site can be developed by stages as desired.

7. Rail Access--The interurban electric tracks makes possible rail freight service to the property.

DISADVANTAGES:

1. Difficult Access--Highway connections will be expensive and discharge capacities from the site will be relatively low. Limitations of the site make only two points of access feasible, which restricts the discharge capacity of the site considerably.

2. Utilities Costly--New sewer and water mains will be necessary. A new pumping station will also be required.

3. Subject to Floods--Substantial amounts of fill and levees are necessary to provide flood protection.

4. Expansion Limited--Area is adequate for many of the exposition-recreation long range needs, but a comprehensive development of the scope possible on the Vanport or Ross Island-Oaks sites could not be accomplished.

RECOMMENDED DEVELOPMENT:

It is recommended that the first stage development of the Oaks-East Bank site should be a sports and livestock coliseum in the area west of the interurban tracks on the site of the amusement park. Future developments should consist of an outdoor theatre, archery and rifle ranges, model airplane field, and playfield or county fair facilities in the area between the bluff and the tracks.

ESTIMATED COST:

To acquire the entire Oaks-East Bank area, prepare the site for development, pave parking areas, and construct access roads will cost approximately $2,716,200.

EXISTING CONDITIONS

Location

The Oaks-East Bank area lies on the east bank of the Willamette River between the Ross Island and Sellwood Bridges. It includes the Oaks Amusement Park, the lagoon to the north and all the area between the Sellwood Bluff and the Portland Traction Company's interurban line to Oregon City. Sellwood Park at the top of the bluff might also be integrated into the development.

Physical Characteristics

The surface soil of the site is composed primarily of silt and sand deposits with gravel in some locations. Natural vegetation consists of a grove of mature oaks on the amusement part area and scattered scrub trees and brush on other parts. A relatively large pond of surface water exists most of the time in the low lying area east of the tracks.

Elevations of the site vary from 3-5 feet in the pond area and at the river's edge to 29 feet in the amusement park. The top of the bluff to the east is approximately 100 feet above the average elevation in the pond area.

A stone revetment approximately 1000 feet long exists along the bank of the river adjacent to the Oaks Amusement Park development.

Area and Ownership

The Oaks-East Bank area consists of approximately 247 acres inside the harbor line, of which 215 acres are above the mean high water level (elevation 7.7 feet city datum). The 72 acre area west of the tracks consists of 37 acres in the Oaks Amusement Park, 20 acres between the amusement park and Spokane Street, and 15 acres between the amusement park and Holgate Boulevard extended. The 126 acres east of the tracks consists of 82 acres from Sellwood Park to Carlton Street extended and 44 acres from Carlton extended to Holgate Boulevard extended. The right-of-way for the tracks contains 17 acres. As shown on plate 7, the majority of this site is owned by the Portland General Electric Company and the Oaks Amusement Park. The remainder is divided into relatively small parcels.

Existing Uses

The Oaks Amusement Park occupies approximately 37 acres at the southern end of the area between the tracks and the river. The Portland Traction Company interurban electric line extends the length of the area in a north and south direction. Although the line is used for both freight and passenger purposes at present, the company hopes to discontinue passenger service as soon as possible.

There are two radio transmitter towers in the amusement park area and a tower south of the amusement park which supports an overhead power cable crossing the river at that point.

The remainder of the Oaks-East Bank area, with the exception of an old storage warehouse fronting on Tacoma Street is vacant, unused land.

Foundations

Since no borings have been made on this site it is impossible to state what the subsurface soil conditions are. There is a sawdust fill area of considerable depth south of the amusement park that would be a major foundation problem if buildings were constructed there. It is possible that piers or pilings could be extended through the sawdust to solid material.

Floods

The 1948 flood waters covered all of the Oaks-East Bank area with the exception of the high land in the southeast portion of the site. The area now occupied by the Oaks Amusement Park requires about 5-6 feet of fill to raise it above the 1948 flood stage, but 20-25 feet of fill are required to raise the area east of the tracks to the same level. Obviously, it is economically impractical to fill the entire area as a flood protective measure since it would cost in the neighborhood of $1,500,000 to fill the pond area alone. The most reasonable method of achieving flood protection consistent with financial feasibility and preservation of site advantages consists of filling the Oaks Amusement Park area and constructing a levee from this fill north along the Portland Traction Company tracks to the bluff. A pump would be needed to discharge seepage and run-off water from the area behind the levee.

This method would protect all buildings and grounds and would provide for flood-free access roads to the site.

RECOMMENDED DEVELOPMENT

The Oaks-East Bank site is adequate for the accommodation of a sports and livestock coliseum, baseball stadium, outdoor theatre, a yacht harbor and a playfield. An alternate development might include the sports and livestock coliseum and county fair facilities. A possible stage development of these functions is indicated on plate 9.

Functions Which Can Be Accommodated Adequately on the Oaks-East Bank Site

1. Sports and livestock coliseum

   Seating capacity of approximately 8,000 permanent seats.

2. Accessory buildings for the P.I. Livestock Exposition

   Sufficient area is available for the construction of the 450,000 square feet of exhibition space desired by the P.I.

3. Dormitories

   For 4-H Club members, exhibitors and participants.

4. War memorial

5. Baseball stadium

6. Outdoor theatre

7. Playfield

8. Convention facilities

   Adequate space is available if the feasibility of the function is established.

9. Parking

   An area of approximately 16 acres, including the roof deck over the exhibit area, is available for parking within 1000 feet of the proposed coliseum. When the exhibit space is not in use an additional 3.4 acres of covered space will be available for parking. The total capacity of these combined spaces is 2800 cars. With a ratio of one space for four persons, a crowd of 11,000 persons could be accommodated. The total parking space indicated on the proposed development plan is approximately 45 acres, which would accommodate 6500 cars or 26,000 people.

First Stage of Development

If the Oaks-East Bank area is selected as the location for the Exposition-Recreation Center the sports and livestock coliseum should be placed on the location now occupied by the Oaks Amusement Park. This area is the most advantageous part of the site since it is on the highest ground and is adjacent to the river.

Included in the proposed first stage development are the construction of a sports and livestock coliseum, attached exhibit space, livestock barns, war memorial and necessary parking facilities.

If the sports and recreation center is located on this site, it is recommended that the entire 198 acres of the Oaks-East Bank area, exclusive of the 17 acres of railroad right-of-way, be purchased at once. The acquisition cost of the area east of the tracks should be very low (approximately $1300 per acre) and the purchase of the entire area would insure the availability of land for future expansion. Even if this property were not developed for stadiums or county fair purposes the area is so desirable for recreation and park purposes that it should be acquired by the city for some recreation purpose.

Future Development

That part of the site that is not included in the first stage of development is sufficient to accommodate a baseball stadium, an outdoor theatre, a playfield, dormitory facilities and necessary parking space. An alternative future development might combine the first stage development with the balance of the site area for a county fair. There is enough area in the site for the development of either of these alternates, but not for both.

Other Functions

Because of the limited access roads and the flood conditions it would be inadvisable to locate state armory facilities on the Oaks-East Bank site.

A development to accommodate a world's fair would be impossible because the site is too small.

Although there is enough space for a football field on this site, the crowds attending such a facility could not be reasonably accommodated by the limited capacity of the access roads.

ACCESS

A total of approximately 277,000 people live within a five mile radius of the proposed coliseum location on the Oaks-East Bank site. This is 46% of the Portland urban population as reported in the 1950 census.

There are no adequate existing access roads to the site, but McLoughlin Boulevard, Milwaukie Avenue, Holgate Boulevard, and Tacoma Street are accessible from the top of the bluff to the east and south.

The proposed development as shown on plate 9 contemplates the construction of two connecting roads to existing major streets. One road would lead north on top of a levee, bridge over the tracks and connect into McLoughlin south of Holgate. Since topography makes it unfeasible to connect with southbound traffic at this location, the total outflow from this access would be two northbound lanes into McLoughlin

A second proposed access consists of a road to the south parellel to the tracks and an interchange with Tacoma Street at the east end of the Sellwood Bridge. If Tacoma were widened east of the bridge this access could accommodate two lanes from the east on Tacoma and one lane from the bridge.

With these facilities the total discharge capacity of the site would be approximately 6,000 cars per hour over five lanes. At this rate it would take about 29 minutes to empty the parking lots of the 2,900 cars representing a capacity crowd of 11,500 attending a coliseum event.

At present the mass transit facilities to this site are relatively good since the Portland Traction Company interurban electric line runs directly through the property. All city routes except the Broadway, St. Johns, Interstate, and Mississippi can transfer easily to the interurban without extra charge. However, it is possible that in the future regular passenger service on this line may be discontinued.

Since the new Hawthorne Bridge approaches will eliminate the interurban lines over the bridge and will necessitate a transfer to a bus to reach the downtown area, it is probable that buses and private automobiles will be more desirable. The freight service over these tracks will probably continue to support the line, but since the tracks and power are already installed it might be reasonable to use the interurban facilities for peak activities. However, this would mean maintenance of equipment for peak periods and would probably result in increased fare for the service.

The closest bus route to the site is the Sellwood bus on Milwaukie and 13th. It is probable that this line would be routed through the site for big events, but busses could not be regularly detoured through the area since a large part of the patronage on this line is from Holgate to Tacoma on Milwaukie.

The taxi fare from the proposed new hotel site at SW 6th and Taylor to the Oaks-East Bank site is $1.70.

Since the interurban tracks connect with the Southern Pacific tracks in the neighborhood of Hawthorne Boulevard the rail access to the site is ideal. A spur approximately 800 feet long would be necessary to provide service directly to the proposed site of the coliseum.

By the fastest traffic routes existing and proposed, distances from the Oaks-East Bank site to various points in the community are as follows:

Milwaukie (McLoughlin & Washington)	2.9 miles
Oswego (State & A)	4.4 miles
Center of Population, City of Portland (NE 15th & Holladay)	4.5 miles
New Hotel in Downtown Portland (SW 6th & Taylor)	4.5 miles
Lents (SE 92nd & Foster)	7.0 miles
Multnomah (SW 35th & Capitol Highway)	7.1 miles
Oregon City (7th & Main)	9.5 miles
Beaverton (Front & Main)	11.1 miles
Downtown Vancouver (5th & Washington)	11.2 miles
St. Johns (N Jersey & Philadelphia)	12.3 miles
Gresham (Main & Powell)	14.5 miles

E S T I M A T E D C O S T S

OAKS-EAST BANK AREA ACQUISITION AND SITE PREPARATION

FIRST STAGE

	ITEM	QUANTITY	COST
1.	Purchase of area west of tracks from Spokane Street to Holgate extended	72 acres	$ 512,000
2.	Purchase area east of tracks from Sellwood Park to Holgate extended	126 acres	156,000
3.	Fill--average 10 feet deep over area in Item 1.	941,706 cu. yds. @ 40¢ per yd.	376,700
4.	North approach		
	Fill (levee)	264,000 @ 40¢	600
	McLoughlin Blvd. interchange and bridge over railroad tracks		
	Surfacing	380 50 p	
5.	Interchange at Sellwood Bridge		
6.	Sewer-pump station, mains and storm lines		
7.	Water main		
8.	Paving parking areas		
9.	On-site roads		
10.	Pump and installation--to discharge water behind levee		
11.	Switch and trackage		000 200

ESTIMATED COSTS

EXPLANATION OF COSTS

Item 1. Cost if five times the assessed value of land and improvements.

Item 2. Five times the assessed value of the land. No improvements exist on this tract.

Item 3. Fill quantities are sufficient to raise ground levels under proposed buildings to 37 feet elevation. The remainder of the area west of the tracks would be raised to elevation 34 feet. One foot of fill settlement is allowed for. These elevations would raise ground levels under buildings above the 1894 flood and the remainder of the filled area above the 1948 flood level.

Item 4. The amount included for fill is the quantity necessary to construct a levee parallel to the tracks from Carleton Street extended north to the bluff. The road would be constructed on top of the levee, which would be elevation 36 feet before settlement. This would make the settled height of the levee two feet above the 1948 flood level.

Cost of bridge and approaches estimated by the Bureau of Traffic Engineering and the City Engineer's Office. No acquisition of additional right-of-way on top of the bluff would be necessary.

The proposed 50 foot roadway will accommodate four moving lanes of traffic. No curbs or sidewalks are necessary.

Item 5. The cost of the Sellwood Bridge interchange consists of $20,000 for land acquisition and $30,000 for construction of the roadway.

Item 6. Estimate by the Bureau of Sewage Disposal, City of Portland. Costs based on capacities to accommodate 15,000 people and 1000 animals.

Pump Station	$ 80,000
Pressure Line	25,000
Gravity Outlet Line	25,000
Gravity Inlet Line	25,000
Storm Sewers	50,000
	$205,000

Item 7. Estimate by Bureau of Water Works, City of Portland. Includes cost of mains and hydrants for first stage construction. System designed to accommodate future expansion.

Item 10. The U.S. Corps of Engineers Office estimates that a 10,000 gal. per minute pump would be necessary to discharge surface and seepage water from the area behind the levee. Figure included cost of pump and controls, pump house, pipe and installation costs.

Item 11. Cost for 800 feet of track plus necessary switches and frogs.

POSSIBLE SUPPLEMENTAL SOURCES OF FINANCING

If adequate substitute facilities are constructed by the Exposition-Recreation Commission and made available to the P.I. at regular rental fees the existing P.I. buildings and grounds will be transferred to the Exposition-Recreation Commission. It should be possible to borrow up to $1,000,000 on these fixed assets to apply on the construction of new facilities.

If future developments include dormitories and the County Fair, financial assistance can be expected from the 4-H and FFA dormitory fund and from the county. At present the dormitory fund is approximately $30,000. In the event the county fair is located on this site it is reasonable to expect the county to pay for the acquisition of the property east of the tracks and part of the costs of the levee, access roads, utilities, and the coliseum and exhibit buildings. This share might amount to approximately $1,000,000.

ADVANTAGES OF A COMMUNITY-WIDE NATURE

The community-wide advantages of this site are essentially the same as those enumerated for the Ross Island-Oaks site, except that the comprehensive development possibilities are not as great.

This site is one of extremely few remaining locations where the city can utilize the unique advantages inherent in a natural body of water for the development of recreation facilities for residents of this area.

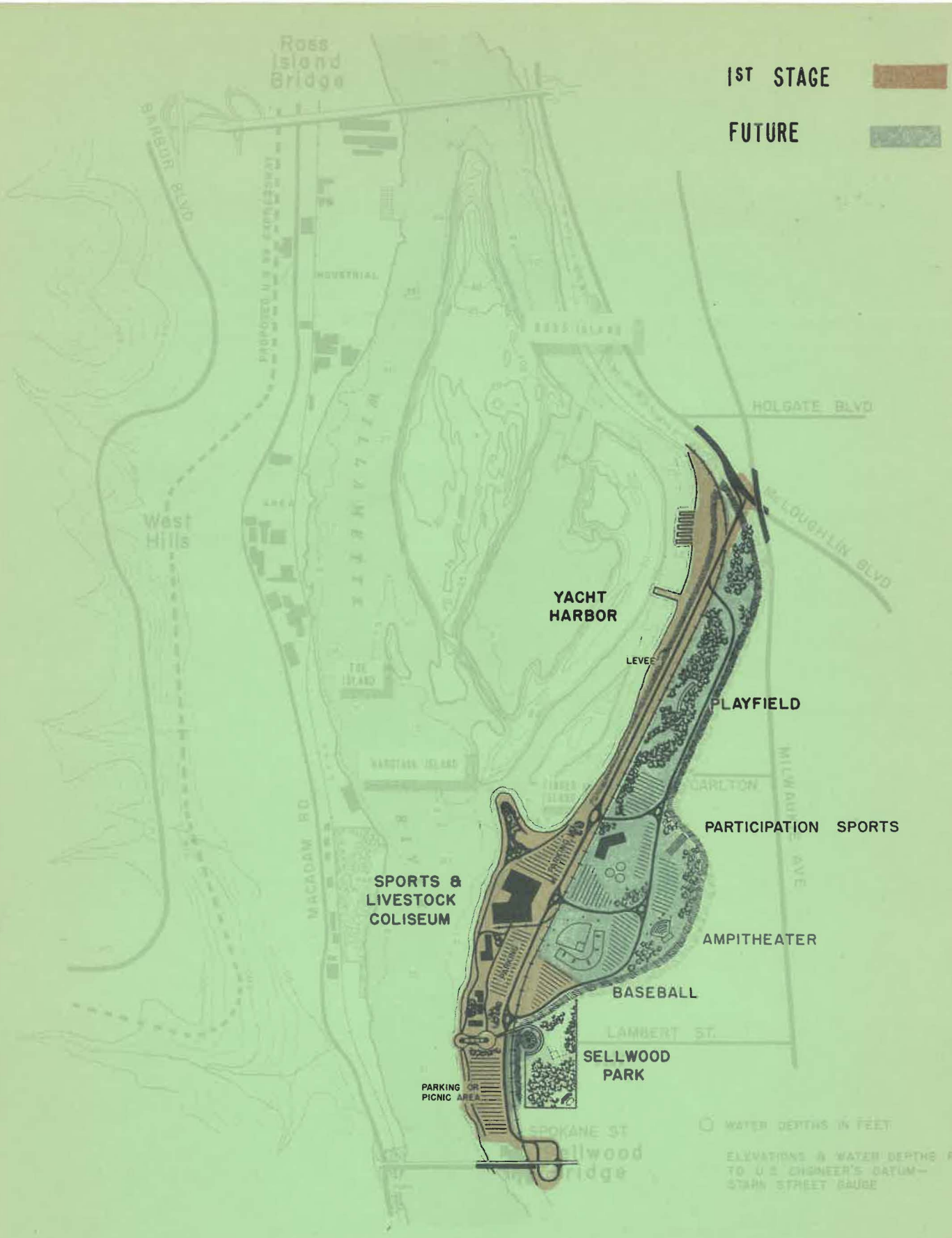


PLATE 9

RECOMMENDED DEVELOPMENT

OAKS - EAST BANK SITE

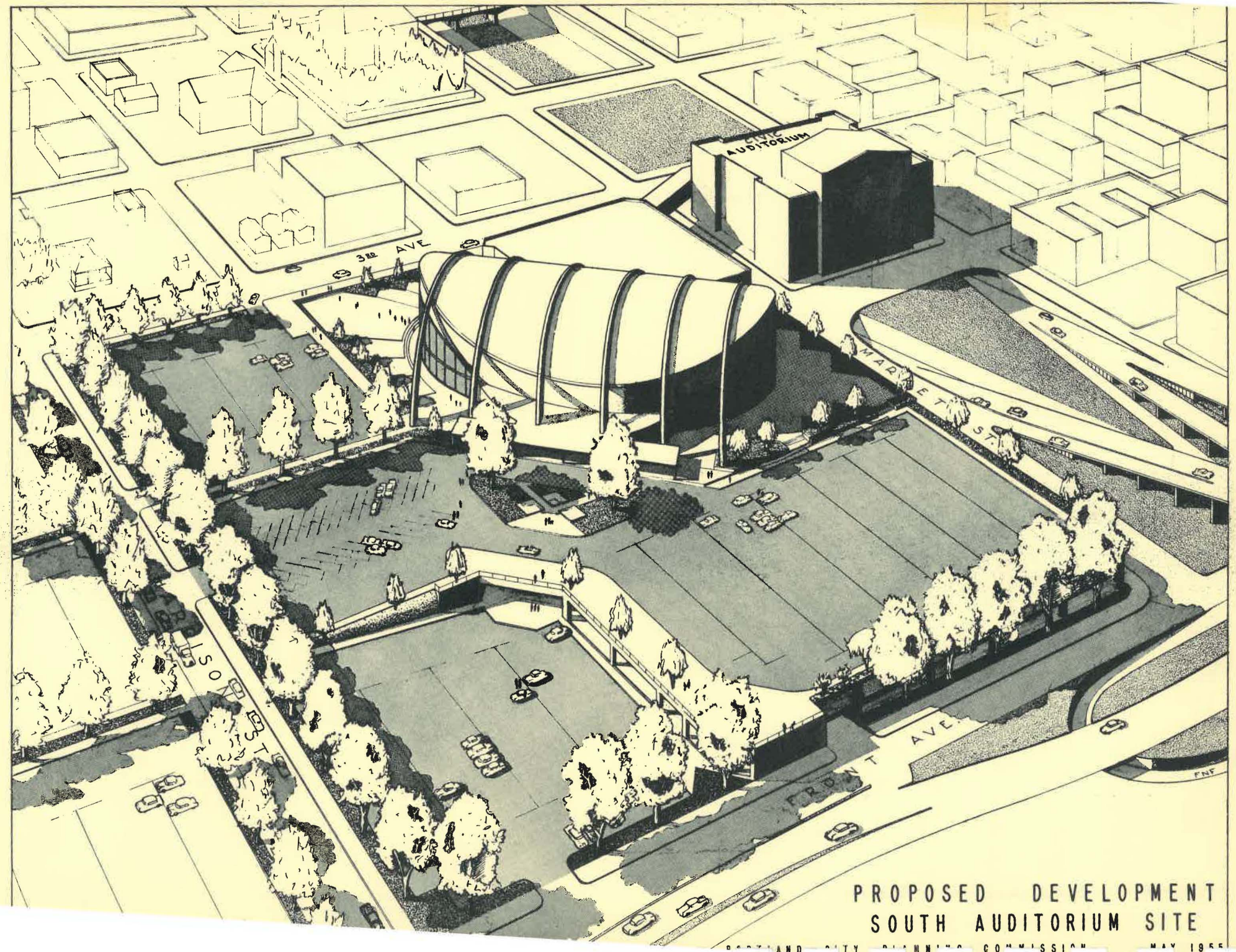
EXPOSITION RECREATION CENTER

NORTH

SCALE IN FEET

0 800 1600

PORTLAND CITY PLANNING COMMISSION APRIL 1955



PROPOSED DEVELOPMENT
SOUTH AUDITORIUM SITE

PORTLAND CITY PLANNING COMMISSION — MAY 1955

SOUTH AUDITORIUM

S U M M A R Y

As a basis for comparison with other sites, the significant advantages and disadvantages of the South Auditorium site are:

ADVANTAGES:

1. A Downtown yet Multi-Purpose Site:

   Accommodation of the two opposite extremes--convention center and the P.I.--is possible at this site. If supplemented by the purchase of 22.5 acres of vacant land in Power Plant site, operation of the P.I. can be better. Sports arena, theatre-symphony hall, and off-street parking for a capacity attendance of 15,700 can also be provided. Being downtown, the array of hotel, restaurant, entertainment, shopping, and transportation facilities complement and enhance the South Auditorium site.

2. Superior Access:

   Located at the crossing of and with direct access to two expressways: Harbor Drive and proposed US26 Expressway (extending from Canyon Road between Market and Clay Streets, across river on new bridge, to Mt. Hood Expressway routed through southeastern Portland and Multnomah County). Immediate discharge capacity over trafficways serving the site is 11,000 vehicles per hour; anticipated future construction will increase this capacity to 15,000. The site is one-half mile from the heart of the downtown district. Within five miles live 85% of the people of Portland and 58% of the population in the total Portland urban community. Site is served by Third Avenue Bus, the only Portland Traction Company line traversing entire length of downtown area and crossing all other bus lines except Barbur and Council Crest.

3. Expands the $8,000,000 Limit on Development

Clearance of this seriously blighted area unquestionably will be eligible for federal urban renewal funds. In effect this will increase the bond issue by $1,800,000. Another increment derives from 44% of the site being street area which upon vacation will become property of the E-R Commission without charge. Also one full block is vacant and city owned. Another source is revenue, probably $139,000 annually, from day time use of parking lots by downtown workers and shoppers which will in effect be an endowment fund for the E-R Commission.

4. Better Utilization of Civic Auditorium:

Will make reconditioning of the Auditorium desirable and feasible. Will eliminate competition between the two facilities and allow operation as a unit, creating outstanding convention, recreational, and cultural center.

5. Adds to Community's Welfare and Income:

Potentially the E-R Center located on the South Auditorium site can mean important community benefits other than entertainment. A blighted area which is now a social and economic drain on the community would be eliminated. Added income from conventions, an assist to the Portland Traction Company by creating an off-peak downtown load, and an assist to the downtown area in general by increasing parking facilities and bringing in more people are in prospect. A development in this location could become the first unit in the long sought civic center embracing governmental office buildings and Portland State College as well.

DISADVANTAGES:

1. Land Cost: Without urban renewal assistance in acquiring this relatively costly site, the total development possible would exclude functions such as the P.I. which require up to 10 acres of exhibition space under roof.

2. Environmental Conflict: Although the P.I. can be accommodated space-wise and operationally, its nuisance aspects without very strict control could be quite undesirable in a civic center environment.

RECOMMENDED DEVELOPMENT

If the South Auditorium site is selected, urban renewal funds should, by all means, be used to acquire the 24.2 acre tract south of Market Street to Lincoln Street between Front and Third Avenues. The coliseum-exhibition building should be located just across Market Street and connected by a pedestrian bridge to the Civic Auditorium, and the rest of the area used for parking. To provide for a more satisfactory operation for the P.I., the 22.5 acre tract of vacant land in the Power Plant site (between the river and SW Water Ave. south of the PPL central heating plant) should also be purchased.

ESTIMATED COSTS

To acquire the site through urban renewal and construct parking lots will cost $1,310,000. The main building of 576,000 square feet is estimated at $5,938,000, leaving $750,000 for design and contingencies. Expenditures beyond the $8,000,000 bond issue which could enhance the Center but financed by other means will total $825,000; recondition Civic Auditorium, $600,000; acquire Power Plant area for P.I., $225,000. Cash outlay to be furnished by local sources in order to benefit by federal urban renewal assistance may total an additional $368,000--to retire loan for planning Vaughn Street project, $107,000; net cash share of one-third difference between site cost and resale, $261,000.

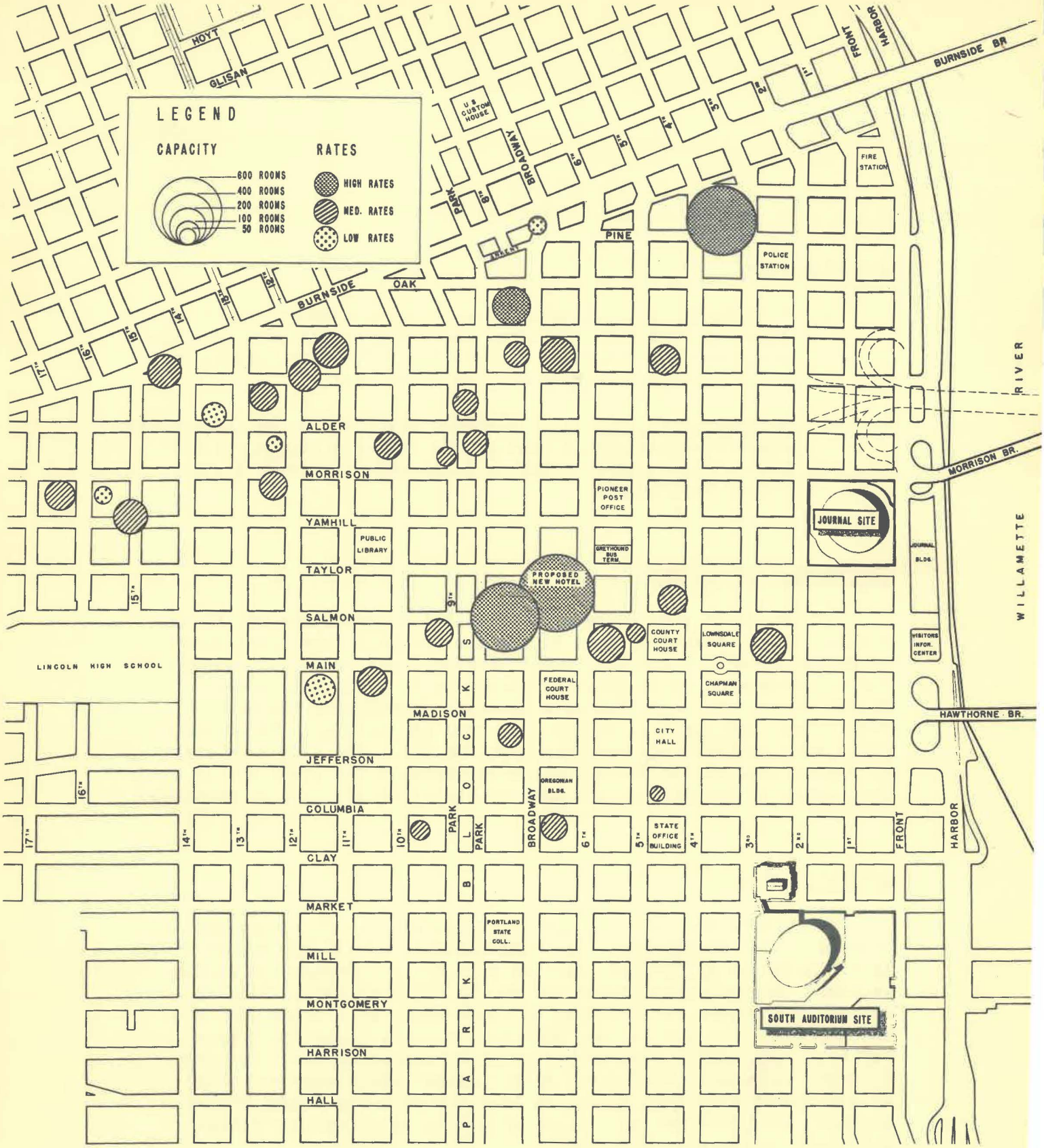


PLATE 10

PORTLAND HOTELS

SOUTH AUDITORIUM SITE

EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION OCTOBER 1954

0 200 400 600

A DOWNTOWN SITE

All factors considered, the best location for the Exposition-Recreation Center is in or adjacent to Downtown Portland--providing a site large enough for the P.I. and sufficient parking can be found at a cost within the limits of the $8,000,000 bond issue and providing further that the site is expandible to include other community-wide recreational or cultural facilities as funds are available in the future.

The closest-in site on the West Side which holds promise in meeting these requirements is the run-down residential area south of the Civic Auditorium. Whether this site is feasible, or can be rated better than all others depends primarily on these questions:

1. In terms of distance to hotels and shops, bus routes, bridges and expressways, does the area really have the convenience and accessibility of a downtown location?

2. Is the Civic Auditorium of such design and condition to be worthwhile reconstructing into a music hall-theatre unit in the E-R Center?

3. What are the possibilities of acquiring a site of sufficient size, either at market prices or at less than market prices through financial assistance by the urban renewal program of the Federal Government?

ACCESSIBILITY

To the Downtown Area

The South Auditorium site is at the southeastern corner of the west side downtown area. The convenience of this site relative to other important buildings is shown in the table following. Distances are measured from SW Third and Market Streets in terms of the standard 200-foot block, widths of intervening streets included. There are 20 of these standard blocks to the mile, 10 to the half-mile, and 5 to the quarter-mile.

From South Auditorium Site To:	Distance in Blocks
Visitors Information Center	8
Greyhound Bus Terminal	9
Union Station	26
New hotel site (SW 6th and Salmon)	9
Multnomah Hotel	14
Meier and Frank's Store	11
Oregonian	6
Journal	11
State Office Building	2
City Hall	4
Court House	6
Portland State College	4

The ordinary person, at a leisurely pace, can walk one block per minute.

Standard taxi fare at this time in Portland is 50¢ for the first one-fifth mile and 10¢ for each additional one-third mile. The fare from the new hotel site to the E-R Center would thus be 60¢.

Practically as convenient as taxi for the short ride to other sections of the downtown district is the Third Avenue Bus. This line passes the South Auditorium site and traverses the entire length of the west side downtown area, running on Third and Fourth Avenues.

To the Whole Community

The South Auditorium site is more convenient for more people to get to than any other location in the Portland Metropolitan Area. It is actually more accessible than buildings in the heart of the downtown area because it can be reached from Harbor Drive, by-passing downtown congestion.

The South Auditorium site now benefits, and will continue to benefit, by the fact that all transportation facilities converge on Downtown Portland. The 1946 survey demonstrated that 26% of all trips made daily by all the people in Metropolitan Portland are to and from the west side downtown area. (a) The routing of bus lines, the

(a) 1946 Portland Metropolitan Area Traffic Survey, Origin and Destination Study, Technical Report 49-2, Oregon State Highway Department, 1949, p.8.

planning and construction of bridges, expressways, and other improvements to facilitiate traffic flow have reflected this fact for years. The investment in these facilities is now tremendous and will continue to be added to in the future regardless of whether or not the E-R Center is located downtown. The task ahead for these facilities is to carry a mass of people equivalent almost to the entire population of Portland into, out of, and through the downtown area each working day.(b) By way of constrast; the E-R Center would add less than 3% to this volume--assuming the maximum capacity is to be 11,000 people as is suggested by the Stanford Research Institute.(c) The number of automobiles added would be 2200 at a minimum and probably 3000 at the most.(d) Are present facilities capable of handling this increase and what new facilities are likely in the future?

New Traffic Facilities to be Constructed

In the immediate future several projects are to be constructed which will facilitate access to the South Auditorium site. The State Highway Commission will shortly double the capacity of the Jefferson-Columbia route by adding Clay and Market as another one-way couplet. And a completely grade-separated interchange of these four streets with Harbor Drive, as shown on plate 16, is to be constructed in 1955. It will then be possible for vehicles from or to any direction to leave or enter Harbor Drive directly from the South Auditorium site without stop-light interference except at Front Avenue. The lights on Harbor Drive at Jefferson, Columbia, Clay, and Montgomery Streets will be eliminated upon completion of the grade-separated interchange.

Upon extension of the Banfield Expressway to the Burnside Bridge, a ramp will be constructed for northbound traffic on Harbor Drive to turn eastward onto the Burnside Bridge. This means that the trip from the South Auditorium site to the northeast sections of Portland and the county can then be made entirely on an expressway, free of any traffic lights.

The Portland-to-Salem Expressway, paralleling Barbur Boulevard, is slated for early construction. This expressway will enter Harbor

(b) About 340,000 are estimated to be entering the downtown area now on an average week day. See Bus Transportation in Downtown Portland, Portland City Planning Commission, 1952, p. 24.

(c) An Economic Study of Portland's Exposition-Recreation Center, Stanford Research Institute, 1955, p.28.

(d) Ibid, p. 30

Drive at the Water Avenue turn-off. Vehicles not only from the southwest section, but from as far south as Salem can then drive literally to the front door of the South Auditorium site making the trip all the way on an expressway.

The new Morrison Bridge can be reached from the site by ramps connecting the bridge to Front Avenue.

Travel to and from McLoughlin Boulevard will be facilitated by the new right-turn ramp off the east end of the Ross Island Bridge.

Arterial Capacity in Immediate Future

When the Columbia-Jefferson and Market-Clay overpasses are constructed, the available number of traffic lanes on arterials approaching or leaving the site will be 19. The carrying capacity of these lanes can be reasonably rated at 11,000 vehicles per hour. If 30% of this capacity were reserved for other traffic passing in the vicinity, the peak load of 3000 cars could be dispersed in 23 minutes. If drivers choose to use the several side streets in the vicinity--First and Second Avenues, Mill, Harrison, Hall, College and Lincoln Streets--dispersal could be cut to 18 minutes.

Additional Traffic Facilities Proposed

In the future a second expressway will be located adjacent to the South Auditorium site. This site is at the cross-roads of the proposed Market-Clay (US26) Expressway and Harbor Drive. The US26 Expressway, as now conceived by the State Highway Department, the City Traffic Engineer, and the City Planning Commission, would be a depressed expressway located between Market and Clay Streets. A new bridge across the Willamette River between the Hawthorne Bridge and the Ross Island Bridge would carry this expressway to the east side and there it would become the new Southeast Expressway probably located between SE Division and SE Clinton Streets.

If the Eisenhower highway program is adopted, this proposed US26 Expressway and bridge together with all of the other expressway (same as throughways) routes shown on plate 1 will probably be constructed within the next 10 to 15 years. Plate 1 makes it clearly evident that the South Auditorium site can then be approached from any section of the Portland Metropolitan areas over an expressway route. Plates 17 and 18 show that it will be possible to have direct connections from the parking areas on the site to these expressways.

When the Market-Clay Expressway is constructed the discharge capacity of trafficway facilities serving the South Auditorium site will become 15,000 vehicles per hour.

Capacity of the Bridges

Automobile traffic is slightly higher in the summer than during the other months. In August, 1954, the six downtown bridges were carrying 214,000 cars per day and 12,800 cars eastbound during the 5-6 P.M. peak hour. There are daily variations in this flow, of course, but this is to be considered a typical condition. Five bridges were carrying better than 1000 vehicles per lane per hour and experience shows that each is certainly being utilized to capacity. The only bridge with surplus capacity during the rush hour is Burnside. If full use were being made of the third and fourth reversible lanes, it could carry 1300 more cars per hour eastbound. When the ramps on the west end to and from Harbor Drive and the ramps to and from the Banfield Expressway at the east end are constructed, no doubt the full capacity of the Burnside Bridge will be utilized, relieving the Steel Bridge of 1000 or so vehicles. When the Morrison Bridge is completed, it will add 3000 more cars to the hourly capacity. Thus by the time the Exposition-Recreation Center is completed the eastbound rush hour capacity of the six downtown bridges can be expected to be 17,000 vehicles.

Although there will be many afternoon events in the Center, rarely will a capacity crowd made up largely of local residents be dispersing to all parts of the city on a working day at the rush hour. Nevertheless, if such a situation should occur, the effect on the bridges would be as follows:

Since 80% of the population in the city and environs lives east of the Willamette River, of the 3000 assumed maximum cars at the Center, 2400 would disperse eastbound across the bridges. Again, on the basis of population distribution, 1700 cars will use bridges north of the South Auditorium site.

These five bridges, two years hence, will have a total capacity of 14,700 vehicles per hour. Increasing the present peak hour flow by 3% per year, as has been the experience since World War II, the normal load in two years should be 11,000. At that time the surplus capacity will thus be 3700 or still 2000 vehicles per hour more than the additional load produced by dispersing 1700 cars at the peak hour from the E-R Center. Looking at it another way, the surplus capacity of 3700 cars per hour, when fully utilized, could discharge 1700 cars in 28 minutes.

Of the 2400 total eastbound cars, the remaining 700 would seek to use the Ross Island Bridge. There, the situation would be critical because there is no surplus capacity to draw on. The congestion resulting from a rush-hour dispersal of a capacity crowd at the Center could only be relieved by building the proposed US26 Expressway Bridge or improving conditions on Macadam Road so that more cars could use the Sellwood Bridge.

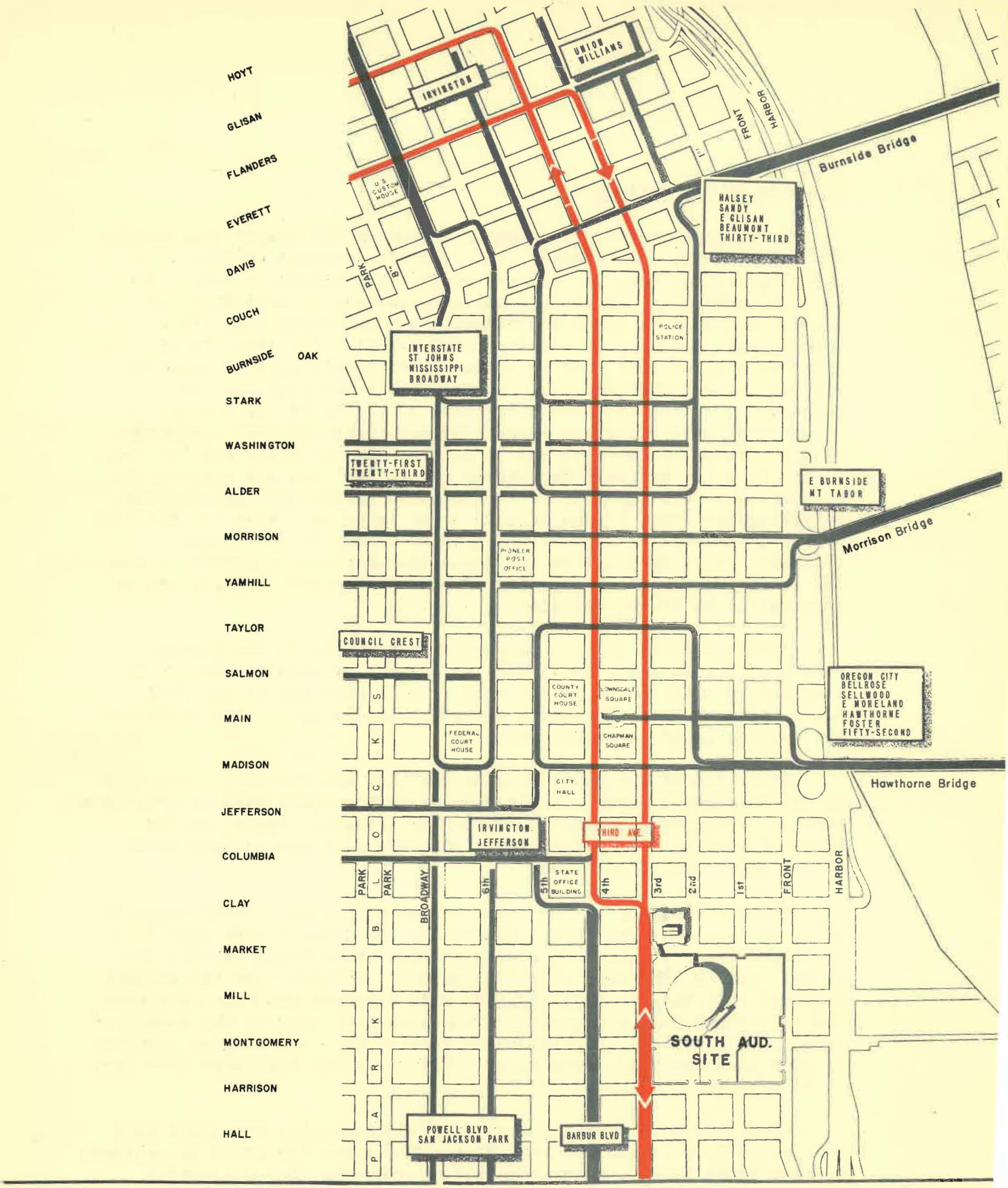


PLATE-II

MASS TRANSIT CONNECTIONS

SOUTH AUDITORIUM SITE - EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

When both the new US26 and Fremont Bridges are completed, then the total rush-hour capacity in one direction will become at least 33,000 cars, assuming both bridges are links in expressways and are six lanes wide with the center-lanes reversible, making four lanes flowing in one direction at peak hours.

The more usual dispersal of capacity crowds from the Center will be in the evenings and on Saturday and Sunday afternoons. At these periods, the surplus capacity on the bridges as they stand today greatly exceeds the expected 2400 cars maximum load. For example, between 10 and 11 P.M. the existing downtown bridges are carrying only 3300 vehicles eastbound while an additional 10,900 cars could be carried during that hour.

Access by Bus

The South Auditorium site is very fortunately situated for those wishing to come by bus. As shown by plate 11, the Third Avenue line passes the site and crosses every other bus line entering the west side downtown area except Council Crest and Barbur Boulevard. A transfer from the former can be made by a two block walk and the latter passes within one block of the site on Fourth Avenue. Normal headways on the Third Avenue line are 17 minutes, but the Traction Company follows the practice of adding "tripper" buses and extending the routes of several lines to the Civic Auditorium when events are held.

In addition to superior local bus service, two-thirds of all acheduled suburban buses pass within four blocks of the site. Forty per cent pass within one block.

Access by Railroad

The South Auditorium site is four blocks from the foot of SW Clay Street where the Southern Pacific line to Oswego ends. Except for freight arriving in Portland over the Southern Pacific, there is a switching charge varying between $26 to $38 per car on this branch line. It may be more economical to truck from the team tracks or corrals of the other railroads rather than transferring to the S.P. Current trucking rates on cattle are $7 per hour for hauls less than 10 miles. In 1954, of the 1202 cattle exhibited at the P.I. 700 came by railroad. The year before 400 of 1115 head arrived by railroad. It costs the Cow Palace in San Francisco $1500 on the average to haul cattle about one-quarter mile to and from a rail line each year at its livestock show.

Additional Facts

Within a five-mile circle of the South Auditorium site 348,000 people lived in 1950, or 58% of the total 601,000 who lived in the Portland Urban Community extending from and including Vancouver to Oregon City and Gresham to Beaverton. Within the five-mile circle lived 317,000 or 85% of the total population of the City of Portland.

By the fastest traffic routes now existing over city streets and highways the distance from SW Third and Market to outer points in the Portland Community are as follows:

Center of Population, City of Portland (NE 15th & Holladay)	2.4 miles
Multnomah (SW 35th & Capitol	4.7 miles
Lents (SE 92nd & Foster)	6.6 miles
Beaverton (Front & Main)	7.5 miles
St. Johns (N. Philadelphia & Jersey)	8.5 miles
Vancouver (5th & Washington)	8.5 miles
Oregon City (7th & Main)	12.6 miles
Gresham (Main & Powell)	13.7 miles

CONDITION OF CIVIC AUDITORIUM

In locating and planning the E-R Center, it is extremely important not to overlook the Civic Auditorium. If not located adjacent nor managed as a unit, these two facilities will unavoidably be in competition with each other. Because of its central and convenient location, the Civic Auditorium in spite of its deficiencies will continue in demand. Yet the newer and finer E-R Center is apt to get the lion's share of promotion and expenditures for upkeep and improvements. In the years ahead, the Civic Auditorium through neglect, could become increasingly sub-standard and a financial liability to the City. Now is the time to decide its future. Later could be a regrettable mistake.

In February, 1916, a $600,000 contract (including furnishings) to construct the Civic Auditorium was awarded. Construction took about a year and there have been two or three minor alterations since that time.

The building itself occupies the full 200' x 200' block. Outside approaches, stairs, balconies, and utilities encroach into the street area. Outside public foyers, halls, are small and cramped and stairs are steep. The basic scheme is good but in execution it is an example of an inadequate site adversely affecting the whole project.

The existing structure provides the following spaces:

1. One large auditorium with 1590 seats on the lower floor.
2. First balcony with 850 seats.
3. Second balcony with 978 seats. This balcony can be closed off with curtains.
4. A total capacity of 3800 seats.
5. One large basement display space 115' x 165' with columns 21' apart.
6. One kitchen of 2000 plate capacity.
7. Two assembly halls 84' x 39' and 129' x 39'. These can be opened into the auditorium.
8. Two exhibit rooms 72' x 26'.
9. One exhibit room 16' x 84'.
10. Two exhibit rooms 14' x 14'
11. And other miscellaneous storage and supply rooms including stage dressing rooms, and a heating boiler room.

The Oregon Historical Society and the City Civil Service Board occupying 9000 and 3100 square feet of space respectively, are also quartered rent free in the building.

Structurally, the building seems adequate and should serve the city for many years to come. If convention facilities were to be constructed across Market Street to the south, an elevated covered passage-way could easily be connected to the southwest stair hall landing at the balcony level.

There are structures outside the building line underneath the street on the south and east sides. On the south side under the sidewalk are the heating engineers' toilets and supply room, as well as a large oil storage tank of 120-barrel capacity. On the east side are stairways down to a boiler room, 21 feet below the sidewalk. Other utility structures under the sidewalk include a large transformer vault.

Some of the deficiencies of the existing facility are as follows:

1. Lack of proper air conditioning for full summer-time use.

2. Need of an adequate public address system to give proper coverage of low-powered sound. According to Mr. Temple Ehmsen, Chief of the Bureau of Communication and Electronics for the City of Portland, the accoustical properties as far as shape of the auditorium is concerned are not bad. The big problem is amplification and direction. He has previously made studies and prepared plans and specifications for a complete installation.

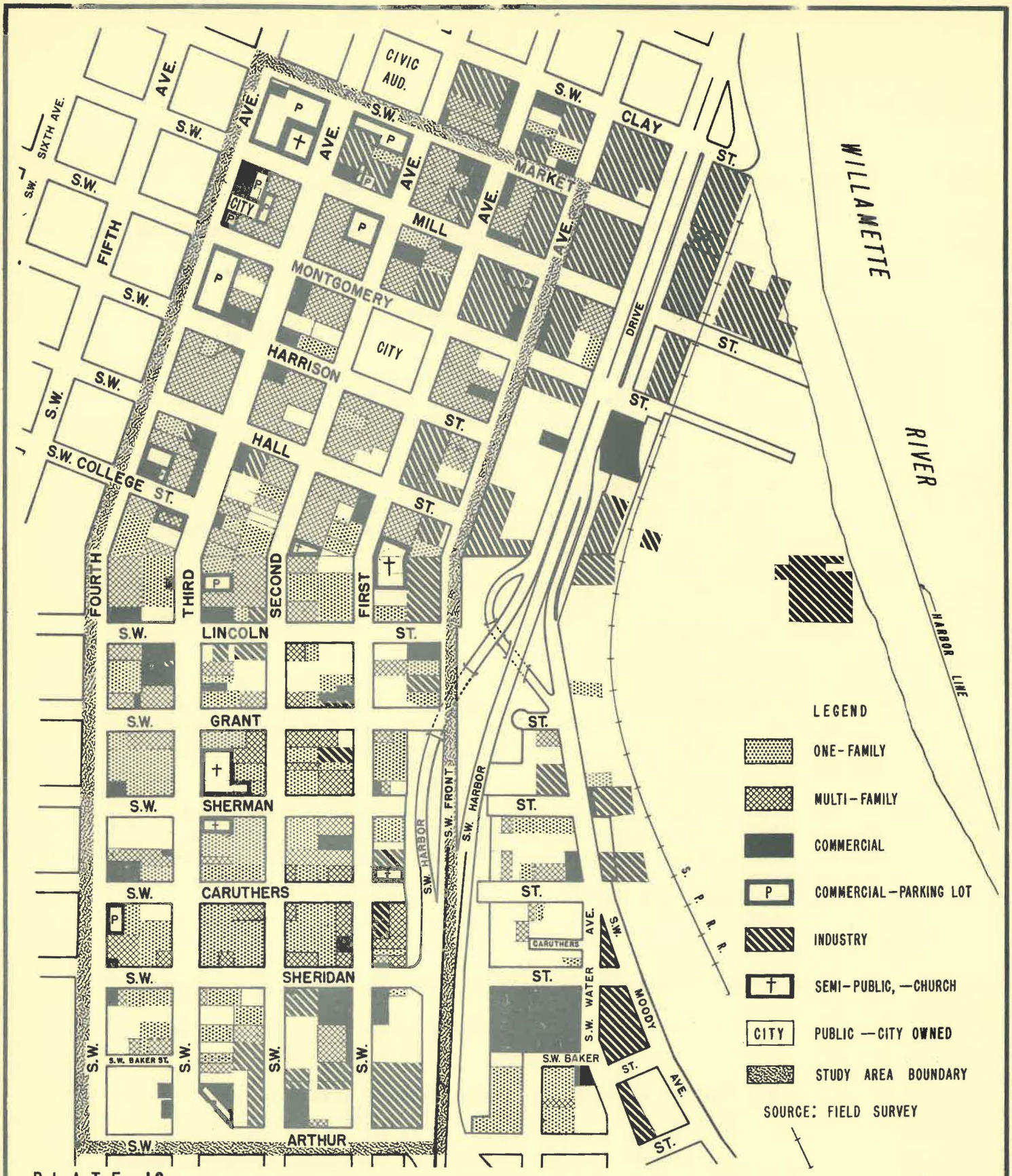


PLATE 12

LAND USE 1955

SOUTH AUDITORIUM SITE
EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION APRIL 1955

3. Mr. Isaacs, the Manager of the Auditorium, says that lack of two or three intermediate size meeting spaces, between the size of the main auditorium and the size of the assembly halls reduces the use of the whole facility. He estimates that if the lower floor could be subdivided into intermediate size auditoriums, he could increase over-all revenues by 25-30%.

4. The problem of off-street parking is critical inasmuch as private operators are charging extreme prices for parking, particularly at night when prices are not always posted. There is no regulation of prices or control of density of parking in the lots. Shortage of space requires some spectators to walk as far as six or eight blocks.

5. Inadequate shelter over entrances cause many people to stand in line in the rain while tickets are sold and until doors are opened. Narrow space between curb and building causes pedestrian traffic to jam to a stand still inside the building when crowds are dispersing.

6. Inadequate storage poorly located, reduces use of larger areas, particularly basement display space.

7. Antiquated light control systems for stage and auditorium.

8. Up until this time, seats in both balconies have been of poor quality but new seats are being installed.

9. Because of inadequate sewer facilities, toilets located in the southwest corner of the building overflow into the building whenever heavy rain storms occur.

To correct these deficiencies and to convert the Auditorium to a satisfactory theatre and music hall, will cost $600,000 according to the rough estimate of one local architectural firm.

PROSPECTS OF FEDERAL AID

The particular importance of the Federal Government's Urban Renewal Program to the E-R Commission is that property if in a blighted area might be acquired for the Center at considerably less than market prices. This means more money within the $8,000,000 bond issue for a larger or more adequate development in a central location.

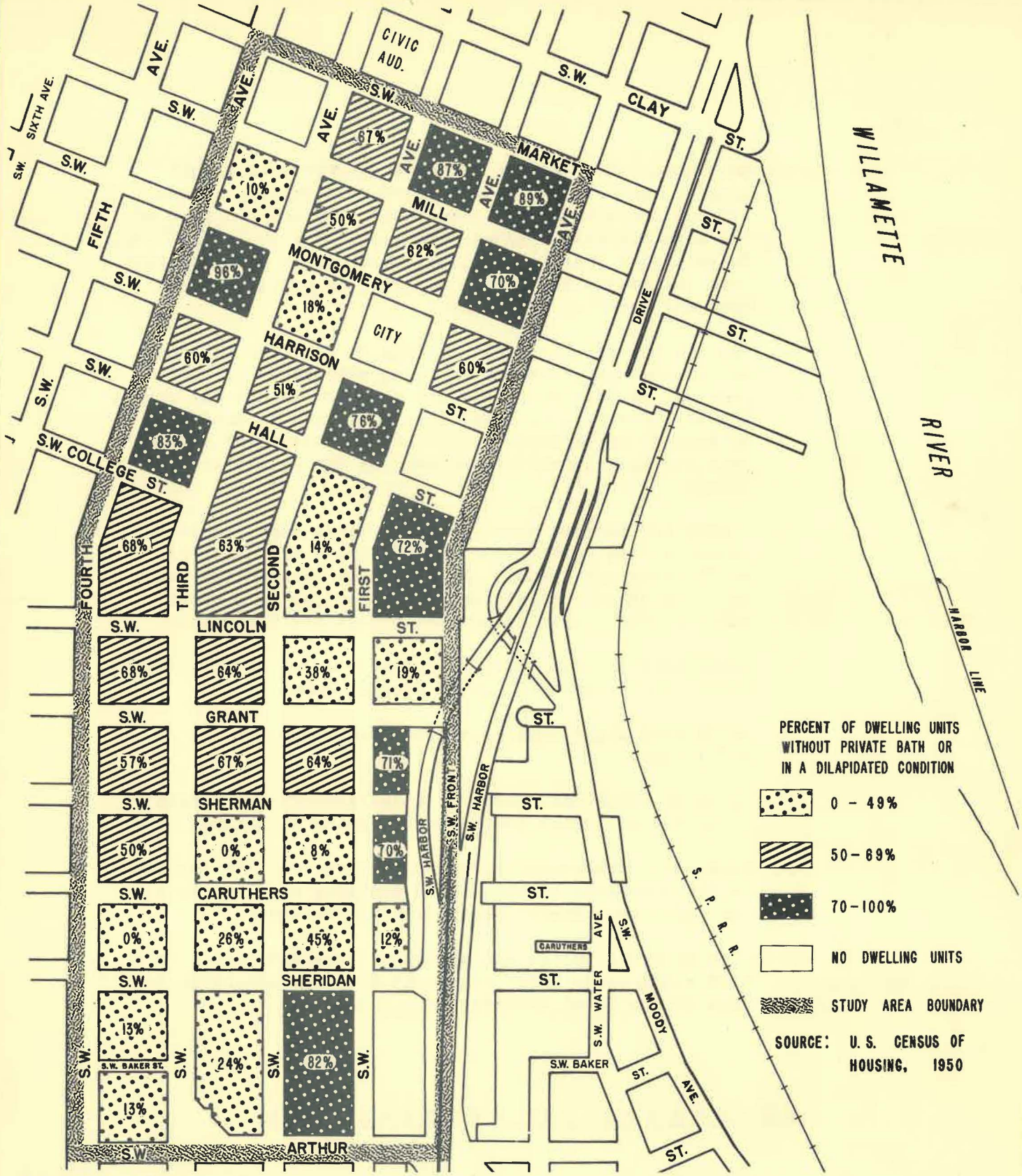


PLATE 13

SUBSTANDARD DWELLINGS

SOUTH AUDITORIUM SITE
EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION APRIL 1955

Under Oregon State Law, the Portland Housing Authority is the local urban renewal agency. After receiving approval of the project and a loan from the Federal Agency, the Housing Authority would acquire the blighted area and resell cleared land to the E-R Commission. The difference between purchase and sale price is to be make up one-third by local funds and two-thirds by a grant from the Federal Government.

Evidence of Blight

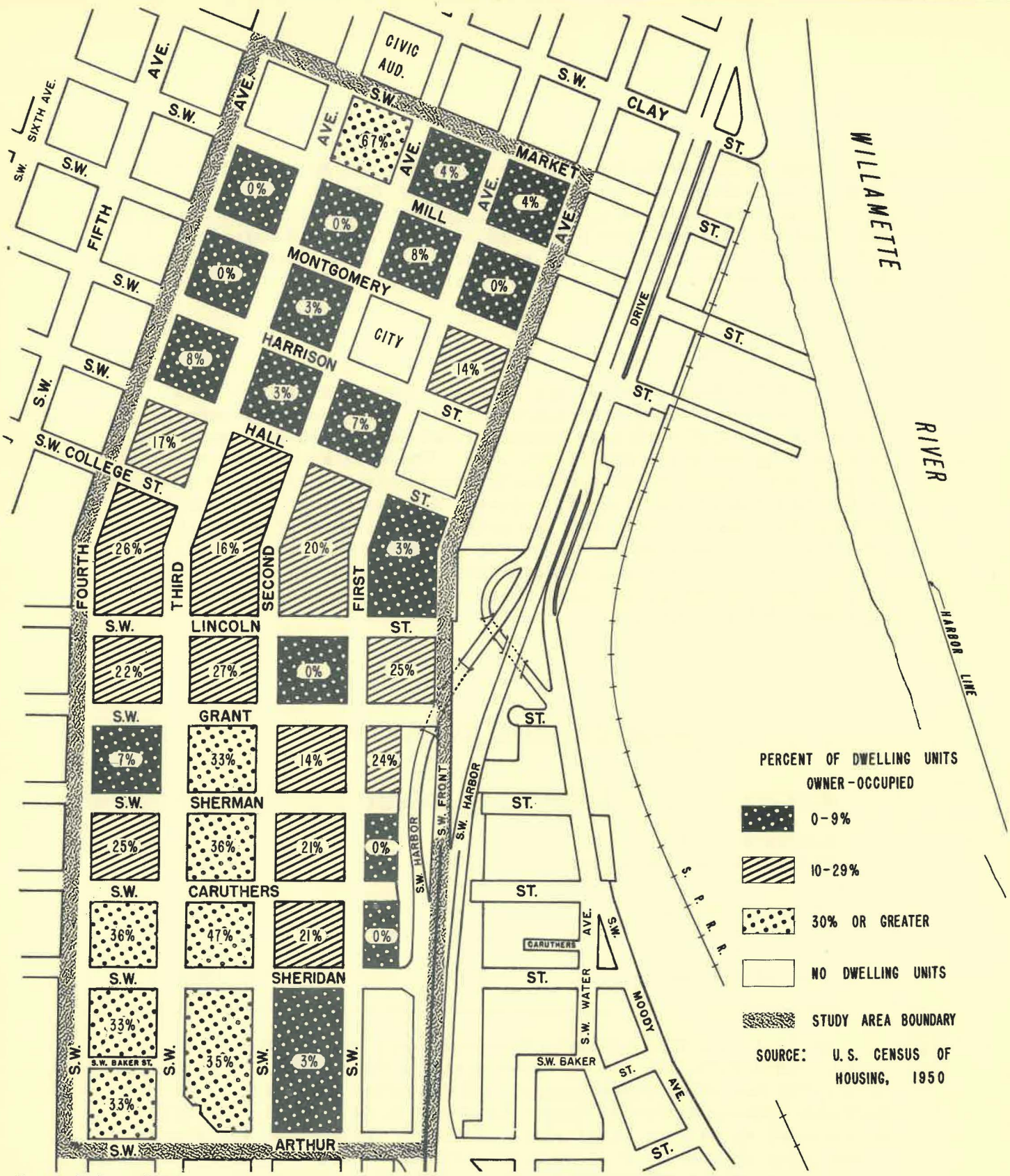
The three maps showing land use, substandard dwellings, and owner occupancy indicate the degree of blight in the study area (SW Market to Arthur Streets between Front and Fourth Avenues) encompassing the South Auditorium site. There is an unusual mixture of land use. Although predominantly residential, only two of 42 blocks in the study area are free of business, industrial, or other non-residential use of property. The area contains some of Portland's oldest houses. As such the incidence of substandardness as indicated by dilapidation or without private bath, is five times greater than the average for the whole city. Home ownership is practically nil. More than 90% are renters.

HOUSING CONDITIONS, 1950 U.S. Census

Area	% Substandard Dwellings	% Owner Occupancy
Market to Lincoln between Front and Fourth	56.7	6.2
Market to Arthur between Front and Fourth	53.5	9.8
City of Portland	11.4	56.8

In 1951, the City Planning Commission designated this South Auditorium district as one of three areas in Portland so blighted as to qualify for urban redevelopment. Upon closer examination, the Portland Housing Authority found the area, as is typical, socially substandard as well as physically. Juvenile delinquency was almost three times greater in 1950 than the city as a whole; adult crime two and one-half times greater. The number of public welfare cases was almost four times the rate for the whole city.

Other indications of substandardness can be seen in the 1950 census statistics for Census Tract 57. Two-thirds of the dwelling units in Tract 57 are within the South Auditorium study area. The



PERCENT OF DWELLING UNITS OWNER-OCCUPIED

- 0-9%
- 10-29%
- 30% OR GREATER
- NO DWELLING UNITS
- STUDY AREA BOUNDARY

SOURCE: U. S. CENSUS OF HOUSING, 1950

PLATE 14

OWNER – OCCUPIED DWELLINGS

SOUTH AUDITORIUM SITE
EXPOSITION RECREATION CENTER

NORTH

SCALE IN FEET
0 200 400

PORTLAND CITY PLANNING COMMISSION APRIL 1955

western boundary of the Tract, Fourth Avenue, coincides with the study area. The northern boundary is at Jefferson Street, the southern at Woods Street, and the eastern line is the Willamette River. As compared to the average for Portland, the people in Tract 57 have much lower incomes and are predominantly unattached adults, a high percentage of whom are unemployed. The educational level is lower than any other census tract in the city, except the one immediately to the north.

Average annual income for unrelated individuals and families was only $1130 compared to $3051 for the whole city. Unemployed males were 26.6% of the total in the labor force as compared to 9.2% in all of Portland. Only 18.5% of the population was under 21 in contrast to 30.3% for the whole city. Population per household was only 1.96 persons in Tract 57 compared to 2.81 persons in all of Portland. Unattached persons outnumbered family units two to one which was just the reverse situation for the whole city where there were twice as many families as individuals living alone.

Between 1940 and 1950 Census Tract 57 lost 464 persons or 8.7% of its population. During the twenty years 1930 to 1950 only 10 of the 35,400 new dwelling units built in Portland were in Tract 57. And 89% of all dwelling units are 35 years old or older as compared to 45% in the city as a whole.

Decisions To Be Made

On the basis of housing and social conditions, it is plainly evident that, if any area in Portland can qualify for urban renewal, certainly the section south of the Civic Auditorium can. (The process of urban renewal was formerly called urban redevelopment during the Vaughn Street Project period).

Whether the Urban Renewal Administration of the U.S. Housing and Home Finance Agency will approve of Portland's program in general and this project in particular will depend on resolving of four key questions locally:

1. The City Council and the Portland Housing Authority must decide whether to revive the urban renewal program at all and whether to do so on a broad enough scale to satisfy the Federal Agency. It is not likely that the Agency will agree to a project restricted only to the clearance of a site for the E-R Center. In 1954, the Congress passed several amendments to the urban renewal bill. For any city to be eligible for federal loans or grants, it must now formulate and place into operation a so called "Workable Program." This means a city-wide attack on blight prevention as well as eradication. Enforcement and adequacy of housing, health,

fire, and building codes will be scrutinized by the Federal Agency. Preparation and acceptance of a city-wide comprehensive development plan, measures to "conserve" residential neighborhoods on the brink of blight, a citizens participation group, a plan to rehouse persons displaced in areas demolished for urban renewal, as well as methods for financing the local share of the program are all required.

2. The City Council, the Portland Housing Authority, and possibly the Exposition-Recreation Commission must decide how the $107,110 borrowed from the Federal Agency for planning the Vaughn Street Project is to be repaid. Shall all of it be allocated to the next project presumably the E-R Center, shall Vaughn Street be revived if only in a limited area, or can it be spread over several projects in years to come?

3. Who shall provide the local one-third share of the difference between the resale and purchase price of the area cleared for the E-R Center? On the South Auditorium site this amount could run up to $700,000. The City Council could assume this obligation but the city's present state of finances are such that a bond issue would have to be placed before the voters. The E-R Commission could decide to provide the funds in order to benefit by the other two-thirds being assumed by the Federal Government as an outright grant. The Housing Authority might be requested to supply the money from its surplus as was promised on the Vaughn Street Project. Theoretically, the citizenry as a whole should pay this one-third as the price of ridding the city of a sub-standard, uneconomic area.

4. Finally, the Exposition-Recreation Commission must decide whether, in terms of the end result, it should wait to start acquisition of a site while the various administrative and financial decisions in the urban renewal program are being hurdled.

PROBABLE SITE ACQUISITION COST

Since this is a downtown site where property values are the highest in the city, the type and size of development possible will depend, in the final analysis, on the cost of acquiring the site.

Streets Are Free

A most fortunate circumstance is that 44% of this site is street area. Although all parts are within 2000 feet of the Willamette River harbor line, an equal area would not have to be dedicated elsewhere for streets vacated--as required by the Ziegler Amendment to the City Charter--because this amendment does not apply to public agencies. Thus, the purchase of each square foot of privately owned area actually means that 1.44 square feet of ground area is acquired. Put another way, if $1 is paid per square foot of block area, the real purchase price for the gross useable area, after streets are vacated, is only 69¢ per square foot.

With Urban Renewal Assistance

If the site is purchased through urban renewal, one possible determinant of the resale value of the cleared land would be the going price for vacant land in this area plus the cost of demolishing buildings and clearing away the debris. The only sizeable vacant area is the full block--bounded by First, Second, Montgomery, and Harrison Streets-now owned by the City Park Bureau. It is not developed as a park but is used by the Police Bureau to impound illegally parked cars. Woodward and Draper, engaged by the Exposition-Recreation Commission to appraise the South Auditorium site, value this vacant block at $40,000 or $1 per square foot.

The going rate to demolish frame structures, fill in basements, and rough grade is 11¢ per square foot of ground area occupied by frame buildings.* A test measurement on one typical block shows that building coverage is close to 50% of the ground area. This means the cost of demolishing frame structures would be only 5½¢ per square foot of ground area. Masonry structures cost 65¢ per square foot of floor area; and since there are a few on the site an assumed cost of demolition of 20¢ per square foot of ground area should be quite ample as an estimate to clear the entire site.

Thus, for purposes of estimating the cost to the E-R Commission of the site, if purchased through the urban renewal program, $1.20 per square foot is assumed.

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* See Downtown Parking Report, Portland City Planning Commission and Bureau of Traffic Engineering, Feb. 1955, p.15.

Exposition-Recreation Commission Funds Alone

If the Commission is forced to acquire the site without urban renewal assistance, some property will undoubtedly have to be condemned. Other sales, although negotiated, will not be exactly free market conditions because owners will have foreknowledge of the purpose and necessity of purchase. Woodward and Draper advise the E-R Commission that 50% above its appraisals must be allowed for this situation. The State Highway Department also appraised three blocks in the area recently and their estimates confirm this large multiplying factor. Opposing this view is the record of actual sales in the recent past. In the table below, sales and appraisal data are equated to assessed values as a common denominator for comparison purposes.

COMPARISON OF DATA FOR ASCERTAINING ACQUISITION COST OF SOUTH AUDITORIUM SITE

AREA BOUNDARIES	BASIS	DATE	RATIO TO ASSESSED VALUE
NW Couch, SW Clay, Front, 14th	County Assessors record of 20 actual sales	1953-54	1.90
SW Market, Woods Front, Fourth	County Assessors record of 274 actual sales	1946-50	2.56
SW Market, Arthur Front, Fourth	County Assessors record of 20 actual sales	1951-54	2.83
SW Market, Hall Front, Third	Appraisal by Woodward and Draper	1954	3.80 (5.70)
SW Mill, Montgomery Front, Third	Appraisal by State Highway Commission	1954	6.05
	Appraisal by Woodward and Draper	1954	4.05 (6.10)

Figure in parenthesis is the ratio increased by 50%.

The question posed by these data is whether adding 50%, or any amount, to the Woodward and Draper appraisal is justifiable. The appraisal already has a margin of 34% above the average of recent sales. A 50% increase still above this margin means that the estimate of site cost, the basis for all decisions regarding this site, is actually twice the amount which private firms and individuals are paying for the same types of property.

The 20 sales in the study area bounded by Market, Arthur, Front, and Fourth were the total number during the period reported. It should also be noted that 18 occurred in 1953 and 1954. Three were industrial properties, one commercial, four apartments, one duplex, seven single-family houses, two vacant lots, and one house with a vacant lot.

In view of these recent sales data on several types of property in the South Auditorium site and in consideration of the age and dilapidation of dwellings, the predominant use in this area, adding a surcharge of 50% to the Woodward and Draper appraisals which are already a third higher than market levels does appear questionable. Nevertheless, an error in estimation could be the determining factor in a decision for or against the South Auditorium site. It certainly seems that a much more precise appraisal is necessary before any reliable estimate can be arrived at.

In the absence of more refined cost data, a probable minimum and maximum estimate is all that can be done at this time. The Woodward and Draper appraisals, without the 50% surcharge are probably near the minimum a public agency could expect to pay. On blocks not included in the appraisal, four times assessed value is assumed to be a reasonable lower limit to expect. The term "Market" is used hereafter to describe this estimate so as not to confuse with the absolute minimum attainable by use of urban renewal. Plate 15 shows the "Market" estimate.

The Woodward and Draper appraisals increased by 50% should certainly be the maximum to expect.

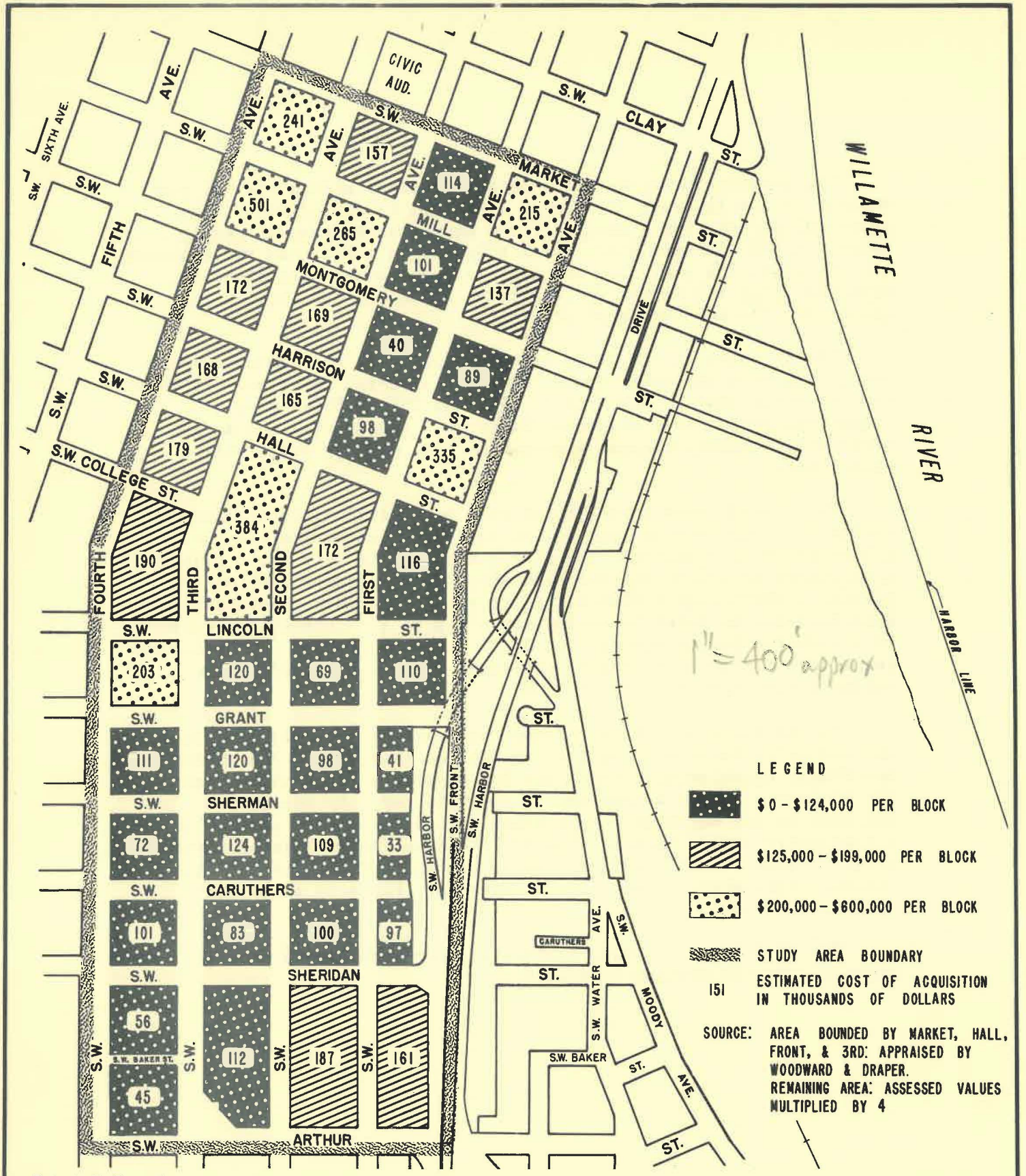


PLATE 15

ESTIMATED COST

SOUTH AUDITORIUM SITE
EXPOSITION RECREATION CENTER

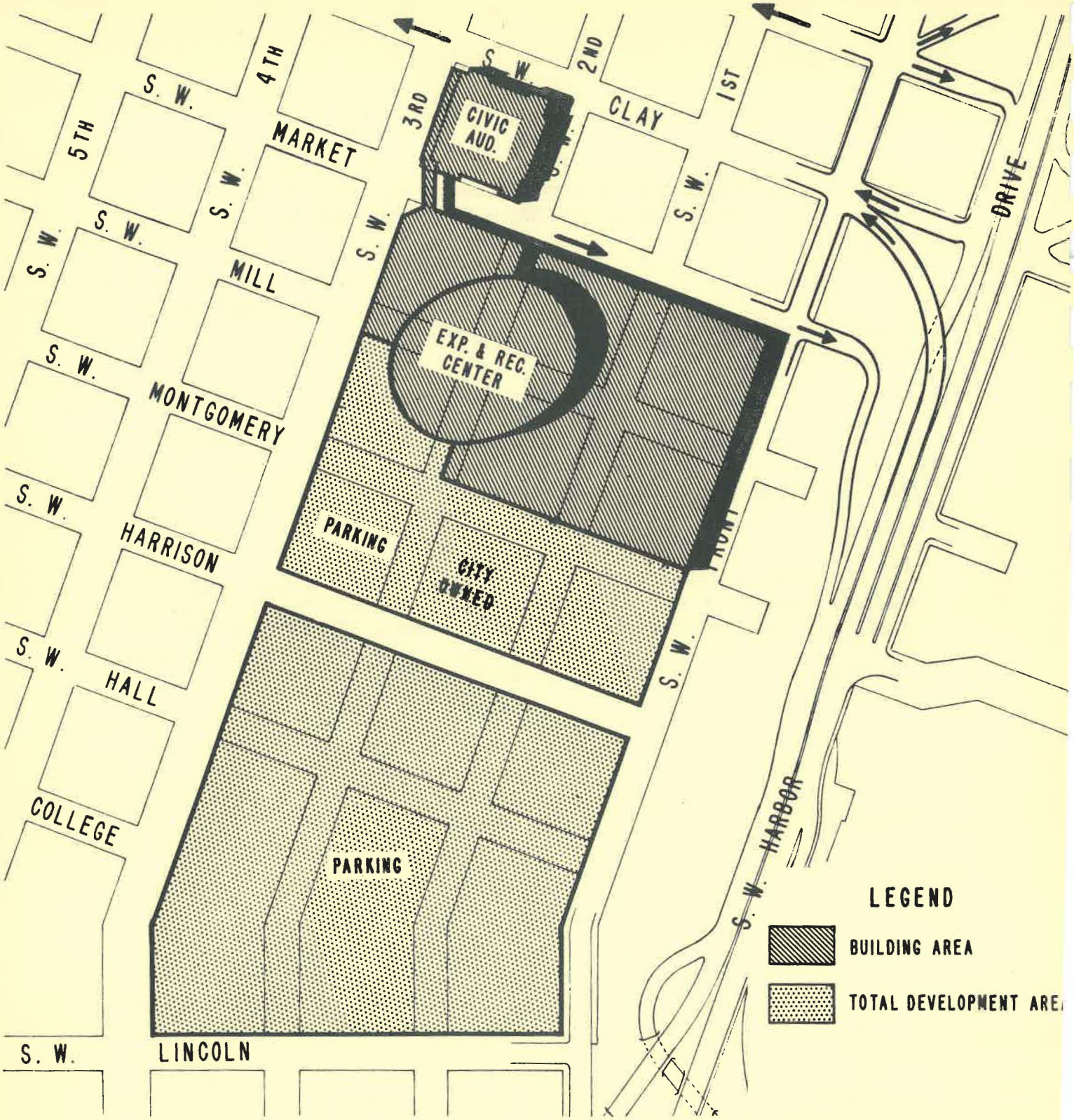
PORTLAND CITY PLANNING COMMISSION APRIL 1955

PROBABLE COST OF SAMPLE 9-BLOCK AREA BOUNDED BY
FRONT, THIRD, MARKET, & HARRISON STREETS

Assumed Conditions	Total	Per Sq. Ft. of Block Area	Per Sq. Ft. of Gross Area*
Urban Renewal	$432,000	$1.20	$ .83
Market Price	$1,287,000	$3.58	$2.49
Maximum Price	$1,930,000	$5.35	$3.72

*Includes area of streets to be vacated

In moving southward from the Civic Auditorium the land cost becomes cheaper. A nine block area south of Lincoln Street and east of Third Avenue could be assembled at an average of $2.32 per square foot (based on four times assessed value). Including vacated streets the gross area cost is just $1.71 per square foot.



SITE AREA	24.2 AC.	PARKING SPACES OUTSIDE	2320
TOTAL FLOOR AREA	576,000 SQ. FT.	PARKING SPACES IN BUILDING	812
SITE COST (BLOCK AREA)	$1.20 PER SQ. FT.	PARKING SPACES TOTAL	3132

PLATE 16

PLAN I - WITH URBAN RENEWAL FUNDS

SOUTH AUDITORIUM SITE

EXPOSITION & RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

JUNE 1955

NORTH

SCALE IN FEET

0 100 200

POSSIBLE DEVELOPMENT PLANS

Should the South Auditorium site be selected, there is an opportunity to develop an outstanding Center, containing a theatre-music hall, indoor sports stadium, convention meeting rooms, exhibit space ample for the P.I., and off-street parking. Three development plans are here presented to indicate the range of possibilities depending on which of the various estimated costs will obtain in acquiring a site. The main elements of each plan and the areas to be acquired are shown on plates 16, 19, and 20.

Common to each plan is the proposal that the present Civic Auditorium be reconditioned as a theatre-music hall and integrated into the development. A pedestrian bridge over Market Street would connect the Auditorium to the main coliseum--exhibition building. The total project could thus be operated, managed, and rented as a unit. It is assumed that reconditioning of the Auditorium would be financed by a separate bond issue or special tax levy because no allowance for such improvement was made in the eight million dollar issue.

PLAN 1--With Urban Renewal Funds

Obviously the most adequate development can be built with the help of urban renewal funds in purchasing the site. To determine what might be possible as well as to test the feasibility of the site from the standpoint of traffic approach and internal arrangement, a plan of the main building and parking areas immediately adjoining has been studied in considerable detail and is shown on plates 17 and 18.

To understand the functional parts of this plan, it is well to pay particular attention to elevations of the various floor levels in respect to those of the adjoining parking lots and the bordering streets. Full advantage is taken of this site, sloping downward from the southwest to northeast, in producing an excellent arrangement of facilities.

Space for the P.I. or other very large expositions is in the basement and in the open-air part of floor level 82 next to Front Avenue. These two spaces combined measure 316,000 square feet and are intended to be suitable for quartering animals. This compares with the 336,000 square feet now so used at the existing P.I. Building in North Portland. In addition, the 82 level opens onto the parking lot planned at Front and Harrison. This lot could be utilized also for storage, unloading, or staging during the P.I. show if more spaces were necessary.

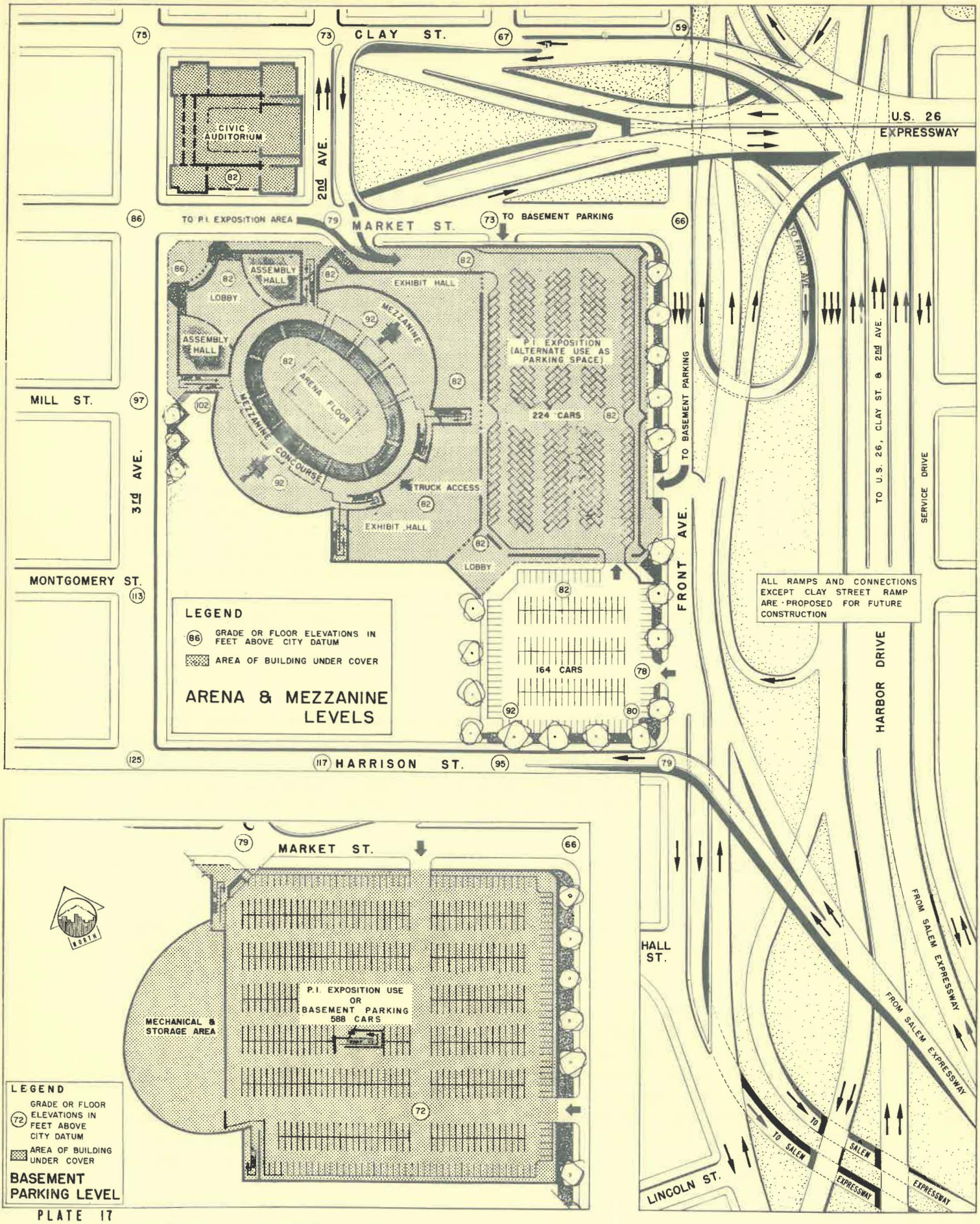


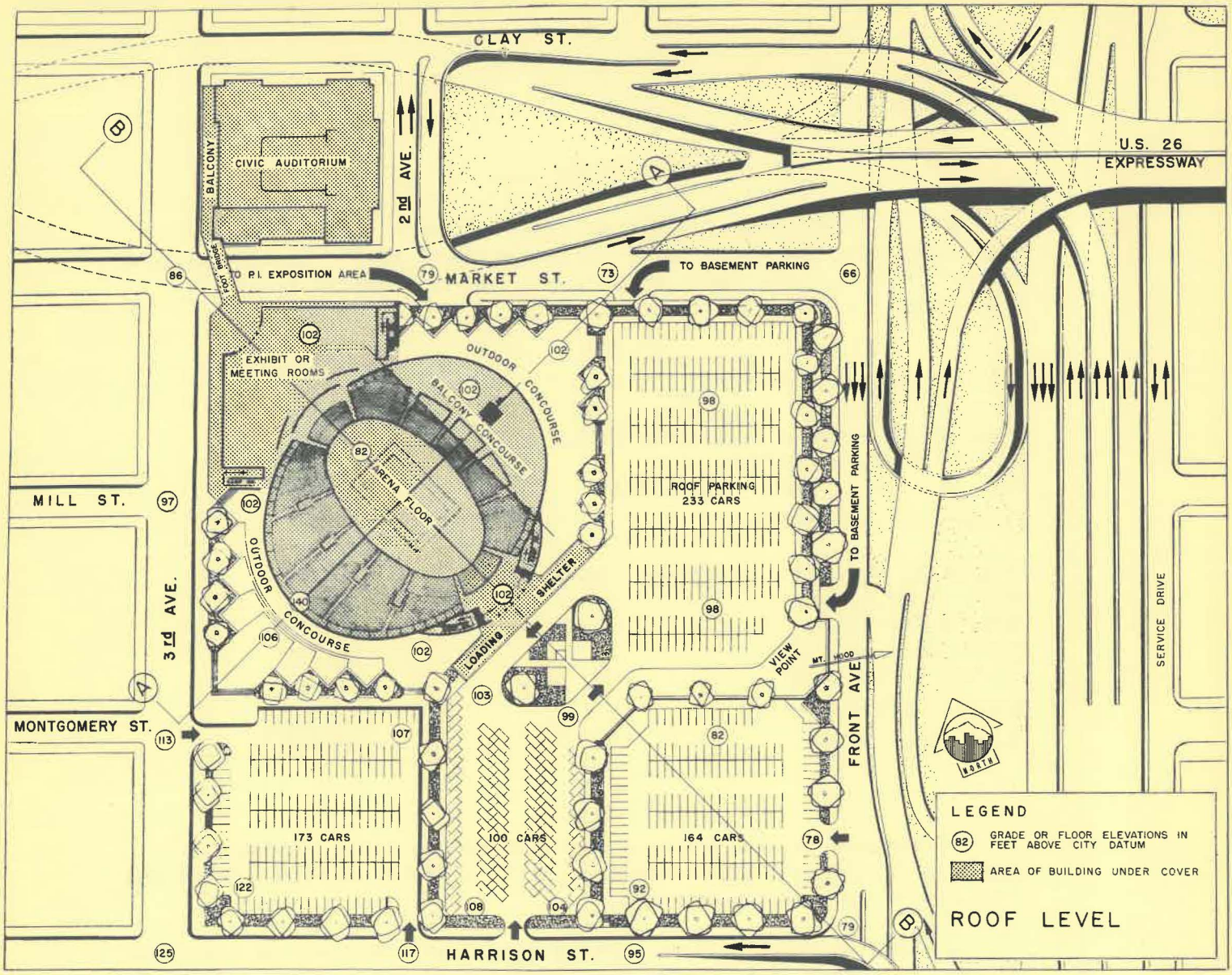
PLATE 17

BASEMENT, ARENA & MEZZANINE PLANS

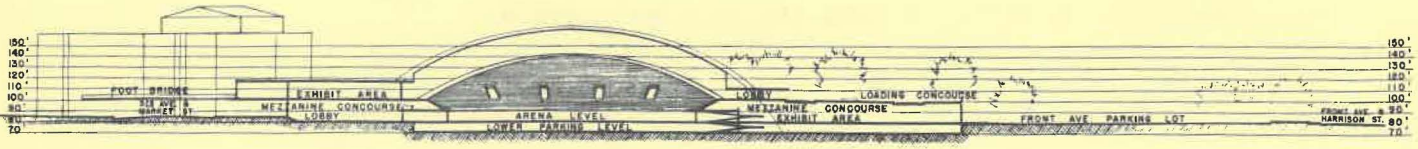
SOUTH AUDITORIUM SITE
EXPOSITION RECREATION CENTER
PORTLAND CITY PLANNING COMMISSION

APRIL 1955

SCALE IN FEET
0 100 200



SECTION A–A
LOOKING N-W



SECTION B–B
LOOKING N-E

PLATE 18

ROOF PLAN & SECTIONS

SOUTH AUDITORIUM SITE
EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION MAY 1955

SCALE IN FEET
0 100 200

For exhibits requiring higher types of space, 152,000 square feet, including the arena floor and space under seats, is also planned at the 82 level. The floor area of all levels combined totals 576,000 and is distributed as follows:

	Square Feet
P.I. or parking (level 72)	216,000
Lobby and assembly halls (level 82)	20,000
Floor above lobby and assembly halls (level 102)	20,000
Exhibit Hall (level 82)	54,000
P.I. or parking space (level 82)	100,000
Primary exhibit space	410,000
Mechanical equipment & storage (level 72)	36,000
Arena floor (level 82)	24,000
Under seats (level 82)	54,000
Mezzanine (level 92)	30,000
Balcony (level 102)	22,000
Space in arena section	166,000
Total floor area	576,000

Dimensions of the sports arena section are scaled to Stanford Research Institute's recommended capacity of 8000 permanent seats and 3000 additional temporary seats.

A total of 3132 on-site parking spaces are laid out on the plan. Average area occupied by each space and its access aisles is 300 square feet. Distribution of the spaces are as follows:

In lots south of Harrison Street	1650
In lots north of Harrison Street	437
On roof (level 98)	233
Available for any event	2320
Basement (level 72)	588
Exhibit (level 82)	224
Available in building when not used as exhibit space	812
Total on-site	3132

Not to be overlooked are 2135 spaces now existing in commercial lots and along curbs west of Third Avenue within 1000 feet or approximately three blocks walking distance from the main building. Of this number 1221 are in lots and 914 are at the curb. If drivers attending the

Center could get into only half of these, the minimum number on the site and in the vicinity would total 3388 spaces. The maximum number, including spaces under cover, would be 4200.

Translating this parking capacity into terms of people attending one or several separate events at the Center, crowds of 17,000 and 21,000 respectively could be accommodated. This assumes a ratio of one car parked per five people in attendance--which is the experience in other cities for centrally located sites.*

Although the need is not yet apparent, any of the outdoor parking areas could be double decked, doubling their capacities in the future. The sloping site makes this quite feasible and economical. Also, no doubt additional private property would be converted to parking lots if the Center should be located in the vicinity.

The convenient traffic access to all levels of the coliseum-exhibition building and its parking areas is shown on plates 17 and 18. The basement, as well as the 82 level containing the arena floor, exhibit hall, animal quarters or parking have direct access to both Market Street and Front Avenue. Parking on the roof and on the lot presently owned by the city can be reached from Harrison Street, while the upper parking lot can be entered from either Third or Harrison.

The ultimate approaches, as designed by the City Traffic Engineer, to Harbor Drive, the new Salem Expressway, and the proposed US26 Expressway and Bridge are also shown on plates 17 and 18. Access to Harbor Drive and the Salem Expressway will be just as convenient immediately with the construction of the Market and Clay Street ramps to be located as shown on plate 16.

The total site area of 15 blocks measures 24.2 acres. There are some businesses and industries in the area to be acquired, but it is predominately multi-family residential. Families or individuals occupying dwelling units which will be displaced are 821.

In summary, functions which can be accommodated adequately on or in conjunction with the South Auditorium site are:

1. Sports and livestock coliseum
   Permanent seating capacity 8000 with 3000 temporary seats for basketball, boxing, political or religious rallies.

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* An Economic Study of Portland's Exposition-Recreation Center, Stanford Research Institute, 1955, p.30.

2. Exhibit space for P.I. or other large shows
   A minimum of 410,000 square feet, or 9.4 acres under roof.

3. Convention facilities
   At least 150,000 square feet more floor area for meeting rooms, kitchens, dining rooms, and assembly halls.

4. Theatre-music hall
   Present Civic Auditorium to be converted

5. War memorial
   Outdoor concourse or space in lobby to arena could be the setting for this feature.

6. Parking
   On site spaces: 2320 outside, 812 under cover, total 3132.

ESTIMATED COST - PLAN 1
to Exposition-Recreation Commission

	ITEM	QUANTITY	COST
1.	Acquire site	734,400 sq.ft. @ $1.20	$ 881,280
2.	Grade, landscape and pave parking lots	72,000 sq. yds. @ $2.70	194,000
3.	Parking lot retaining walls	4650 lin. ft. @ $13.25	62,000
4.	Install parking memters	2320 @ $75	173,000
	Site cost and preparation		$1,310,280
5.	Coliseum-exhibition building		5,928,000
6.	Footbridge to Civic Auditorium		10,000
			$7,248,280
7.	Design and contingencies		751,270
	TOTAL		$8,000,000

Explanation of Costs

Item 1 Assuming the extent and character of improvements as proposed on plates 17 and 18 were constructed, this is about the maximum amount which could be paid to the Portland Housing Authority after the site was cleared. Although other interests may be able to top this amount, any other proposed reuse of the site would have to qualify as higher and better in the public interest and in conformance with the comprehensive plan for the development of the whole city as recommended by the City Planning Commission and approved by the City Council. No such reuse is in prospect at this time.

On the basis of $1.20 per square foot resale value, the local one-third share of the write down would be computed as follows:

Cost of acquiring 15 blocks (market price)	$2,557,000
Demolition and clearing (20¢ per sq. ft. of ground area)	147,000
Rerouting underground trunk line utilities:	
Mill Street sewer	35,000
Water mains	80,000
Gas mains	16,000
Electric power lines	100,000
Telephone line	15,000
Cost of site to Housing Authority	$2,950,000
Resale	881,280
Write down (difference between cost and resale)	$2,068,720
Local share (1/3 of write-down)	690,000

It is possible under the Federal Renewal Act that certain improvements made on the site financed by local funds may be considered as part payment on the local one-third share. In other words, the provision of a huge parking lot so near the downtown area may be considered by the Federal Agency as instrumental in relieving the daytime shortage of downtown parking space thus enhancing the taxable values of this area and benefiting the community and region as a whole. If such is the case, the total cost of these parking improvements made by the Exposition-Recreation Commission, $429,000 (Items 2, 3, and 4), could be subtracted from the $690,000 leaving a cash balance of only $261,000 to be raised locally.

Item 3 Since this is sloping site, some retaining walls will be required. Estimate is based on reinforced concrete in place at $90 per cubic yard, average wall height three feet above ground.

Item 4 The desirability of this expenditure is explained fully in the chapter on Supplementary Sources of Financing on page

Item 5 Estimate is derived as follows:

Basement, level 72	216,000 sq. ft. @ $3.15	$675,000
Lobby and assembly hall, level 82	20,000 sq. ft. @ $15	300,000
Above lobby, level 102	20,000 sq. ft. @ $8	160,000
Exhibit hall, level 82	54,000 sq. ft. @ $7	378,000
P.I. or parking, level 82	100,000 sq. ft. @ $3.50	350,000
Roof and outdoor concourse level 102	74,000 sq. ft. @ $3.25	240,000
Roof, level 98	100,000 sq. ft. @ $3.25	325,000
Total exhibit areas		$2,428,000
Coliseum building as per Stanford Report p.28		$3,500,000
Total		$5,928,000

Item 7 This is approximately 10% of improvement costs to be allowed for engineers' and architects' fees and for unforseen items.

Additional Space for P.I.

In order that the P.I., and possibly other larger shows, can function to the satisfaction of their managements, it will be desirable to acquire additional land for parking cattle trucks or other equipment and for storage in between shows. For this purpose a portion or all of the vacant land in the nearby Power Plant site could be purchased. There facilities for unloading direct from

railroad cars arriving on the Southern Pacific branch line could be built. Livestock or other equipment or materials could then be trucked along the service road paralleling the new Portland-Salem Expressway to the Columbia-Jefferson overpass entering the main building from Front Avenue. The distance between the two sites over this access route is 0.8 mile. The location of the Power Plant area relative to the South Auditorium site is shown on plate 21. Trucks hauling livestock or equipment to the Power Plant site will be able to travel through the city from all approaching highways to the Power Plant site over stop-light-free expressways.

The 22½ acres of vacant land in the Power Plant site are appraised at $10,000 per acre.

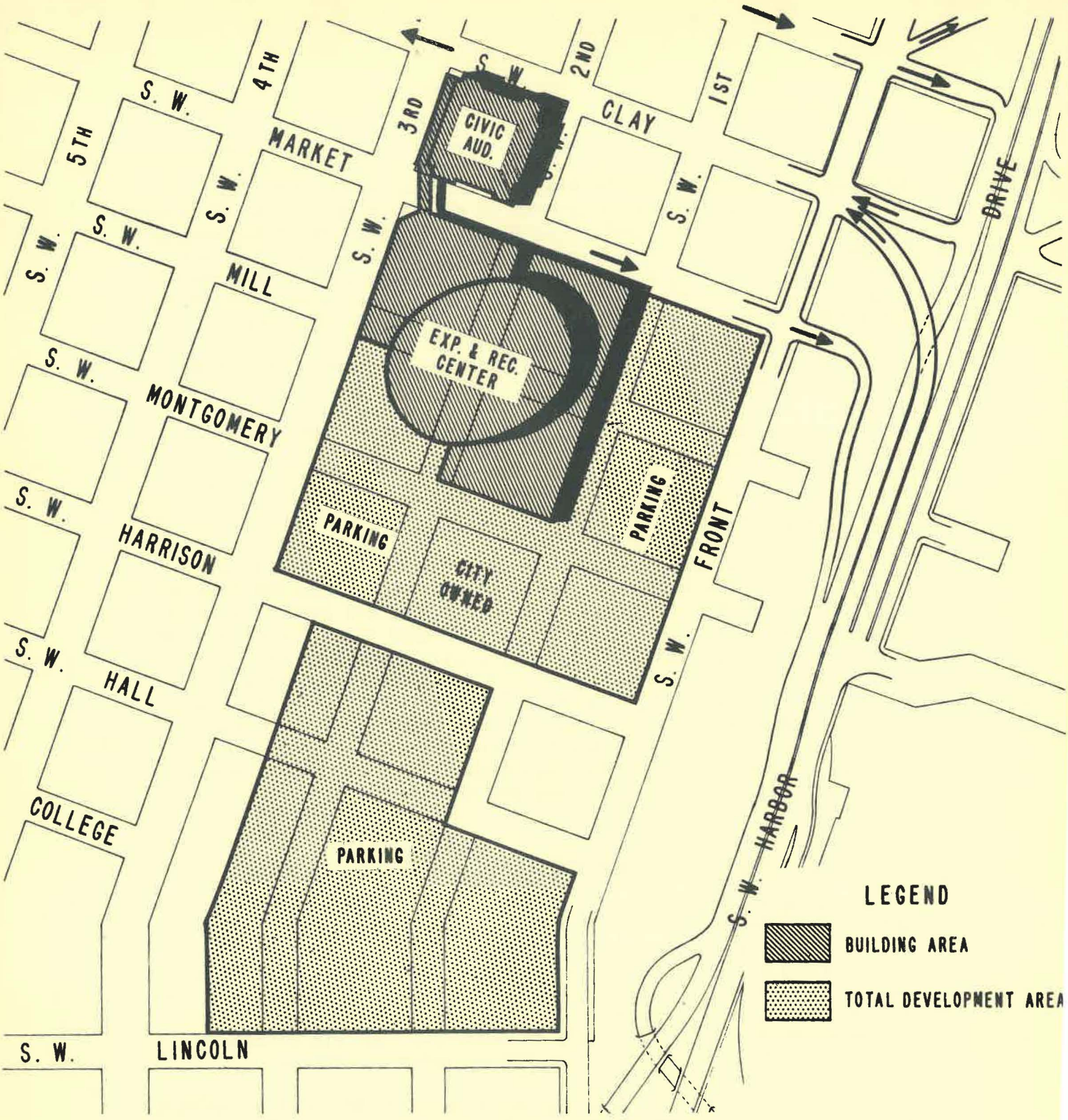
Plan 1 Alternative

Since the preparation of the detailed development plans (plates 17 and 18), the State Highway Department's studies indicate that in constructing the US26 Expressway between Market and Clay Streets it probably will be no more costly to buy and raze the Civic Auditorium rather than bypassing it with two short tunnel sections as shown in this report. If such is the case, the main building together with a brand new symphony hall-theatre could better be located farther south on the site. It would then be surrounded by, rather than situated at the edge of the parking area. Also, the total site cost would be at least $95,000 less because the underground trunk line utilities in Mill Street need not be disturbed.

Plan 2--Site Acquired at Market Prices

Assuming site acquisition costs as estimated on plate 15, a very satisfactory Exposition-Recreation Center can still be developed on the South Auditorium site--even without urban renewal assistance. With the E-R Commission relying solely on its own funds, to develop Plan 1 would exceed the bond issue by $1,789,000. However, the cost can be brought within the $8,000,000 limit, by scaling down the coliseum-exhibition building and by selecting the less expensive property south of Harrison Street for off-street parking.

The cost of the main building can be reduced $990,000 by omitting that section between the exhibit hall and Front Avenue. This would reduce the floor area having as its primary use parking or quartering animals for the P.I. show by 200,000 square feet. The resultant exhibit space, exclusive of that in the sports arena section, would be 210,000 square feet. This amount is still considerably larger than in similar facilities in most cities and is sufficient for



SITE AREA	20.1 AC.	PARKING SPACES OUTSIDE	2208
TOTAL FLOOR AREA	376,000 SQ. FT.	PARKING SPACES IN BUILDING	325
SITE COST (BLOCK AREA)	$2.85 PER SQ. FT.	PARKING SPACES TOTAL	2533

PLATE 19

PLAN 2 - SITE COST - MARKET PRICES

SOUTH AUDITORIUM SITE

EXPOSITION & RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

JUNE 1955

NORTH

SCALE IN FEET

0 100 200

most exhibitions except the P.I.* One possibility for the P.I. would be to extend its show over a longer period, housing fewer animals at one time.

The most expensive properties south of Harrison Street are in the block bounded by Harrison, Hall, Front and First and along the east side of Third Avenue. If these are not acquired, cost of the remaining area of 8.15 acres would be only $504,600 as compared to $1,270,000 for the full six blocks of 11.4 acres proposed for parking in Plan 1. On this smaller area 1185 cars could park, allowing 300 square feet per car. The two blocks (Market, Montgomery, Front, and First) not to be utilized for building are proposed for parking also. Thus 1023 spaces would be north of Harrison Street and 1185 south, making a total of 2208 spaces outside and available for all types of events. The basement parking would be reduced to 325 spaces. The total on-site would thus be 2533 or enough to accommodate an attendance of 12,650 people without drawing on the curb and commercial lot spaces in the vicinity. Again, if one-half of these were available, a peak attendance of 18,000 people could be handled.

The total area to be acquired is 20.1 acres. The number of families and individuals living separately which will be displaced is 719.

In summary, Plan 2 provides for all functions as in Plan 1 except that exhibit space for the P.I. and other large shows is reduced by 200,000 square feet and the number of parking spaces on the site is reduced by 799.

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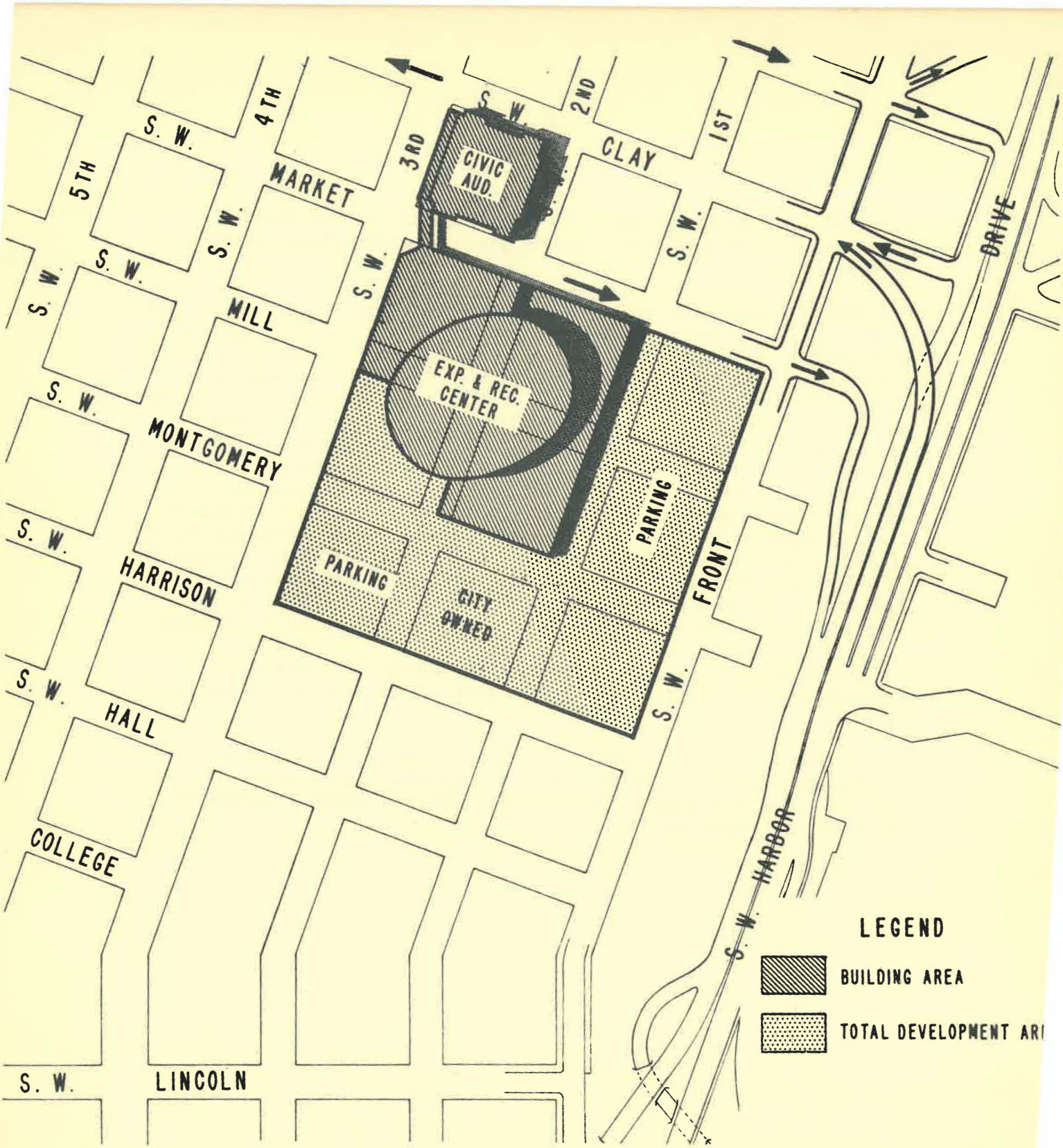
* See Stanford Report pp. 29, 92, 96.



SITE AREA	11.9 AC.	PARKING SPACES OUTSIDE	1023
TOTAL FLOOR AREA	376,000 SQ. FT.	PARKING SPACES IN BUILDING	325
SITE COST (BLOCK AREA)	$5.35 PER SQ. FT.	PARKING SPACES TOTAL	1348

PLATE 20

PLAN 3 - MAXIMUM SITE COST

SOUTH AUDITORIUM SITE

EXPOSITION & RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

JUNE 1955

NORTH

SCALE IN FEET

0 100

ESTIMATED COST--PLAN 2
to Exposition-Recreation Commission

	ITEM	QUANTITY	COST
1.	Acquire site		$1,791,600
2.	Demolition and clearing	628,600 sq. ft. @ 20¢	125,720
3.	Reroute underground utilities		126,000
4.	Grade, landscape and pave parking lots	73,600 sq. yds. @ $2.70	199,000
5.	Parking lot retaining walls	4500 lin. ft. @ $13.35	60,000
6.	Install parking meters	2208 @ $75	165,800
	Site cost and preparation		$2,468,120
7.	Coliseum-exhibition building		$4,918,000
8.	Footbridge to Civic Auditorium		10,000
			$7,396,120
9.	Available for design and contingencies		603,880
	TOTAL		$8,000,000

Plan 3--Maximum Site Cost

If the property south of the Civic Auditorium should cost as much as 50% above present market prices, the site for the Center would have to be confined to the nine blocks bounded by Market and Harrison Streets between Front and Third Avenues. The development would be the same as in Plan 2 less the parking area for 1185 cars south of Harrison Street. Parking on this reduced site would be 1348 cars, 325 in the basement and 1023 outside. Thus crowds exceeding 6750 people would have to be accommodated at the curbs and in commercial lots in the vicinity. Assuming one-half of the 2300 spaces within 1000 feet could also be utilized, a maximum attendance of 10,850 could be served.

ESTIMATED COST - PLAN 3
to Exposition-Recreation Commission

	ITEM	QUANTITY	COST
1.	Acquire site		$1,930,000
2.	Demolition and clearing	360,000 sq. ft. @ 20¢	72,000
3.	Reroute underground utilities		126,000
4.	Grade and pave parking lots		92,000
5.	Parking lot retaining walls		10,400
6.	Install parking meters		77,500
	Site cost and preparation		$2,307,900
7.	Coliseum-exhibition building		$4,918,000
8.	Footbridge to Civic Auditorium		10,000
			$7,235,900
9.	Available for design and contingencies		764,100
	TOTAL		$8,000,000

SUPPLEMENTAL SOURCES OF FINANCING

Other than urban renewal assistance, the best prospect for additional financing is the revenue to be derived from off-street parking. There is an assured market in accommodating workers and shoppers in the downtown district and in serving students attending Portland State College. No other site under consideration for the Center has this prospect of multiple use of its parking facilities.

Within the core area of the west side downtown district, bounded by Second and Eleventh Avenues between Oak and Taylor Streets, presently the parking demand exceeds the supply by 17,900 spaces. Using all existing facilities and supplementing them by creating new facilities on all land priced $7 per square foot and under

within the area bounded by Couch, Fourteenth, Clay and Front Avenue, a deficit of 7370 spaces would still remain. One possibility to make up this deficit is the provision of large parking areas on cheap land at the edges of the downtown district. If the fee charged for parking were coupled with a ride on Portland Traction buses to and from the downtown area there is every reason to expect that this arrangement would be successful. It is true that fringe parking areas which have been tried in several large cities in the East have not been successful. But these experiments were located from two to five miles from the downtown district. Patrons thus had a long ride on mass transportation after parking their cars. At the South Auditorium site this ride would be reduced to three or four minutes at the most. In fact the area is within walking distance of a considerable portion of the downtown district.

There is every reason to expect that the parking areas at the South Auditorium site will be self-financing through daytime use only. Revenues from use during evening and weekend events at the E-R Center would be all profit to the Commission. The table below shows that assuming the land is acquired through urban renewal and assuming use 300 days per year and a turn-over of one car per space per day, the economic cost of parking is only 18.1¢ per car space per day. If the Portland Traction Company can see its way clear to offer a reduced fare for the short haul between the parking area and downtown destination, say 10¢ a round trip, an attractive low price of 30¢ per day for parking and bus ride both is a possibility.

DAYTIME REVENUE FROM PARKING LOTS - PLAN 1

Land cost (urban renewal) 494,400 sq. ft. @ $1.20	$ 593,000
Improve lots and install meters	430,000
	$1,023,000
Amortization 20 years @ 4%	430,000
Replace meters and repave lots after 10 years	368,000
20 year capital cost	$1,821,000
One day capital cost (300 days use per year)	$304
Capital cost per car space per day (2320 spaces outside)	13.1¢
Operating cost per car space per day	5.0¢
	18.1¢

Assuming a 20¢ fee, the total annual revenue would be $139,200. Revenue from spaces inside the main building not included in these calculations.

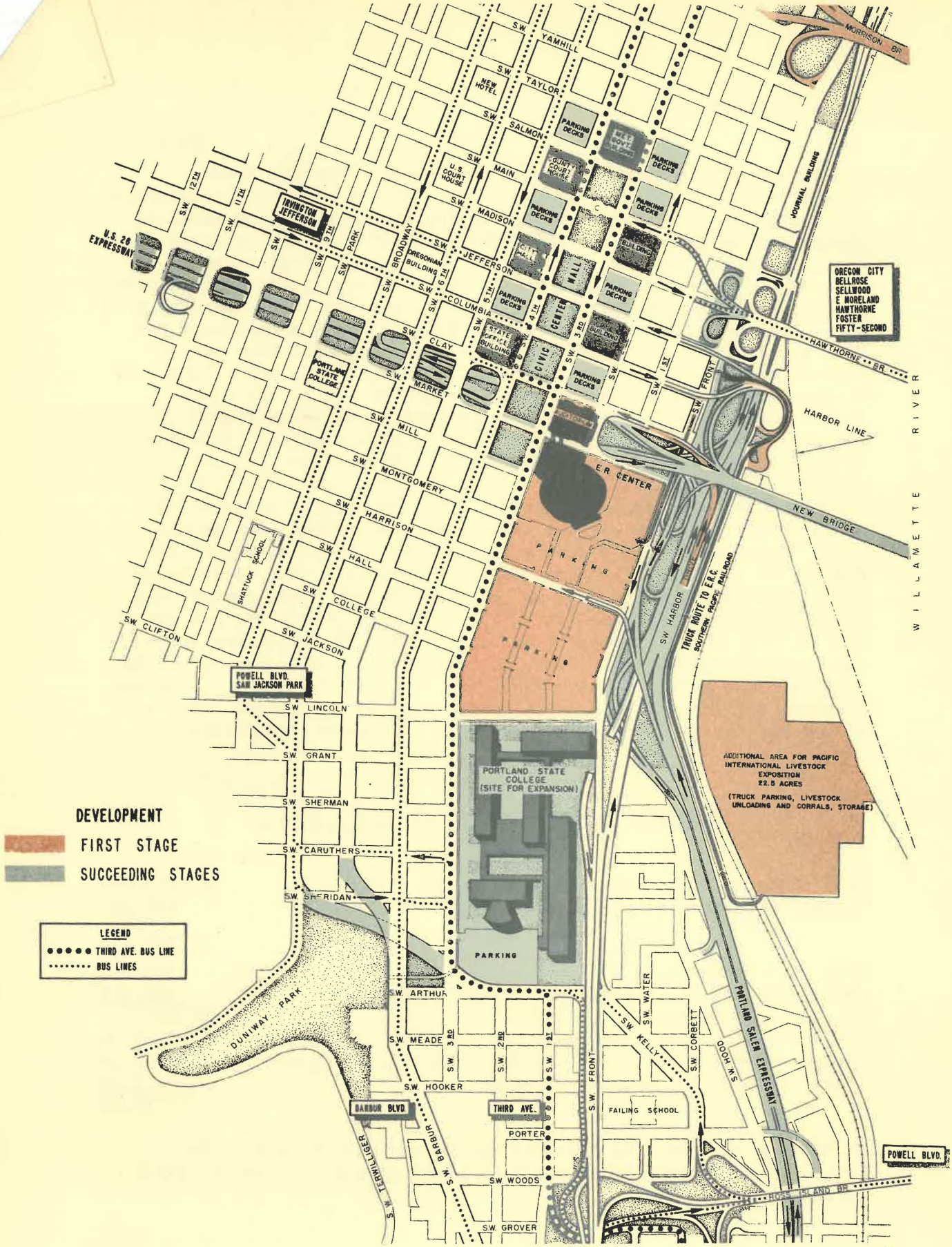


PLATE - 21

COMPREHENSIVE DEVELOPMENT PLAN

SOUTH AUDITORIUM & POWER PLANT SITES
EXPOSITION - RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

MAY 1955

Should the parking area not be too popular with the downtown workers and shoppers, there is still the prospect of it being used by students at Portland State College. On the basis of children already born, it is anticipated that the day-time enrollment of Portland State College will steadily increase from the present 3000 students to become 9000 in just 15 years. The night-time enrollment may be equally as large.

The use of parking facilities is primarily a matter of price and convenience. It is very possible that the amount of curb parking in downtown Portland will decrease in the years ahead. It is also possible that the prices of curb parking will steadily increase. It is also possible that many off-street parking lots will be converted to other uses. The fringe lots in Cleveland and Chicago which are on the periphery of the downtown district have been successful. The South Auditorium area is similarly situated.

It will be advisable to install parking meters on the parking lots rather than have collectors stationed at entrances. In this manner the driver can park his own car and there will be no barrier stopping traffic and causing it to back up on bordering streets for several blocks.

COMMUNITY-WIDE ADVANTAGES

Civic Center

If the South Auditorium site is selected, there is an excellent opportunity to create an outstanding civic center development. This site is near the area traditionally accepted as the location for the civic center for Portland. A long-range development scheme is shown on plate 21. The civic center envisioned would consist of three major elements. North of the US26 Expressway would be the site for additional public buildings grouped around a mall including the Plaza blocks and extending southward to the expressway. Three blocks between Third and Fourth Avenues south of the Plaza blocks would be cleared. At this time there is only one major building in this group of blocks and that is the Labor Temple. The second element would be the Exposition-Recreation Center and the third element envisioned is a 25 acre area for Portland State College. Present plans are for the college to utilize a four block area including the old Lincoln High School. If the enrollment reaches the 9,000 as indicated, it appears both unwise and impossible that the college could function on such a small area. Moreover, the area south of Lincoln Street could be obtained under urban renewal financing

for $1.20 a square foot, as contrasted to the $6-$7 a square foot which the college must pay for property fronting the park blocks. Without urban renewal the area south of Lincoln Street would still be much more economical and could be obtained at about $2.32 per square foot.

Tourist Attraction

This development when created ultimately in the heart of the city at the crossing of two major trans-continental highways could very well give Portland an attraction unmatched in few cities in the nation. The natural features surrounding Portland bring thousands of tourists, but the City of Roses has little to offer in the form of man-made attractions. Not only would this ultimate development meet primary needs for Portland itself, but it would obviously create an economic asset as well.

Convention Center

Another way whereby the selection of the South Auditorium site would add to the community's assets economically is in making Portland a major convention center. If the very large exhibit floor area as proposed is constructed, Portland could out-distance most other competitive facilities in other cities in the country. With such an outstanding facility for conventions and with such natural attractions near the city, these inducements should bring many major conventions to Portland.

Assist to Downtown District

If the South Auditorium Site is selected it should also assist in revitalizing the downtown area. Portland's downtown district, in common with most downtown districts in the nation, is on the brink of decline. The community as a whole has much to lose if such should happen. One reason among others is that the downtown district represents the greatest concentration of property values for taxing purposes. The Exposition-Recreation Center could well be the means of bringing more people into the downtown district and thereby assisting in assuring its economic future.

Assist to Portland Traction Company

A downtown location for the Center could also be the means of assisting in the solution of another pressing community problem. That is the future of our mass transportation system. If the Center could create a sizeable off-peak hour load, the Portland Traction Company might well be helped to a position of improving service throughout its system.

Maximum Community Usefulness

A central location for the Center undoubtedly would render the maximum service to the community. Facilities in downtown Syracuse is an example in point. Meeting places for groups of all sizes make use of this facility. A non-central location would be infeasible for dinners, meetings, and other functions for many groups large or small because of the inconvenience.

Future Re-use

The proper zoning of the South Auditorium is a difficult question considered and re-considered by the City Planning Commission on its proposed new zoning map. An objective view indicates that the area is not needed for expansion of the downtown district. A better area is west of Third Avenue to Broadway as the present trend of new structures indicates. The streets are wider and the topography flatter. Business blight to the north of the Civic Auditorium has long detracted from any business expansion southward. Yet, the South Auditorium section is too small to maintain itself properly as a residential neighborhood unit. It is too isolated by heavy traffic streams for easy and safe access to schools and playgrounds. The best re-use of the area if cleared, would be for some institutional or public use needing a fairly large and central location. It commands a fine view of the river, the East Side, Mt. Hood, and the Cascade Range. It could thus be a most dramatic setting for the Exposition-Recreation Center as well as rid Portland of an area which blights the city both socially and economically in its present condition.

POWER PLANT

The particular advantages and disadvantages of the Power Plant site are as follows:

ADVANTAGES:

1. Centrally Located Vacant Area--The site is slightly over one mile from the heart of the downtown district. Of the total area of 30 acres, 22.5 acres are vacant land. The total area including buildings can be obtained for an average price as low as 43¢ per square foot.

2. A Good Location for the P. I.--There is sufficient area for both indoor and outdoor space needs. The industrial environment is in keeping with the nuisance aspects of a livestock show.

3. River Frontage--Here would be the only publicly owned area with river frontage in the central part of the city.

4. Has Railroad Trackage

DISADVANTAGES:

1. Inaccessibility--The site is practically isolated at the present, being accessible by only two narrow driveways having a discharge capacity of not more than 1300 vehicles per hour. This situation will be improved only slightly in the future. The building of the new Salem Expressway will create a barrier between the site and street access from the west. The topography also renders access from the west extremely difficult.

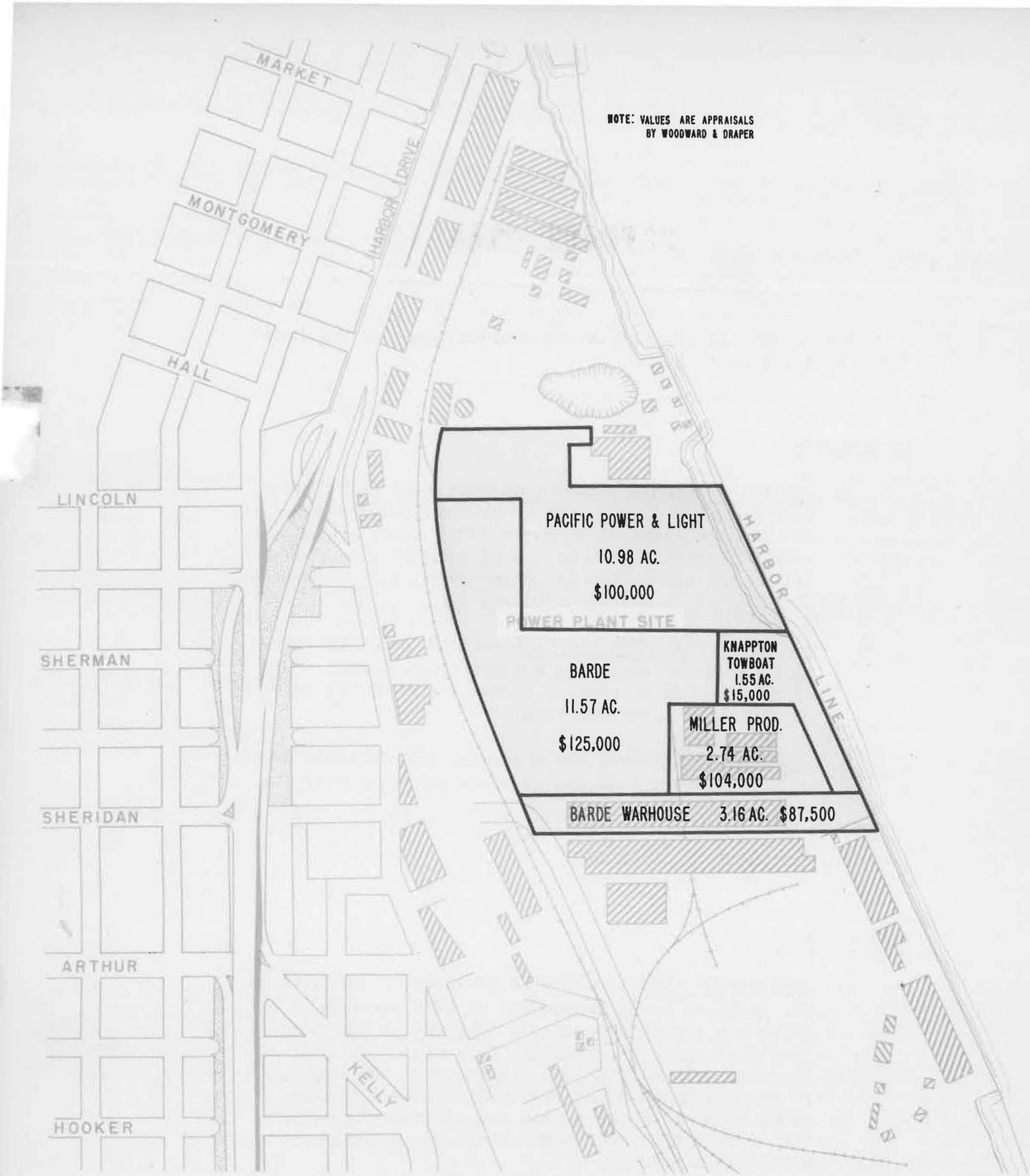


PLATE 22

AREA, OWNERSHIP & VALUE

POWER PLANT SITE
EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION APRIL 1955

NORTH

SCALE IN FEET
0 200 400

2. Poor Environment--Surrounded by industrial and salvage yards this site would be a distasteful environment for convention and cultural facilities.

3. Industrial Use--This area is one of the sole remaining large tracts of land for industrial development along the west side of the river south of the downtown district. Its use by the E-R Center would eliminate a possibility for industrial development.

4. Subject to Flooding and Foundation Problems

LOCATION & DESCRIPTION

The Power Plant site is the vacant level tract immediately south of the Pacific Power and Light Company's central heating plant on the west bank of the Willamette River. It is practically a downtown site, being only 1.2 miles from the site proposed for the new hotel at SW 6th Avenue and SW Salmon Street.

Area, ownership, and appraisal value are shown on plate 22. The three vacant tracts total 24.1 acres and are appraised at $240,000 or 23¢ per square foot. The two tracts containing buildings are 5.9 acres and are appraised at $192,000 or 75¢ per square foot.

The general elevation of the site is 29 feet above city datum. It is five feet below the 1948 flood level and eight feet below the 1894 flood. The northern part just west of the P.P.L. plant is six to ten feet lower than the general level. Much of the area is the former sawdust fill of the Portland Lumber Company. Test holes drilled when the P.P.L. plant was built show that good sand and gravel is not reached until 70 to 80 feet below the surface. It is reported that compaction is still going on in the sawdust fill and subsidence varying from two to six feet during the last thirty years has been observed at specific locations on the site.

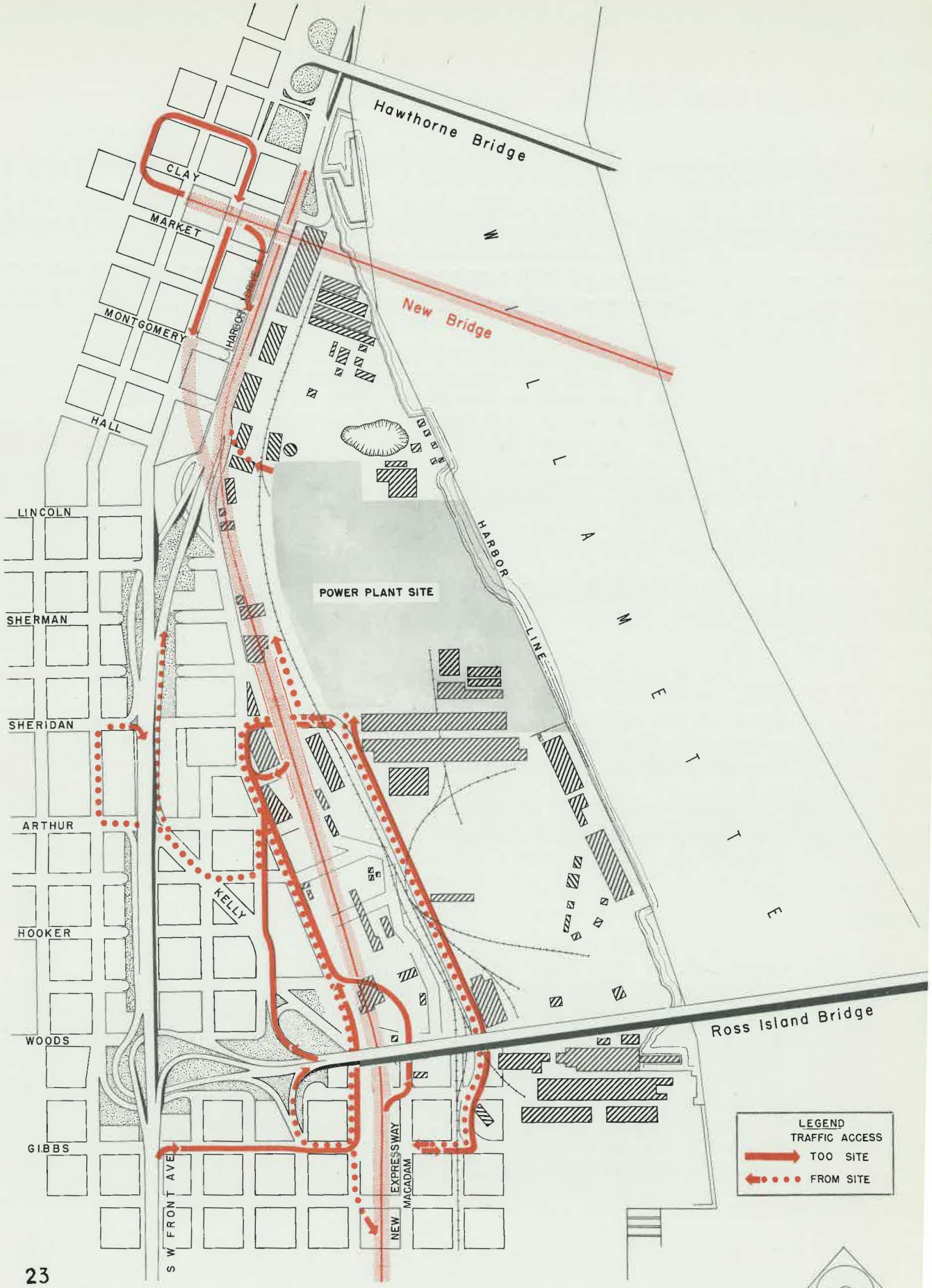


PLATE 23

TRAFFIC ACCESS

POWER PLANT SITE EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

APRIL 1955

A C C E S S

Automobile access to the site is poor at this time. It can be reached from SW Water Avenue at the foot of Sheridan Street. The only other means is over an industrial service road turning off of SW Macadam Road and SW Gaines Street. Both of these access streets are two-lane, narrow, black-topped drives having a combined carrying capacity in one direction of not over 1300 vehicles per hour. In other words, it would take almost three hours to clear 3700 cars from the site. This is the number expected for a capacity crowd of 11,000 people, assuming a ratio of three persons per car.

Construction of the proposed Salem Expressway (US99 W), with an underpass at Sheridan Street and a service road northward from the site, as shown on plate 23, will improve the situation. But even then, the discharge capacity will increase to only 3750 vehicles per hour. Thus approximately an hour would still be required to clear the site of a peak attendance of 11,000 people.

Moreover, distribution of this discharge capacity is disadvantageous. Ordinarily 60% of the cars will be headed northward from the site, in keeping with distribution of the population. But only 47% of the capacity is available for northbound traffic.

Unfortunately there is little prospect for additional access routes. The new Salem Expressway together with the steep rise in slope to the west practically wall-in the site. Ramps from the site to either the new US 26 Expressway Bridge or the Ross Island Bridge appear to be prohibitive because elaborate structures would be necessitated to overcome the great difference in elevation.

Access by bus is also poor. There are no regular bus lines serving the site. In fact, pedestrian access from the nearby Third Avenue and Powell lines is most difficult because of the steep slope and the dangerous crossing of Harbor Drive.

Railroad access on the other hand is good. The Southern Pacific branch line from Oswego borders the site on the west.

RECOMMENDED DEVELOPMENT

In view of the inadequate capacity of access routes to the site, it cannot be recommended as a location for a coliseum, stadium, or other facility drawing large crowds. The best use of the Power Plant site is to supplement the South Auditorium site, particularly to accommodate the Pacific International Livestock Exposition. It is a good site for the P. I., having railroad trackage; at least 22.5 acres of level, cheap land; and an industrial environment similar in nature to the nuisance inherent in a livestock show.

Two alternative development plans are suggested for consideration by the P. I. management as to which would suit their operation better.

Alternative A--Supplementary to South Auditorium Site Plan 1

It is suggested that 22.5 acres of the vacant land be acquired and used primarily as open area. Here livestock could be unloaded from railroad cars, transfered to trucks, and transported to quarters at the coliseum-exhibition building. Parking of cattle trucks, storage of paraphernalia necessary to the show, and such other activities requiring space not available at the intensively developed South Auditorium site could be provided for in less trim surroundings. Housing accommodations for ranch hands and 4-H Club participants could be constructed. The river frontage might be advantageous as an adjunct for boating or sport shows or other types of marine events sponsored at the Center.

The P. I. show itself, including the display and judging of animals, would be contained in its entirety inside the large exhibition areas at the main coliseum building. The Power Plant site would serve as a staging or spill-over area. The close proximity of these two sites is shown on plate 21.

Cost of facilities to meet the variety of functions are not possible to estimate until needs are analyzed in more detail. Primarily they would be specialized and of use only to the P. I. As such, that organization could be expected to finance them. Cost of the site acquisition and preparation is estimated as follows:

1.	Site acquisition (22.5 acres)	$225,000
2.	Sewer	68,000
3.	Revetment on river bank	45,000
	TOTAL	$338,000

Alternative B--Supplementary to South Auditorium Site Plan 2 or Plan 3

In case sufficient space to quarter livestock at the main coliseum-exhibition building is not constructed, it is suggested that the full 30-acre tract in the Power Plant site be acquired. On this tract facilities for the P.I., except an arena, would be constructed as is shown on plate 24. All activities, including the quartering and judging of animals, would take place on the Power Plant site. The display of prize livestock and the holding of rodeo and horse shows or other events expected to draw large crowds would be held in the main coliseum-exhibition building on the South Auditorium site.

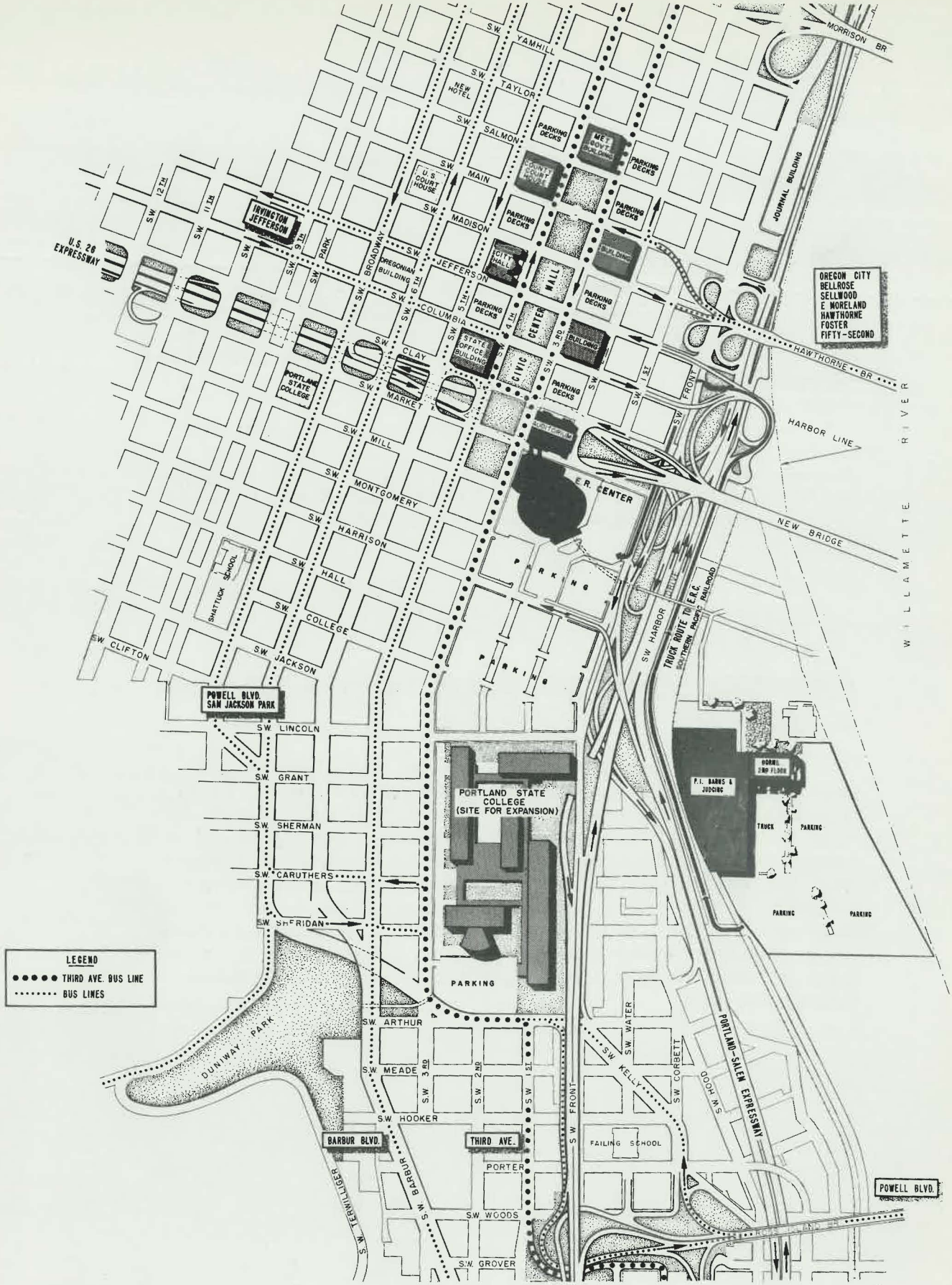


PLATE - 24

DEVELOPMENT PLAN - ALTERNATIVE B

SOUTH AUDITORIUM & POWER PLANT SITES
EXPOSITION - RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

MAY 1955

The estimated costs are as follows:

1.	Acquire site (30 acres)		$ 432,000
2.	Sewer		68,000
3.	Pave parking area	(70,000 sq. yds. @ $1.75 per sq. yd.)	122,500
4.	P. I. Exhibition building	(300,000 sq. ft. @ $2.50 per sq. ft.)	750,000
5.	4-H Dormitory and offices	(40,000 sq. ft. @ $7 per sq. ft.)	280,000
6.	Revetment on river bank		45,000
			$1,697,500

No allowance is made in either Alternative A or B for flood protection works. The type of construction and seasonal use does not seem to justify the extra expenditure. A flood as high as 1948 is expected only once in 31 years--which is longer than the economic life of the barns and pens to be provided. Those facilities which could suffer considerable harm if flooded, such as the dormitory or offices, could be built at second story levels above flood danger.

BROADWAY - STEEL BRIDGE

SUMMARY

This section of the report is concerned with a site on the east side of the Willamette River between the approaches to the Broadway and Steel Bridges.

The principal advantages and disadvantages of this site are as follows:

ADVANTAGES:

1. Central location

   The site is located approximately one mile from the center of the westside business district and less than a mile from the center of population of Portland. A total of 93% of the population of the city of Portland and 63% of the Portland urban area population live within five miles of this site.

2. Access

   Excellent automobile access exists to the area. Proposed and existing major thoroughfares on all sides of the site lead to all sections of the city and provide direct and rapid access for people residing in every part of the community. The discharge capacity from the site over these roadways is approximately 9000 vehicles per hour.

   Seven mass transit lines pass directly by the site making it possible for people in any section of the city to arrive at the area by bus directly or with a transfer.

   With the construction of a short pedestrian tunnel railway access can be provided.

3. Vacated street area

   The city already owns approximately 34% of the site in streets, which could be vacated and would cost the Exposition-Recreation Commission nothing.

4. Possibility of urban renewal assistance

The existence of predominantly substandard buildings on the site makes possible the utilization of federal urban renewal funds for acquisition and clearance of the site. This would result in a federal grant of approximately $937,700 to the city and would make possible a more extensive Exposition-Recreation development within the available $8,000,000.

5. Elimination of a substandard area

The development of the Broadway-Steel Bridge area for Exposition-Recreation purposes would result in the elimination of many substandard structures, which would be a social and economic gain for the entire community.

DISADVANTAGES:

1. Space limited

Although adequate area is available to satisfy the city's immediate exposition-recreation needs, any extensive future expansion requiring more than six additional blocks would involve crossing some major thoroughfare and would be relatively difficult and expensive.

2. Land cost

Unless urban renewal assistance is obtained for purchasing the site, the development will be limited to a coliseum, 10 acres of exhibit space and 2400 parking spaces.

3. Location between business centers

Although the site is centrally located it is not within convenient walking distance of either the westside downtown district or the proposed Lloyd Shopping Center.

RECOMMENDED DEVELOPMENT

If the Broadway-Steel Bridge site is chosen for the location of an Exposition-Recreation Center it is recommended that all buildings be placed on the area bounded by Broadway, Williams Avenue, and US99W. An eight block area east of Williams should be used for parking and the area between US99 W and the river could be best used for truck parking and material storage.

ESTIMATED COST

The total cost of the Exposition-Recreation Commission to acquire and improve the site with urban renewal funds is $1,805,000. The proposed buildings would cost approximately $5,618,000 including professional fees, leaving $577,000 for the purchase of operating equipment.

Additional costs to the include the local one-third share of the difference between the cost of the cleared land and its resale price - $468,900, and the unpaid $107,000 necessary to retire the federal loan for the Vaughn Street study.

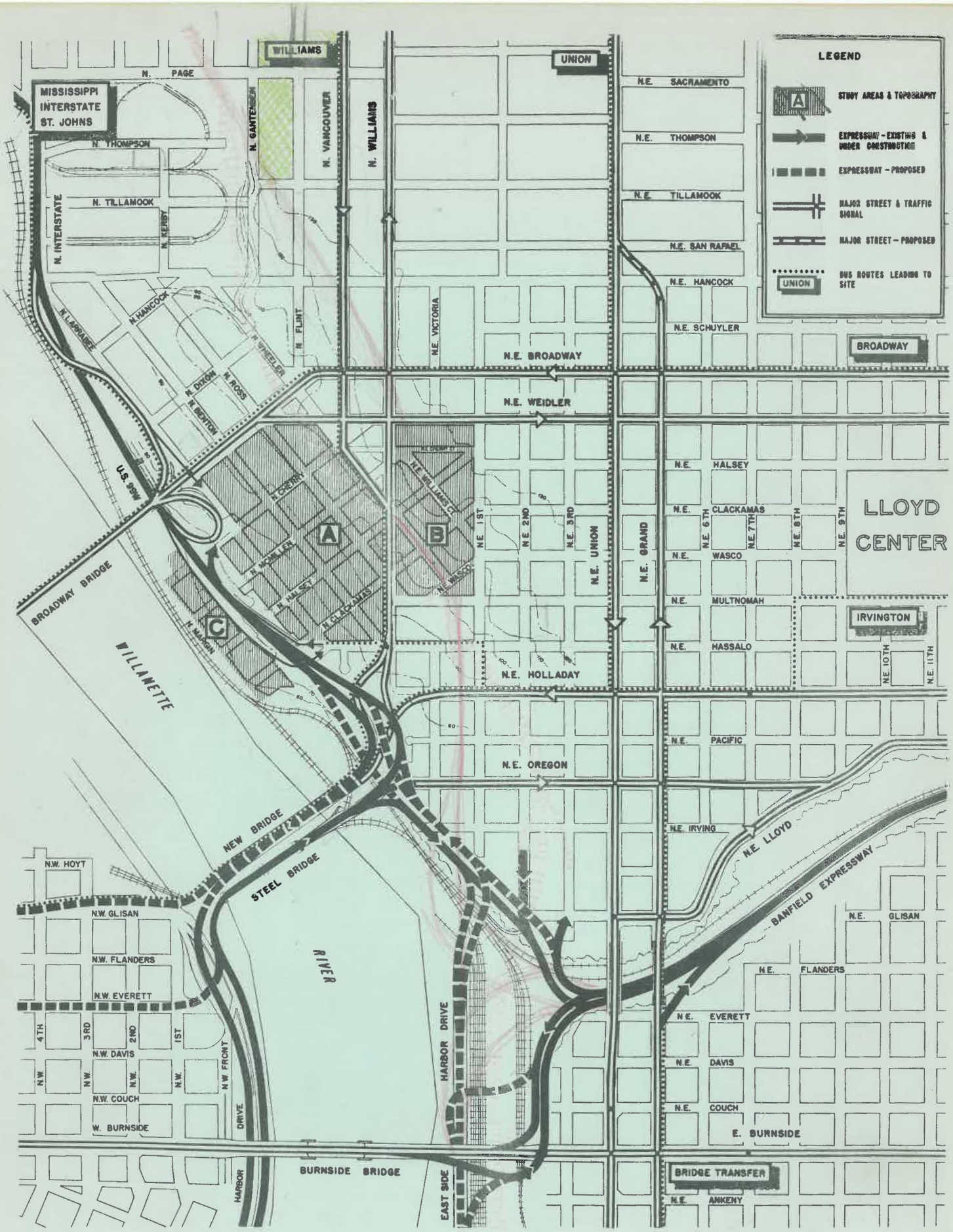


PLATE 25

VICINITY & CIRCULATION PLAN

BROADWAY – STEEL BRIDGE SITE
EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

APRIL 1955

SCALE IN FEET
0 200 400

EXISTING CONDITIONS

Location

For the purposes of this study the Broadway-Steel Bridge site is defined as the area bounded generally by N. Broadway, N.E. Weidler, N.E. First, N.E. Hassalo and the Willamette River. To facilitate studies and presentation of data the site is divided into three sections as shown on plate 25.

This is the closest East Side site to the downtown business core and has many of the advantages inherent in a downtown site. The Broadway-Steel Bridge area is not within convenient walking distance of the shops and hotels of the westside business district, however, it is close enough so that the time and cost of transportation from the center do not constitute a major disadvantage. The distance from the site to the proposed Lloyd Shopping Center and development, which include plans for a future hotel, is eleven blocks.

This site is located about 0.8 of a mile from he city's center of population which means near optimum traveling distances for all sections of the city's population.

Topography

The ground in this area slopes uniformly down at approximately a 3% grade from the northeast to the southwest, terminating in a relatively steep bank of 30-40 feet down to the river. Midway in the slope of this bank is a short level interval on which railroad tracks are constructed. A difference of approximately 40 feet exists between the northeast and southwest corners of section "A".

Areas

	Section "A"	Section "B"	Section "C"	Total
Block Area	13.1 Acres	6.7 Acres	2.5 Acres	22.3 Acres
Street Area	7.4 Acres	3.1 Acres	2.5 Acres	13.0 Acres
Gross Area	20.5 Acres	9.8 Acres	5.0 Acres	35.3 Acres

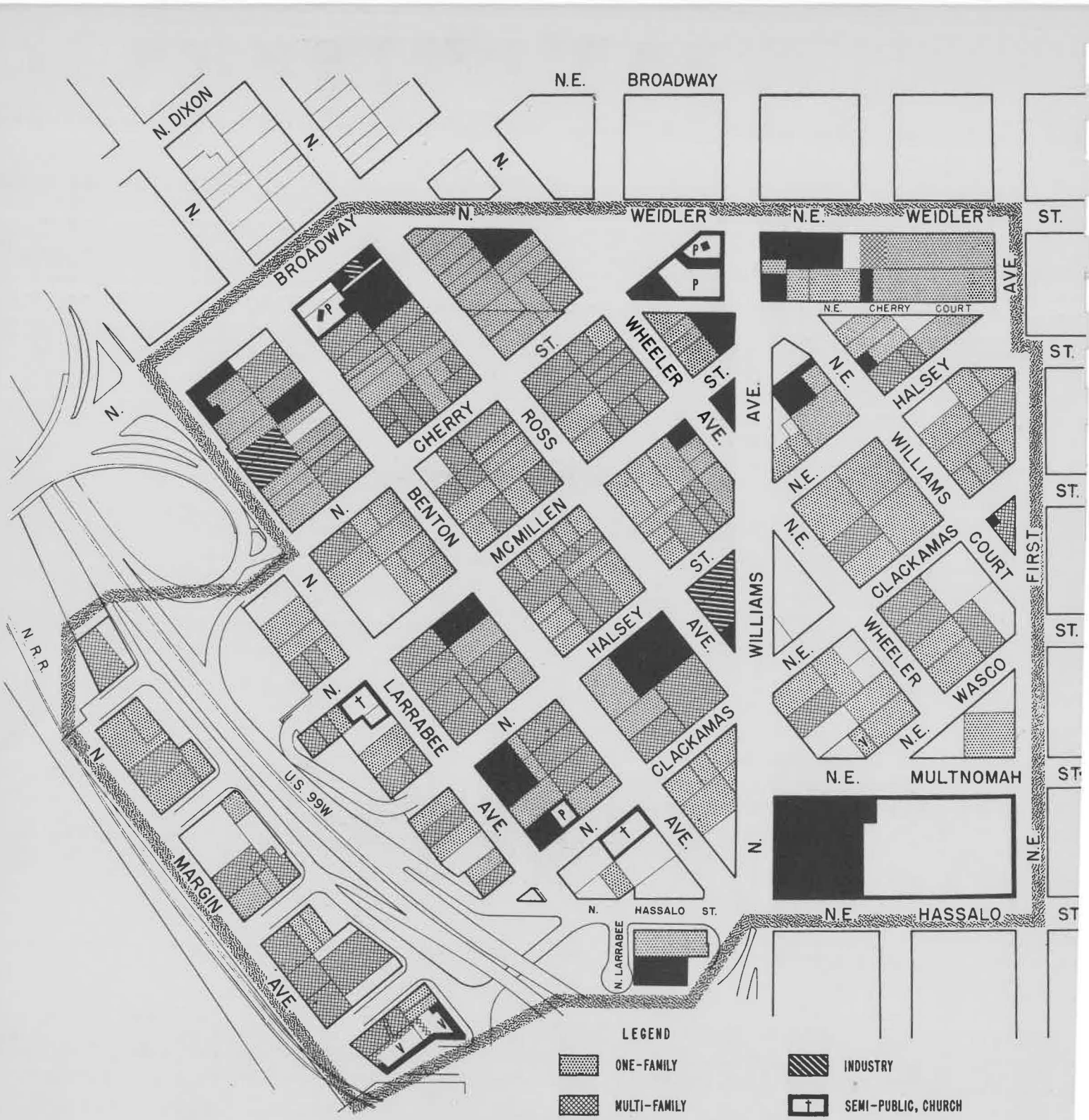


PLATE 26

LAND USE 1955

BROADWAY - STEEL BRIDGE SITE
EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

APRIL 1955

Existing Uses

At present the site is being used as indicated on plate 26. It can be seen that the area is being used predominantly for single-family residential purposes. Although the entire area has been in a commercial zone for many years, a comparatively small amount of the site is developed for commercial and industrial purposes. The majority of the existing commercial and industrial uses occur along Broadway and Williams Avenue. About 10% of the area exclusive of streets is vacant.

The percentage of ground areas in the various use classifications are as follows:

Section "A"

Single-Family	28.6%
Multi-Family	21.3%
Industrial and Commercial	8.6%
Semi-Public	1.8%
Vacant	5.8%
Streets	34.9%
	100.0%

Section "B"

Single-Family	36.6%
Multi-Family	10.6%
Industrial and Commercial	3.5%
Semi-Public	0.0%
Vacant	15.9%
Streets	33.4%
	100.0%

Section "C"

Single-Family	14.6%
Multi-Family	10.6%
Industrial and Commercial	3.9%
Semi-Public	0.0%
Vacant	13.5%
Streets	49.2%
	100.0%

Total Site

Single-Family	28.4%
Multi-Family	18.5%
Industrial and Commercial	6.6%
Semi-Public	.6%
Vacant	9.5%
Streets	36.4%
	100.0%

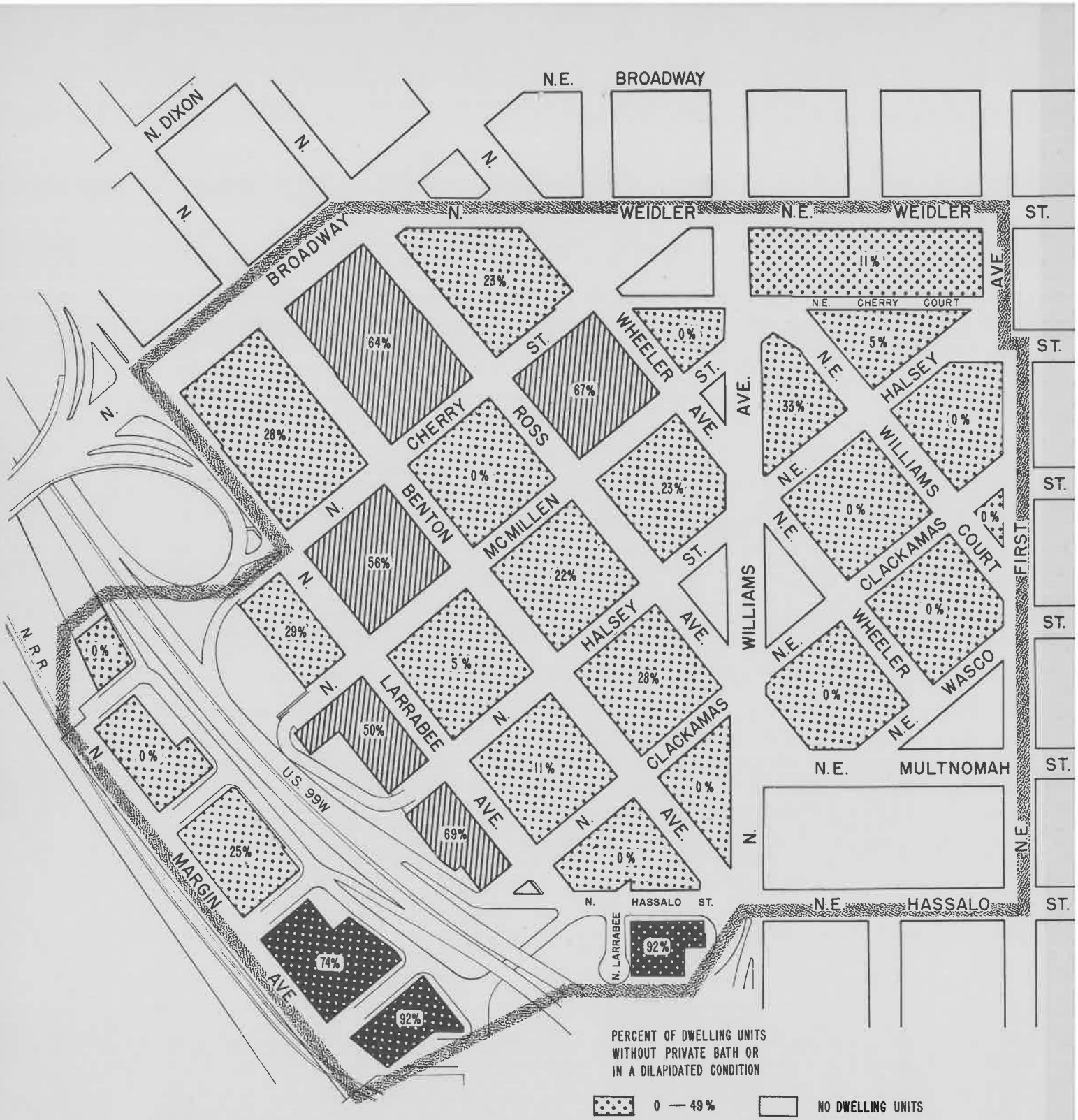


PLATE 27

SUBSTANDARD DWELLINGS

BROADWAY - STEEL BRIDGE SITE
EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

APRIL 1955

NORTH

SCALE IN FEET
0 100 200

Character of Area

Considerations of substandard dwellings and owner occupancy in the area, as indicated by the 1950 US Census Block Statistics, are shown on plates 27 and 28.

According to the 1950 Census this area has a total of 476 dwelling units, of which 224 or 47% are occupied by non-white families. Approximately 4% of the dwelling units are overcrowded as defined by the Portland Housing Code, compared to the city-wide average of 2.3%. The average number of persons per household is 2.75 compared to 2.81 for all of Portland.

The dwelling units in section "A" are 24% owner occupied, 33% in section "B" are owner occupied and 16% in section "C" are owner occupied. The city average of owner occupancy is 57%.

All of the residential structures on the site were constructed prior to 1920, but several new commercial and light industrial buildings have been constructed recently. There were approximately 70 less dwelling units in the area in 1950 than there were in 1940, not including the units taken for the construction of the new US99 W highway. As defined by the 1950 Census, 33% of the dwelling units on the site are substandard, 34% of those in section "A" are substandard, 5% of those in section "B" are substandard and 61% in section "C" are substandard.

In general, the area is one having predominantly old single and multiple family homes, occupied by average sized families having an educational and income level somewhat below the city average.

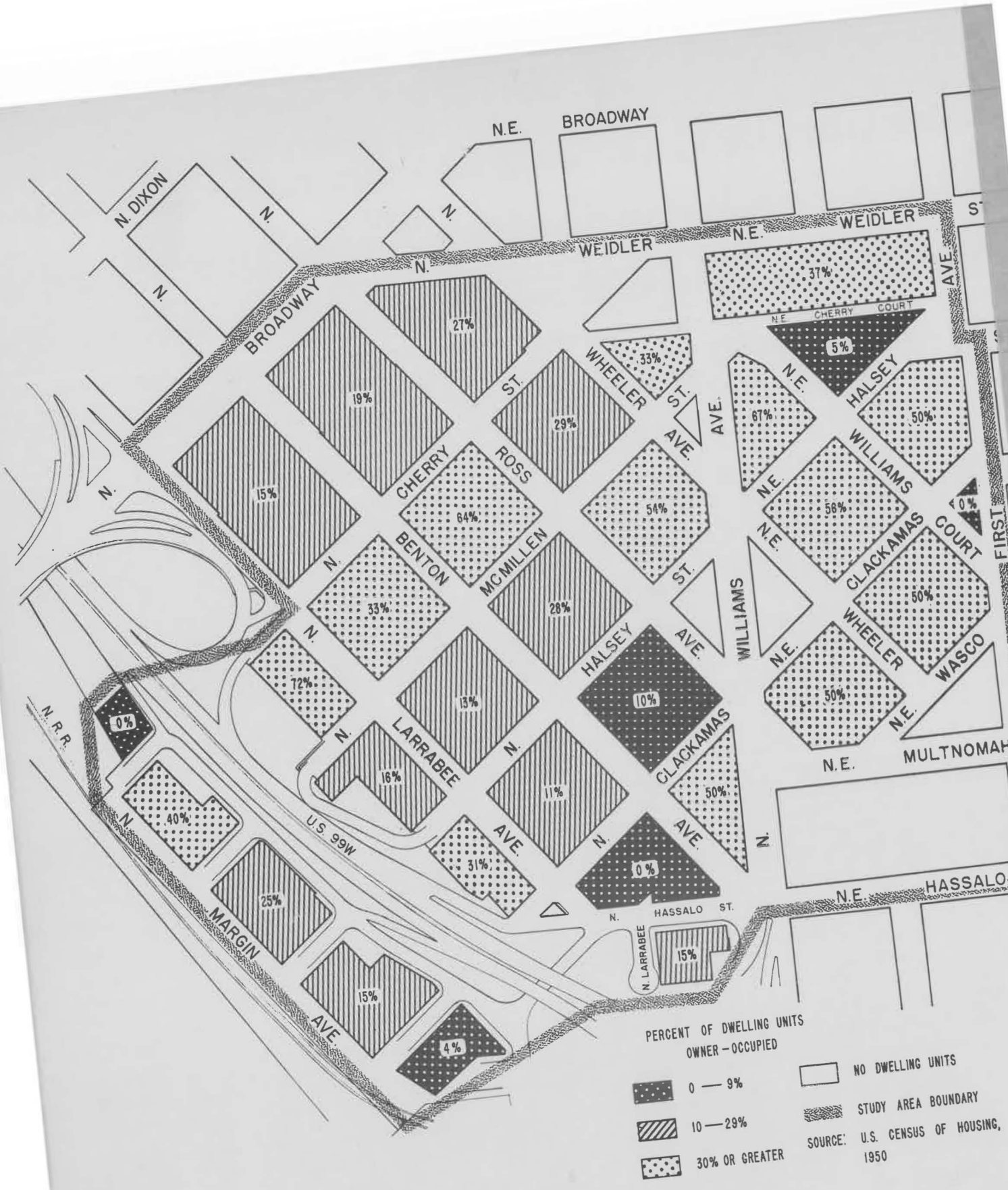


PLATE 28

OWNER-OCCUPIED DWELLINGS

BROADWAY-STEEL BRIDGE SITE
EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

APRIL 1955

SCALE IN FEET
0 100

A C C E S S

Existing Thoroughfares

The Broadway-Steel Bridge site is surrounded by several major existing trafficways. Broadway, Vancouver Avenue, Williams Avenue, and US99 W, are all adjacent to the site. Recent traffic counts show that these combined streets are carrying approximately 52,000 cars per day distributed as follows:

Broadway	20,000	US99 W	15,000
Williams	10,000	Vancouver	7,000

The existing peak volumes on these streets, however, do not coincide with the hours of anticipated traffic peaks which will be generated by the Exposition-Recreation Center. Since all of these major abutting streets are now carrying capacity loads of 750 to 1000 cars per lane per hour during peak periods, dispersal of cars from the parking lots will be difficult in rare cases when the termination of afternoon events in the Center and rush-hour traffic occur at the same time.

Imminent changes and new construction which will improve traffic circulation in this area as well as facilitate access to and from the site include (1) making Vancouver Avenue and Williams Avenue one-way couplets, (2) making Broadway and Weidler Street one-way couplets east to the vicinity of 20th Avenue, (3) making Union Avenue and Grand Avenue one-way couplets from Division Street north to the vicinity of Hancock Street, (4) completion of the Banfield Expressway to the east with connections to the Burnside Bridge, Steel Bridge, 2nd Avenue and 3rd Avenue as indicated on plate 25.

With these changes there would be a total of 10 lanes available adjacent to the site for dispersal of traffic. Because of stop signals and use by through traffic, carrying capacity of these thoroughfares can be reasonably rated at only 750 vehicles per lane per hour. Thus the total discharge capacity from the site would be approximately 7500 cars per hour. At this rate, a peak load of 2500 cars could be dispersed from area "A" in 20 minutes. However, if area "B" is used for parking, an additional 1400 cars could be accommodated and two more discharge lanes could be added. Under these conditions the maximum parking capacity of 3900 cars could be dispersed in 26 minutes.

This rate of dispersal may be increased somewhat by vehicles using minor streets in the area to other major thoroughfares some distance away.

Proposed Future Traffic Facilities

Future plans for the expressways and connections effecting this site contemplate the construction of (1) an East Side Harbor Drive, (2) interchange connections between the Banfield Expressway, East Side Harbor Drive, and US99 W, (3) a new bridge paralleling the Steel Bridge, (4) on and off ramps from the Banfield Expressway to Holladay and Oregon Streets in the vicinity of NE 14th Avenue.

The proposed East Side Harbor Drive is to be located on the east bank of the river and will connect US99 W and the Banfield Expressway with a new Southeast Expressway probably located in the vicinity of Division Street or Clinton Street.

Another proposal is the extension of Wheeler Avenue south to 1st Avenue. The purpose of this connection is to facilitate the access from the Banfield on and off ramps at 2nd and 3rd Avenues to the northern section of the city on Williams Avenue. With the construction of the connections between US99 W and the Banfield Expressway, this Wheeler Avenue route would become less important.

These proposed new facilities would make access to the site from various sections of the city easier and more direct, however, the discharge capacity would not be increased since the streets immediately adjacent to the site would remain the same.

Assuming completion of the above proposals, the probable major routes used by people from various sections of the city for going to or departing from the Center would be as follows:

North - Vancouver Avenue to the site and back on Williams Avenue, or use US99 W to the Hassalo underpass or Larrabee Street approaches to the site and back on US99 W.

Northeast - Vancouver Avenue to the site and back on Williams Avenue or Broadway to Vancouver Avenue to the site and back on Weidler Street.

East - Broadway to Vancouver Avenue to the site and back on Weidler Street, Holladay Street to the Hassalo approach to the site and back on Oregon Street or Banfield Expressway to the Cherry Street approach and return Broadway to Wheeler Avenue to 1st Avenue to Oregon Street to 2nd Avenue to the Expressway.

Southeast - Grand Avenue or the East Side Harbor Drive and return on Union Avenue.

Southwest - Arrive and leave across the Steel Bridge.

Northwest - Arrive and leave across the Broadway Bridge.

It can be seen that convenient access to the site exists from all sections of the city, but getting onto the Banfield Expressway or the East Side Harbor Drive to return to the East or Southeast section is relatively difficult.

Mass Transit

Existing mass transit service to the Broadway-Steel Bridge site is excellent. The St. Johns, Interstate, Mississippi, Irvington, Union, Broadway, and Bridge Transfer lines are all routed past the site at present. This insures direct mass transit access to the site for people coming to the Center from the North and Northeast sections of the city and also from the westside downtown district. It is necessary for residents of the Southeast, Southwest, and Northwest to transfer to one of the above mentioned lines to reach the site. For special events at the Center, "tripper" buses and the routing of other lines past the site would increase the accessibility from all sections of the city to this area.

In addition to the Portland Traction Company service, the Portland-Vancouver and Yacolt suburban bus lines pass by this site.

Taxi

At current rates the taxi fare from Multnomah Hotel to the Broadway-Steel Bridge site is $1.40. The fare from the proposed new hotel location at S.W. 6th Avenue and S.W. Taylor Street is $1.70.

Railroad

There are two U.P. tracks leading north from the east end of the Steel Bridge which pass by the site between Margin Avenue and the Willamette River. The bed of the tracks is approximately 20 feet below the level of Margin Avenue and 15 feet above the mean high water level of the river.

Three major methods of transferring rail arrivals to the site are possible. A relatively costly method is to tunnel under the highway and bring railroad cars directly to area "A" in an open cut. The cars would thus arrive at the site approximately 25 feet below the ground level and would necessitate some means of raising animals and materials to the level of the exhibit space. A second possibility consists of unloading the cars on an existing siding in the low area south of section "C" and trucking the animals and materials to the site. Livestock could be walked up an existing road from the unloading area to the top of the hill and under the Hassalo underpass to the site. A third method possible for gaining access to the railroad is to cut back the bank on the western side of area "C", construct a retaining wall and provide a new siding from which to unload. A tunnel and ramp could then be built from the siding to the exhibit area passing under area "C" and US99 W and rising at approximately a 7% grade so as to arrive at the building at floor level.

At present a critically sharp curve in the tracks exists at the east end of the Steel Bridge which results in problems for rail traffic movements at that point. The railroad has plans for alleviating these difficulties by acquiring additional property to the east of their right-of-way and relocating their tracks approximately 50 feet west of US99 W. This would necessitate cutting into the existing bank, constructing retaining walls and vacating several dedicated streets. If this were accomplished it would eliminate the possiblity of any other use of section "C" and would also make the southbound connection between US99 W and the Banfield Expressway as proposed impossible. To date, none of the property on the top of the bank has been purchased by the railroad.

Additional Facts

Census figures show that 377,000 people lived within a 5 mile radius of the Broadway-Steel Bridge site in 1950. This represents a total of 63% of the Portland urban area population. Approximately 348,000 or 93% of the City of Portland 1950 population lived within this 5 mile circle.

By the fastest existing traffic routes, distance to various points in the community are as follows:

Lloyd Center (NE 12th & Multnomah)	.7 miles
Center of Population (NE 15th & Holladay)	.8 miles
New hotel (SW 6th & Taylor)	1.5 miles
Multnomah (SW 35th & Capitol Highway)	6.0 miles
St. Johns (N. Jersey and Philadelphia)	6.8 miles
Milwaukie (McLoughlin & Washington)	7.0 miles
Lents (SE 92nd & Foster)	7.3 miles
Downtown Vancouver (5th & Washington)	7.3 miles
Oswego (State & A)	8.5 miles
Beaverton (Front & Main)	9.2 miles
Oregon City (7th & Main)	13.1 miles
Gresham (Main & Powell)	13.8 miles

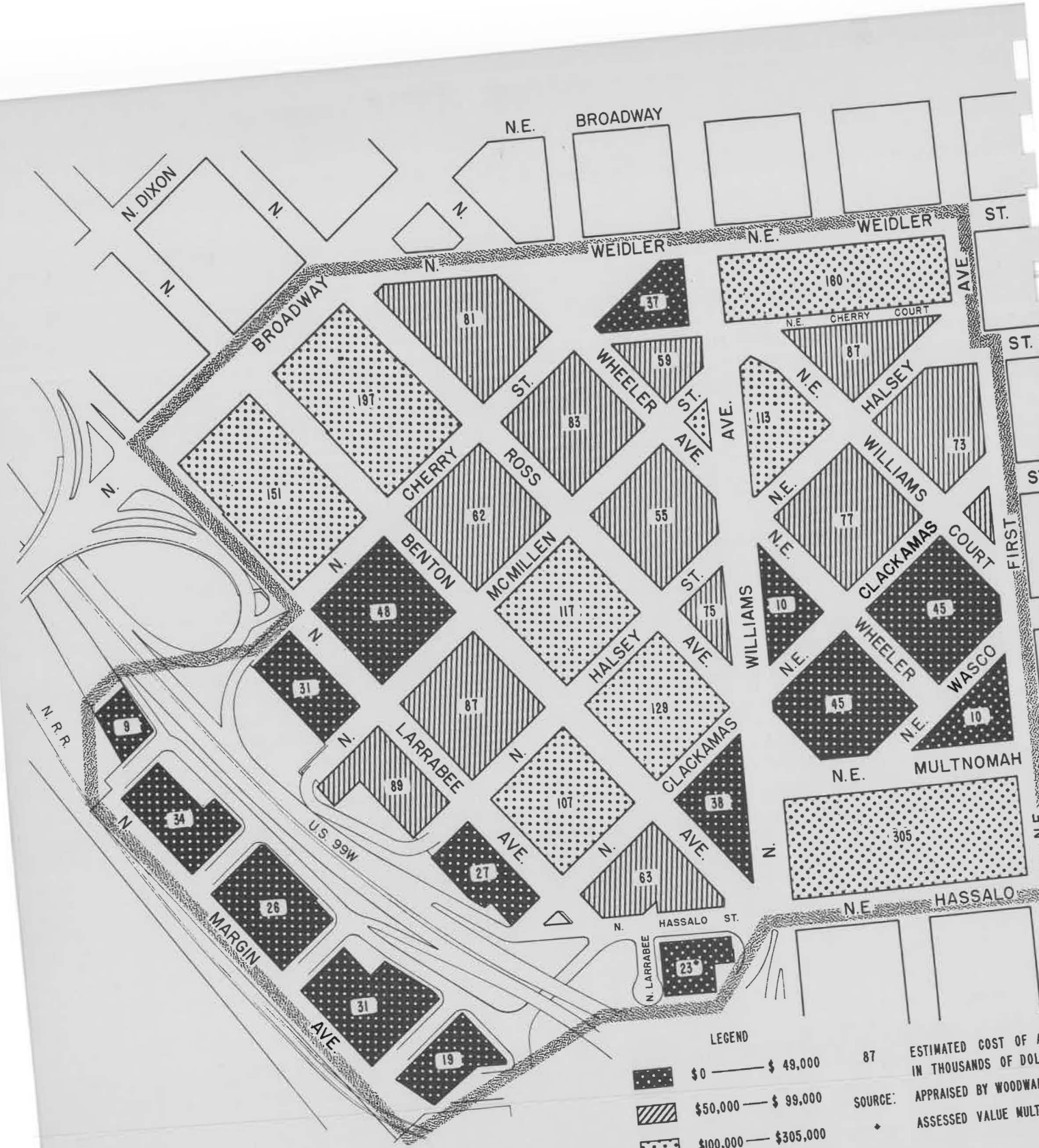


PLATE 29

ESTIMATED COST

BROADWAY – STEEL BRIDGE SITE
EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

APRIL 1955

SITE ACQUISITION AND PREPARATION COSTS

Recent Sales and Assessed Values

Records in the County Assessor's office show that thirteen actual sales of property in the Broadway-Steel Bridge area since 1950 have averaged 4.14 times the assessed values. This figure is approximately the same as the ratio of recorded sales to assessed values in other sections of the city comparable to this site.

Appraisals

The firm of Woodward and Draper, engaged by the E-R Commission to appraise the properties of this site, have estimated the value of the area at $2,177,850. This is 4.61 times the assessed value of the property, which compares very closely with the ratio of actual sales to assessed values. Plate 29 indicates individual block appraisals. However, Woodward and Draper estimate that a 50% contingency should be added to the probable market value of property to cover costs required either by negotiated payments to avoid condemnation, or by jury verdicts in condemnation. The total estimated cost including the 50% contingency is $3,266,760 or 6.93 times the assessed value of the site.

Streets

Of the 35.3 acres in the site, 13 acres or 36% of the gross area consists of dedicated streets. It is assumed that these streets can be vacated with no cost for use in the development of an E-R Center.

As mentioned previously, the Ziegler Ammendment to the City Charter does not apply to public agencies so the vacation of streets within 2000 feet of the Willamette River for the E-R Center will not require the dedication of an equal amount elsewhere.

Urban Renewal

It is possible that this site may be purchased and cleared with the assistance of federal urban renewal funds. Under this program, the local Housing Authority can acquire and clear substantially substandard or blighted areas and sell the property for uses consistent with an integrated community plan. Two-thirds of the difference between the cost of the cleared site and its resale value is paid by the federal government as an outright grant.

If this area is accepted as a blighted or substandard area and becomes eligible for federal urban renewal assistance, the Portland Housing Authority can purchase and clear the area and sell it to the Exposition-Recreation Commission for the development of a Center.

It is highly probable that sections "A" and "C" can be classified as substantially substandard and thus qualify for clearance funds. According to the U.S. Census definition of substandardness, 33% of the dwelling units in the total site are substandard. However, a more detailed analysis based on quality standards of the American Public Health Association, which are acceptable by the federal urban renewal agency, will undoubtedly show that this area is predominantly substandard.

Although area "B" has better housing and may not qualify by itself for urban renewal funds, the area is needed for parking as part of the total development and may thus be included in the urban renewal program.

Any final estimate of site costs to the E-R Commission based on urban renewal assistance must be governed by the decisions to be made on the questions stated on pages 86 and 87. ie (1) Shall the city undertake urban renewal projects at this time? (2) How shall the $107,000 borrowed for the Vaughn Street study be repaid? (3) Allocation locally of the city's one-third share of the write-down cost of the project? (4) Should the E-R Commission wait for possible urban renewal assistance?

Since vacant land in this area has a value of approximately 65¢ per square foot, based on 4.5 times the average assessed value of existing vacant properties, it is assumed that $1.00 per square foot is a reasonable price which could be expected by the redevelopment authority from the E-R Commission for vacant cleared land in this area. Other agencies

might be willing to pay a higher price to the redevelopment authority for the property, but any other use would have to qualify as a higher and better use for the land consistent with the over-all development plan for the city.

Possible Acquisition Costs of Areas

	Section A	Section B	Section C	Total
Maximum Price--Woodward and Draper Appraisal including 50% Contingency				
Block Area Cost per Sq. Ft.	$3.80	$3.20	$1.64	$3.38
Gross Area Cost per Sq. Ft. (Includes Streets)	$2.40	$2.18	$ .82	$2.18
TOTAL COST	$2,160,000	$927,000	$178,000	$3,266,760
Market Value--Woodward and Draper Appraisal not including 50% Contingency				
Block Area Cost per Sq. Ft.	$2.50	$2.12	$1.09	$2.24
Gross Area Cost per Sq. Ft.	$1.61	$1.45	$0.55	$1.41
TOTAL COST	$1,440,500	$618,350	$119,000	$2,177,850
Urban Renewal Price				
Block Area Cost per Sq. Ft.	$1.00	$1.00	$1.00	$1.00
Gross Area Cost per Sq. Ft.	$ .64	$ .68	$ .50	$ .63
TOTAL COST	$571,000	$292,000	$109,000	$970,000
Assessed Values	$335,120	$136,510	$29,010	$500,640

Demolition

A unit figure for estimating demolition and grading costs is very difficult to establish because of the many variables such as type of structure, amount of salvage, time allowed for demolition, etc. which determine the demolition cost of a structure. However, the average estimate by several wrecking contractors in the city is that the buildings on the Broadway-Steel Bridge site could probably be removed and the area graded for approximately $300 per building. Since there are in the neighborhood of 250 buildings on the site it is estimated that clearing and grading the property should cost about $75,000.

CONSTRUCTION COSTS

Interviews with practicing architects and engineers have established that the following unit costs for construction are reasonable to use for estimating purposes:

Coliseum building with lobbies, circulation area, arena and 8,000 permanent seats	$ 3,500,000
Assembly halls and meeting rooms	$15.00 per sq. ft.
Primary exhibit space	$ 7.00 per sq. ft.
Open covered exhibit and parking space	$ 3.50 per sq. ft.
Open uncovered parking deck	$ 3.25 per sq. ft.
Grade, pave and landscape parking area	$ 2.70 per sq. yd.

Costs for portions of exhibit areas, meeting rooms, mechanical equipment space, etc., located under the arena seats are included in the cost of the coliseum.

RECOMMENDED DEVELOPMENT

The Broadway-Steel Bridge site can adequately accommodate a sports and livestock coliseum, convention facilities, exhibition space, P. I. facilities, a theater-music hall, and off-street parking. Since the possible costs vary so greatly, three alternate development plans are presented based on different site acquisition costs.

Plan 1 is predicated on urban renewal assistance and represents the maximum which might be accomplished on this site within the available $8,000,000. Plan 2 is based on the average market value

or estimated appraisal value (not including the 50% contingency) for land costs. Plan 3 is the minimum development which can be expected on this site within the $8,000,000. The acquisition cost used for this plan is the maximum appraisal figure including the 50% contingency.

Plan 1--With Urban Renewal Funds

If the Broadway-Steel Bridge site is chosen for the E-R Center and the property acquisition costs from the local redevelopment authority approximate $1.00 per square foot of block area, it is recommended that all buildings be located on section "A" with parking on section "B" and truck and material storage on section "C". A suggested development plan is indicated on plate 30.

Based on these costs the functions which can be accommodated on this site within the available $8,000,000 are:

1. Sports and livestock coliseum.

Arena floor	(24,000 sq. ft)
8000 permanent seats	
3000 temporary seats	

2. Exhibit space of P.I. or other large shows

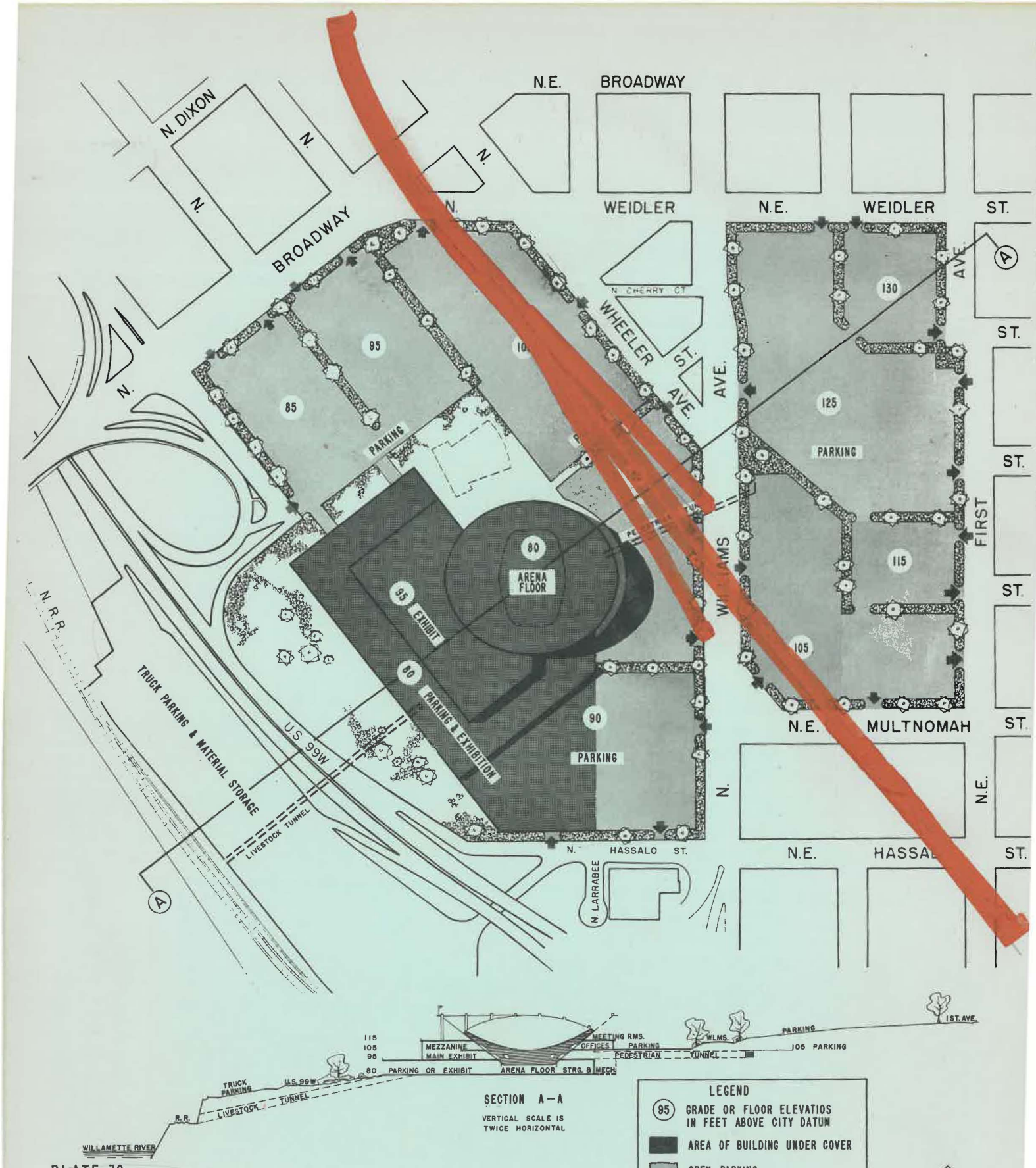
Permanent exhibit - level 95	(93,000 sq. ft.)
Mezzanine exhibit - level 105	(54,000 sq. ft.)
P.I. or parking - level 80	(253,500 sq. ft.)
TOTAL EXHIBIT SPACE	(400,500 sq. ft.)

3. Convention facilities

Meeting rooms and assembly halls	(15,000 sq. ft)

4. War Memorial

A focal point could be developed in the outdoor concourse for this feature.



SECTION A—A

VERTICAL SCALE IS TWICE HORIZONTAL

LEGEND

(95) GRADE OR FLOOR ELEVATIOS IN FEET ABOVE CITY DATUM

AREA OF BUILDING UNDER COVER

OPEN PARKING

NORTH

SCALE IN FEET

0 100 200

PLATE 30

RECOMMENDED DEVELOPMENT

BROADWAY - STEEL BRIDGE SITE
EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

1" = 150'

5. Parking

3000 spaces in lots or parking deck	(916,000 sq. ft.)
850 spaces under cover when not used for P.I. or exhibit purposes	(253,500 sq. ft.)
3850 TOTAL PARKING SPACES	(1,169,500 sq. ft.)

6. Truck and material storage

Section "C" can be developed for this	(215,000 sq. ft.)
Mechanical and storage under arena	(27,000 sq. ft.)

ESTIMATED COST - PLAN 1

Site Acquisition and Preparation

1.	Acquisition of "A"	20.5 acres	$ 571,000
2.	Acquisition of "B"	9.8 acres	292,000
3.	Acquisition of "C"	5.0 acres	109,000
4.	Grade, pave and landscape parking lots on "A" and "B"	95,000 sq. yds. @ $2.70 per sq. yd.	258,000
5.	Pedestrian underpass under Williams Avenue to coliseum	320 lin. ft. @ $200 per lin. ft.	64,000
6.	Railroad siding and tunnel to building		286,000
7.	Install parking meters	3000 @ $75	225,000
		TOTAL SITE COST	$1,805,000

Building Costs

8.	Coliseum		$3,500,000
9.	Permanent exhibit space	77,000 sq. ft. @ $7.00 per sq. ft.	539,000
10.	P.I. or covered parking	226,000 sq. ft. @ $3.50 per sq. ft.	794,000
11.	Parking deck	57,000 sq. ft. @ $3.25 per sq. ft.	185,000
		TOTAL BUILDING COST	$5,018,000
12.	Design and contingency		600,000
		TOTAL DEVELOPMENT COST	$7,423,000
13.	Available for operating equipment, removable stanchions, etc.		$ 577,000

Demolition and utilities relocation where listed?

Explanation of Costs

Items 1, 2, and 3. These acquisition costs are based on $1.00 per square foot.

On this basis the local one-third share of the write-down would be computed as follows:

Cost of acquiring "A", "B", and "C", (market value)	$2,177,000
Demolition and clearing	75,000
Utilities relocation	124,000*
TOTAL SITE COST	$2,376,600
Resale price	$ 970,000
Write-down	$1,406,600
Local share (one-third of write-down)	$ 468,900

* Utilities relocation estimate by Office of City Engineer and the various utilities companies. Costs include necessary relocation of existing utilities and provision of services for proposed buildings.

Sewer	$ 39,000
Water	33,000
Telephone	None
Gas	26,000
Power	26,600
TOTAL UTILITIES COST	$124,600

It is possible that certain civic improvements on the site can be considered as payment on the local one-third share. The parking lots or public buildings might thus fulfill part or all of the city's obligation. Even if the E-R Commission were to assume the entire amount of the local share they would still save $830,000 over the market value or $1,919,000 over the maximum appraisal price in the acquisition of the site.

Item 4. Provides for landscaping and a thicker paving surface not included in the estimate used for the Vanport and Ross Island-Oaks sites.

Item 5. Estimate by Office of City Engineer.

Item 6. Estimated by the Office of the City Engineer as follows:

Cut back bank	10,000 cu. yds. @ $1.25 per cu. yd.	$ 13,000
Retaining wall	830 lin. ft. @ $100 per lin. ft.	83,000
Tunnel	350 lin. ft. @ $500 per lin. ft.	175,000
Open cut	150 lin. ft. @ $35 per. lin. ft.	5,000
Railroad siding (800 ft) including necessary switches		10,000
	TOTAL	$286,000

Item 7. The efficient use of the parking areas and access streets can be greatly increased by the installation of parking meters in the parking lots. It would result in the elimination of money collection bottlenecks at entrances to the lots and thus decrease the lines of waiting cars in access streets. In addition to facilitating the operation of the parking function during E-R Center activities, the meters might serve as a source of income revenue through use of the parking facilities for daytime parking by persons going to the downtown area. A recent parking study by the Portland City Planning Commission shows that there is a large unsatisfied parking demand along the northern edge of the downtown core area. This is largely due to the fact that the downtown business district is adjacent to a wholesale and industrial area to the north, which has a large parking demand itself and is thus unable to alleviate the downtown parking need. If the parking on the Broadway-Steel Bridge site combined with a bus ride into the downtown area were made attractive enough in terms of money and time expenditures to users, it is conceivable that this area might be extensively used for daytime parking purposes.

Items 9 and 10. Areas for parking and exhibit located under arena seats are not included.

Item 12. Approximately 10% of the improvement cost is allowed for professional fees and unforseen costs.

Plan 2 - Market Value

If the acquisition costs for the Broadway-Steel Bridge area approximate the present market value (plate 29) the development proposed in Plan 1 would exceed the $8,000,000 available by $1,208,000. However, by eliminating the acquisition and development of the parking lot on section "B" the costs can be brought within the limitation.

Assumingthe approximate present market value for land acquisition, the following functions can be provided on this site within the $8,000,000:

1. Sports and livestock coliseum

Arena floor	(24,000 sq. ft.)
8000 permanent seats	
3000 temporary seats	

2. Exhibit space for P.I. or other large shows

Permanent exhibit - level 95	(93,000 sq. ft.)
Mezzanine exhibit - level 105	(54,000 sq. ft.)
P. I. or parking - level 80	(253,500 sq. ft.)
TOTAL EXHIBIT SPACE	(400,500 sq. ft.)

3. Convention facilities

Meeting rooms and assembly halls	(15,000 sq. ft.)

4. War memorial

A suitable feature could be developed in the outdoor concourse

5. Parking

1630 spaces in lots or parking deck	(489,000 sq. ft.)
850 spaces under cover when not used for P.I. or exhibit purposes	(253,500 sq. ft.)
2480 TOTAL PARKING SPACES	(742,500 sq. ft.)

6. Truck and material storage

Section "C" can be developed for this	(215,000 sq. ft.)
Mechanical and storage under arena	(27,000 sq. ft.)

ESTIMATED COST - PLAN 2

1.	Acquisition of "A"	20.5 acres	$1,440,500
2.	Acquisition of "C"	5.0 acres	119,000
3.	Demolition and grading		75,000
4.	Grade, pave and landscape parking lots on "A"	48,000 sq. yds. @ $2.70 per sq. yd.	130,000
5.	Railroad siding and tunnel to building		286,000
6.	Install parking meters	1630 @ $75	122,000
7.	Utilities		124,000
		TOTAL SITE COST	$2,296,500

Building Costs

8.	Coliseum		$3,500,000
9.	Permanent exhibit space	77,000 sq. ft @ $7.00 per sq. ft.	539,000
10.	P. I. or covered parking	226,000 sq. ft. @ $3.50 per sq. ft.	794,000
11.	Parking deck	57,000 sq. ft. @ $3.25 per sq. ft.	185,000
		TOTAL BUILDING COST	$5,018,000
12.	Design and contingency		600,000
		TOTAL DEVELOPMENT COST	$7,914,500
13.	Available for operating equipment		$ 85,500

Plan 3 - Maximum Site Cost

If the Broadway-Steel Bridge site is chosen for the Exposition-Recreation Center and the site acquisition costs approximate the maximum appraisal values, it is recommended that the first development be placed on section "A" of the area.

Functions which can be accommodated on this area within the available $8,000,000 are:

1. Sports and livestock coliseum

Arena floor	(24,000 sq. ft.)
8000 permanent seats	
3000 temporary seats	

2. Exhibit space for P.I. or other large shows

Exhibit, P.I. or parking	- level 80	(253,500 sq. ft.)
Permanent exhibit	- level 95	(93,000 sq. ft.)
Mezzanine exhibit	- level 105	(54,000 sq. ft.)
TOTAL EXHIBIT SPACE		(400,500 sq. ft.)

3. Convention facilities

Meeting rooms and assembly halls	(15,000 sq. ft.)

4. War memorial

A focal point could be developed in the outdoor concourse for this feature

5. Parking

1630 spaces in lots or parking deck	(489,000 sq. ft.)
850 spaces under cover when not used for exhibit purposes	(253,500 sq. ft.)
2480 TOTAL ON-SITE SPACES	(742,500 sq. ft.)

ESTIMATED COST - PLAN 3

Site Acquisition and Preparation

1.	Acquisition of "A"	20.5 acres	$2,160,000
2.	Demolition and grading		75,000
3.	Utilities		124,000
4.	Grade, pave and landscape parking lots	48,000 sq. yds. @ $2.70 per sq. yd.	130,000
		TOTAL SITE COST	$2,489,000

Building Construction

5.	Coliseum		$3,500,000
6.	Permanent exhibit	77,000 sq. ft. @ $7.00 per sq. ft.	539,000
7.	Exhibit and covered parking	226,500 sq. ft. @ $3.50 per sq. ft.	794,000
8.	Parking deck	57,000 sq. ft. @ $3.25 per sq. ft.	185,000
		TOTAL BUILDING COST	$5,018,000
9.	Design and contingency		493,000
		TOTAL DEVELOPMENT COST	$8,000,000

POSSIBILITY OF EXPANSION

In the future, as more needs become apparent and as more money is made available, it is probable that some expansion of the initial development will be desirable.

After a development such as indicated in Plan 1, it is possible to provide additional facilities without increasing the boundaries of the site. Space is available for the construction of a new theater-music hall adjacent to the coliseum. In addition to cultural advantages the adequacy of the Center for accommodation of conventions would be greatly increased by such a facility.

Because of the difference in elevations which exists on the site it is possible to increase the parking capacity of the area by double-decking the parking lots on the upper levels.

In addition to on-site expansion, it is within reason to contemplate the acquisition and development for exposition-recreation purposes the six blocks to the east of section "B". The area bounded by Weidler Street, N.E. 3rd Avenue, Multnomah Street, and N.E. 1st Avenue is essentially the same in character as "B" and should be no more expensive or difficult to acquire.

SUPPLEMENTARY SOURCES OF FINANCING

As mentioned in previous sections of the report, if the E-R Center provides adequate space to accommodate the P.I. on a rental basis, the P.I. will turn over its present buildings and grounds (appraised at about $2,000,000) to the city. These assets may be utilized by selling the property, leasing the property or by obtaining a loan on the value of the property.

It is reasonable that under Plan 3 a loan on existing P.I. facilities should be used to acquire area "C" for truck storage purposes and also to purchase removable stanchions and stalls necessary for the P.I. operation.

ADVANTAGES OF A COMMUNITY-WIDE NATURE

A well-designed exposition, recreation, cultural and convention center development located on the Broadway-Steel Bridge site could well be the most remembered experience of visitors to Portland--either by those actually using the center's facilities or by tourists merely passing through on US99 W. The setting, located on a slope up from the highway within view of the activities on the Willamette River and not surrounded by tall buildings or congestion, has possibilities of a very dramatic and impressive development.

The community would also benefit by the elimination of substandard housing and the relocation of the residents of the site in more adequate living conditions.

The Center's activities and day-time parkers would create an off-peak demand for mass transit facilities that could help the Portland Traction Company economically and thus decrease somewhat the community's mass transit problem.

BUCKMAN FIELD

SUMMARY

This section of the report deals with a site on the south side of Sullivans Gulch in the vicinity of Benson High School and Buckman Field.

For purposes of comparison with other sites, the major advantages and disadvantages of this site are as follows:

ADVANTAGES:

1. Central Location - The site is located within 0.3 of a mile of the center of population of the city and 1.5 miles from the center of the westside downtown district. A total of 365,000 people and 98% of the city's 1950 population live within five miles of the site.

2. Majority of the Site is Vacant - Since expensive building acquisition and demolition are not involved in the preparation of the site, land costs, as well as time required to get the Center underway, would be reduced.

3. Close to Shopping Center - The site is within easy walking distance (8 blocks) of the Lloyd Shopping Center and proposed hotel location.

DISADVANTAGES:

1. Expansion Limited - Expansion beyond the study area (39.4 acres) would be extremely costly and difficult.

2. Separation of Parts of the Site - Major thoroughfares and Benson High School divide the site into five separate tracts, making an integrated design and operation difficult.

3. Rail Access Difficult - The most feasible method of bringing livestock and materials arriving by rail to the site is by truck from railroad terminal points. The difference in ground elevation and the Banfield Expressway are barriers to direct access to the Union Pacific Railroad in Sullivans Gulch.

4. Playfield Displaced - The location of the Exposition-Recreation Center on Buckman Field would displace a centrally located playfield which functions also as a part of Benson High School facilities. Although this playfield might be relocated on Lloyd Golf Course, it would be separated from Benson High School by Irving Street, a heavily traveled artery, probably divided into two parts by the extension of 16th Avenue across the Gulch, and the golf course is some three acres smaller than Buckman Field.

5. Environmental Conflict - The activities inherent in the operation of an E-R Center would conflict with established apartment house uses adjacent to the northeast

RECOMMENDED DEVELOPMENT

If the Buckman Field site is chosen as the location for the Exposition-Recreation Center, it is recommended that the first stage of construction consisting of a sports and livestock coliseum, exhibition space, and parking facilities be located on the Buckman Field area (bounded by NE Glisan, NE Davis, NE 12th and NE 16th).

Future expansion could take place on the circus grounds to the northwest, the vacant block east of Buckman Field, and on the two block area east of Benson High School.

It is recommended that the playfield facilities of Buckman Field be relocated on the Lloyd Golf Course .

ESTIMATED COST

The total cost to the Exposition-Recreation Commission to acquire and improve the Buckman Field area is estimated to be $1,920,600. The proposed first stage construction cost would be approximately $5,441,000, leaving $638,400 for design and contingencies.

EXISTING CONDITIONS

Location

The study area for this site includes the following properties:

Buckman Field area (bounded by NE Glisan, NE Davis, NE 12th and NE 16th)

Lloyd Golf Course (bounded by the Banfield Expressway, NE Irving, NE 12th and NE 16th)

Circus Grounds (bounded by the Banfield Expressway, NE Glisan, NE 9th and NE 12th)

The two block area adjacent to the east of Benson High School.

Block bounded by NE Glisan, NE Flanders, NE 16th & NE 17th

Topography

The site slopes down slightly (approximately 2% grade) to the southwest. A difference in elevation of about 20 feet exists between the northeast and southwest corners of the Buckman Field area.

Areas	Block Area	Street Area	Gross Area
Buckman Field Area	17.5 Ac.	2.5 Ac.	20.0 Ac.
Lloyd Golf Course	10.0 "	0.8 "	10.8 "
Circus Grounds	4.2 "	1.4 "	5.6 "
Two block area east of Benson High	1.9 "	0.0 "	1.9 "
Vacant block east of Buckman Field	1.1 "	0.0 "	1.1 "
Totals	34.7 Acres	4.7 Acres	39.4 Acres

Existing Uses

At present, the majority of the property in the study area is unoccupied by buildings. Buckman Field, adjacent to the south of Benson High School is developed as a large playfield, including facilities for baseball, football, track, tennis and rest rooms. It is used for public recreation and also as athletic facilities for Benson High.

Seventeen single and multiple family residences, consisting mostly of one and two story frame structures, exist south of Buckman Field along the south edge of the study area. Two commercial uses, a used car lot and a one story automobile repair garage also exist along the southern fringe of Buckman Field.

The circus grounds, the block adjacent to the northeast corner of Buckman Field, and the two block area east of Benson High are vacant and are used only occasionally for transitory uses. A clubhouse and a restaurant are located on the extreme west end of the Lloyd Golf Course.

A C C E S S

Automobile

Although several existing and proposed major thoroughfares are near the site, (see plate 31) the discharge capacity is not as great as might be expected, since some of these thoroughfares are relatively narrow and most are heavily used by through traffic. When peak through traffic flows occur simultaneously with the termination of an event at the Center, which would happen only occasionally, evacuation of the parking lots will be extremely difficult and slow. However, for all normal afternoon and evening events, a total of eight lanes having a capacity of approximately 6250 cars per hour will be available for discharge of vehicles from the site. This means that about 27 minutes will be required to disperse a capacity coliseum crowd of 11,000 spectators.

With the construction of the proposed 16th Avenue connection to the Banfield Expressway and a grade separation at the intersection of 12th and Sandy Blvd., the discharge capacity will be increased to over 8,000 vehicles per hour. These facilities would be capable of dispersing a crowd of 11,000 people in approximately 20 minutes.

Mass Transit

The only bus line which passes directly by the site at present is the Sandy Blvd. route. However, the Beaumont, 33rd Avenue, East Glisan and Irvington lines are all within easy walking distance of Buckman Field and the Bridge Transfer and East Burnside lines could be easily routed past the site.

Mass transit access to the site from residential areas in the west, north, and southeast sections of the city will necessitate a transfer at one or more points.

Taxi

The current taxi fare from the proposed new hotel location at SW 6th and Taylor to this site is $1.00. The fare from the Multnomah Hotel to the Buckman Field area is 90¢.

Railroad

The main line of the Union Pacific is located in the bottom of Sullivans Gulch only a short distance from the site; however, because of the 55 foot difference in elevation between the tracks and the ground level of Buckman Field, there is no possibility of direct rail access to the site and very little likelihood that a nearby siding with a short haul by truck will be possible.

It seems probable that the most economical method of getting livestock arriving by rail to the site is by trucking the animals from the railroad corrals or stockyards.

Additional Facts

In 1950, a total of 365,000 people lived within a five mile radius of the Buckman Field site. This represents 61% of the 600,000 people in the Portland urban area and 98% of the 1950 population of the City of Portland.

Distances from various points in the Portland community to the Buckman Field site are as follows:

Center of population (NE 15th & Holladay)	0.3 miles
Lloyd shopping center (NE 12th & Multnomah)	0.4 "
Proposed new hotel (SW 6th & Taylor)	1.7 "
Milwaukie (McLoughlin & Washington)	6.2 "
Lents (SE 92nd & Foster)	6.8 "
Multnomah (SW 35th & Capitol Highway)	7.0 "
St. Johns (N Jersey & Philadelphia)	7.5 "
Downtown Vancouver (5th & Washington)	7.9 "
Oswego (State and A St.)	8.5 "
Beaverton (Front & Main)	9.1 "
Oregon City (7th & Main)	11.5 "
Gresham (Main & Powell)	12.8 "

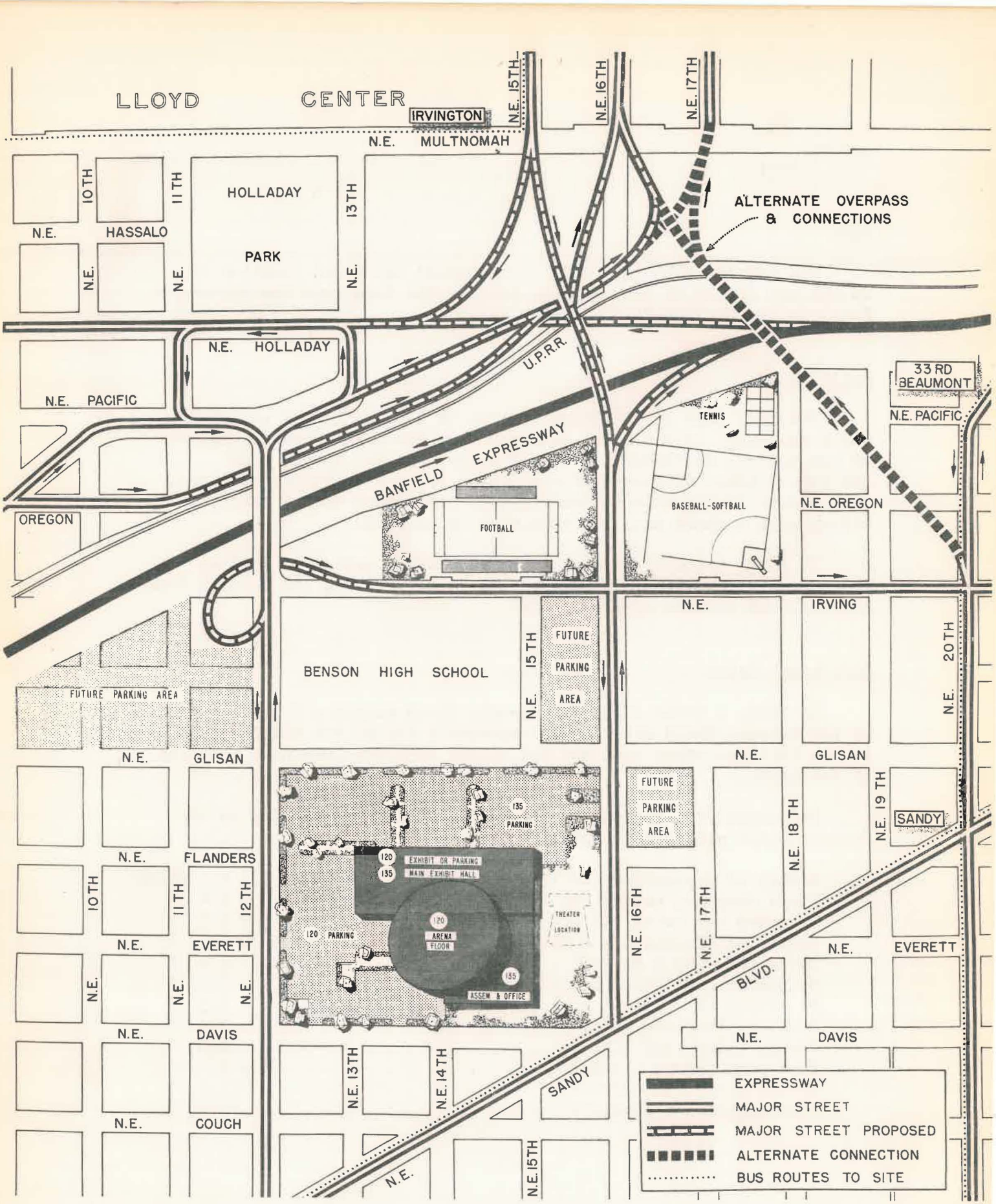


PLATE 31

VICINITY & RECOMMENDED DEVELOPMENT

BUCKMAN FIELD SITE
EXPOSITION – RECREATION CENTER
PORTLAND CITY PLANNING COMMISSION JUNE 1955

NORTH
SCALE IN FEET
0 100 200

ASSUMED COSTS

The firm of Woodward and Draper, engaged by the Exposition-Recreation Commission to appraise the properties of this site, has estimated that a reasonable valuation for vacant property in the area is $2.50 per square foot.

For purposes of estimating costs in this report, the Woodward and Draper figure is used to calculate vacant land cost, five times the assessed value is used for developed property, and $300 per building us used for the demolition cost of residential structures.

Building construction costs are assumed to be the same as those listed on page 140 of this report.

RECOMMENDED DEVELOPMENT

Since the close integration of all facilities in the first stage of construction is desirable, it is recommended that the coliseum and exhibition buildings be located on the Buckman Field area, the largest single tract of the site. Future parking facilities could be developed on the circus grounds and the two block area east of Benson High. The Lloyd Golf Course, which contains only three acres less than Buckman Field, is a logical area for the relocation of the playfield displaced by the recreation center. A suggested development of this area is indicated on plate 31.

As shown on the suggested plan, facilities which can be included in the first stage of development are:

1. Sports and livestock coliseum

   Arena floor (24,000 sq. ft.)
   8000 permanent seats
   3000 temporary seats

2. Exhibit space for P.I. or other large shows

   Permanent exhibit - level 150 (99,000 sq. ft.)
   Exhibit or parking - level 135 (99,000 sq. ft.)
   Exhibit or parking - level 120 (207,000 sq. ft.)

   TOTAL EXHIBIT SPACE 405,000 sq. ft.

3. Convention facilities

Meeting rooms and assembly halls - level 135 (50,000 sq. ft.)

4. War memorial

An appropriate element serving this purpose can be included in the design of the building or its environs.

5. Parking

1000	spaces in parking lots	(300,000 sq. ft.)
1020	spaces under cover when not used for P.I. or exhibit purposes	(306,000 sq. ft.)
2020	TOTAL PARKING SPACES	(606,000 sq. ft.)

On-street parking within three blocks and vacant properties adjacent to this area, which will undoubtedly be privately developed for off-street parking, can provide an additional 1800 spaces.

ESTIMATED COST - FIRST STAGE

SITE ACQUISITION AND PREPARATION

1.	Acquisition of Buckman Field Area		$1,787,000
2.	Demolition and grading		7,000
3.	Grade, pave and landscape parking lots	33,400 sq. yds. @ $2.75 per sq. yd.	92,000
4.	Utilities		34,600
		TOTAL SITE COST	$1,920,600

BUILDING COSTS

5.	Coliseum		$3,500,000
6.	Permanent exhibit space	99,000 sq. ft. @ $7 per sq. ft.	693,000
7.	Exhibit or covered parking	228,000 sq. ft. @ $3.50 per sq. ft.	798,000
8.	Lobby, assembly hall and meeting rooms	30,000 sq. ft. @ $15 per sq. ft.	450,000
		TOTAL BUILDING COST	$5,441,000
		TOTAL DEVELOPMENT COST	$7,361,600
9.	Design and contingency		$ 638,400

Explanation of Costs

Item 1. Vacant land - 606,640 sq. ft. @ $2.50 per sq. ft. $1,517,000
Assessed value on developed property $54,000 x 5 270,000

Item 2. Based on $300 per residential structure.

Item 4. Utilities relocation estimates by Office of City Engineer and the various utilities companies.

Sewer	$32,000
Water	100
Telephone	500
Gas	2,000
Power	none
TOTAL UTILITIES COST	$34,600

Items 6, 7, and 8. Areas located under arena seats are included in the cost of the coliseum.

Item 9. Approximately 10% of the improvement cost is allowed for professional fees and unforseen costs.

POSSIBILITY OF EXPANSION

Future acquisition and development of the circus grounds, the vacant block east of Buckman Field, and the two block area east of Benson High School can more than double the parking provided in the first stage of development.

There is adequate space available for the future construction of a music hall-auditorium on the site if this can be established as a feasible location for such a facility.

Expansion beyond the study area to the east, south or west would be extremely expensive because adjacent areas are built up with commercial, industrial and apartment house structures.

JOURNAL

S U M M A R Y

If a clear decision is made to separate the P.I. from the Exposition-Recreation Center, then the Journal site should definitely be given serious consideration for development as a theatre-convention hall-sports arena facility.

ADVANTAGES:

1. At the center of Portland: Within easy walking distance of all bus lines, hotels, offices, and shops. Located adjacent to Harbor Drive expressway with connections to all parts of Metropolitan Portland ultimately. Excellent site for conventions, smaller meetings, and entertainment events.

2. Adjoins proposed 3500-space parking structure over new Morrison Bridge terminal: Sufficient parking furnished without capital outlay by Exposition-Recreation Commission. Access from East Side greatly facilitated.

3. Adjoins proposed bus terminal site and near Visitors Information Center: Most convenient to attract and serve out-of-town people.

4. Adjacent to additional parking facilities at Journal Building and privately operated lots: Within three blocks walking distance, there are 1662 existing off-street and curb parking spaces.

5. Will furnish night-time clientele for proposed Morrison Bridge Terminal parking structure: Will increase economic feasibility of this parking project which otherwise might have little night-time use.

6. Will clear blighted business blocks and stimulate private investment in renewing adjacent properties: Urban renewal funds can also be utilized to purchase this site.

DISADVANTAGES:

1. Success hinges on the building and on the mode of operation of Morrison Bridge terminal parking structure: This proposal is beyond control of Exposition-Recreation Commission. If not built or if rates are too high, Coliseum revenues and service to community will suffer.

2. Exhibition space may have to be divided: Space in basement or street floor may have to be interrupted to allow continuation of Yamhill Street through to Front or so as not to disturb underground utilities.

RECOMMENDED DEVELOPMENT:

If the Journal site (blocks bounded by Front, 2nd, Morrison and Taylor) is selected, the E-R Center would be one of three elements in the total development envisioned. The other two: Morrison Bridge terminal parking structure, located adjacent to and connected to the E-R Center by a pedestrian bridge; and a bus terminal for long haul buses, located south of Taylor Street and also connected by pedestrial bridge to the E-R Center. If sufficient money is available or in succeeding stage of development, a fifth block (bounded by Alder, Morrison, 1st, and 2nd) should be acquired and a theatre-concert hall constructed.

Minimum available parking for evening and week-end events should be 2500 spaces in the bridge garage and at least one-half of curb and private lot space within three blocks--or 1100. Thus, at a ratio of one space per five people in attendance, a maximum crowd of 18,000 could be accommodated.

ESTIMATED COST:

The Journal site will undoubtedly be eligible for urban renewal under the "10% exception" clause in the 1954 Federal Housing Act. This means that up to 10% of the total federal appropriation for urban renewal can be used to clear business or other non-residential blight.

With urban renewal assistance, a coliseum, 160,000 sq. ft. of exhibit space, and a theatre-concert hall could be built. Estimated costs are $5,910,000 for the coliseum, $1,590,000 for the theatre-concert hall, leaving $500,000 for design and contingencies.

Without urban renewal funds, a coliseum and 130,000 sq. ft. of exhibit space could be built. The estimated site and building cost is $7,550,000, leaving $450,000 for design and contingencies.

EXISTING CONDITIONS

The area considered in this site study includes the four square block area in the westside downtown district, bounded by SW Morrison, SW Taylor, SW Front, and SW Third Avenue. The proposed parking garage on the five block area at the west end of the new Morrison Street Bridge, and the proposed long-haul bus terminal on the two blocks bounded by SW Taylor, SW Salmon, SW Front and SW Third Avenue are also vital to the consideration of this location as a potential site for the E-R Center.

The site is level and contains a total of 4.7 acres, including 0.4 of an acre of dedicated street. However, if the Center is located here, it will necessitate the widening of Morrison Street along the northern edge of the site and thus reduce the useable area to 4.4 acres.

At present, the area is occupied by two to four-story masonry buildings used primarily for retail, warehousing and hotel purposes. A parking lot is located on the 90 x 120 foot tract in the northeast corner of the site. Although the principal use of these buildings is for commercial purposes, the 1950 census lists 116 dwelling units in the four block area. Of these, 108 are classified as substandard and 112 are renter occupied.

ACCESS

Automobile

The Journal site is located near the heart of the city and thus benefits from the convergence of many important thoroughfares on the core area. Front Avenue and Harbor Drive, adjacent to the east of the site, are major north-south arteries which also connect directly to all the bridges leading to the east-side thoroughfares. With the completion of the new Morrison Street Bridge, access from the east side will be greatly facilitated. East side residents can cross the new bridge, park in the proposed parking facility at the western terminal of the bridge and arrive at the site without traversing any of the west side trafficways.

Since the majority of the parking spaces (3500 in the Morrison Bridge facility and 500 in the Journal building), which could be used by people attending the Center, are adjacent to major traffice distributors, the dispersal of cars from the site should present very few problems.

The capacity of the streets for dispersing the cars from an evening event is approximately 12,000 vehicles per hour over 13 lanes. With a ratio of one car per five persons, a maximum crowd of 11,000 people could be dispersed in about 11 minutes. However, the rate may be somewhat less than this fugure since traffic bottlenecks are apt to occur in the parking areas and on discharge ramps, rather than on the streets carrying the traffic away.

The construction of an Exposition-Recreation Center on this four block area will necessitate the vacation of SW Yamhill from SW Front to SW Second and SW First from SW Morrison to SW Taylor. The closure of First Avenue will not cause serious problems in the north-south traffic pattern in this area, but the closure of the connection of Yamhill and Front will complicate the eastbound traffic movements in the downtown area. To alleviate this problem, it is suggested that SW Morrison between SW Front and SW Second be widened to permit two-way traffic movements in that section.

If it is established that the continuance of traffic on SW Yamill through to Front Avenue is of primary importance, it is possible to construct a split exhibition area at street level with the arena above. However, this would mean that the top of the arena seating would be a considerable distance above the entrances, and would probably necessitate escalators or similar equipment.

Mass Transit

The East Burnside, Mount Tabor, Oregon City, Bellrose, Sellwood, East Moreland, Hawthorne and Foster mass transit lines all pass directly by the Journal site. The Third Avenue route, which intersects all other bus lines entering the downtown area, except the Barbur Blvd. and Council Crest lines, passes within one block of the Journal site.

Taxi

At current rates, the taxi fare from the Multnomah Hotel to this site is 60¢ and from the proposed new hotel at SW 6th and Salmon is the minimum fare of 50¢.

Additional Facts

The 1950 population within a five-mile radius of this site is essentially the same as the South Auditorium site--i.e. 348,000 people or 85% of the city's population.

Walking distances from various points in the downtown area to the site are:

Proposed Long-Haul Bus Terminal	0 blocks
Journal Building	0 "
Visitors Information Center	1 "
Greyhound Bus Terminal	3 "
County Court House	3 "
New Hotel (SW 6th & Salmon)	4 "
Meier and Frank Store	4 "
City Hall	5 "
Multnomah Hotel	6 "
State Office Building	7 "
Oregonian Building	8 "
Portland State College	12 "
Union Station	16 "

By the fastest existing traffic routes, the distances to outer points in the Portland Community are as follows:

Center of Population, City of Portland (NE 15th & Holladay)	1.8 miles
Multnomah (SW 35th & Capitol Highway)	5.0 "
Lents (SE 92nd & Foster)	6.8 "
Beaverton (Front & Main)	8.0 "
St. Johns (N. Philadelphia & Jersey)	8.0 "
Vancouver (5th & Washington)	8.0 "
Oregon City (7th & Main)	12.1 "
Gresham (Main & Powell)	13.9 "

ASSUMMED COSTS

Recent Sales and Assessed Values

The average of recent recorded sales in the downtown area indicates that the cost of properties in that area approximates two times the appraisal values. However, the acquisition of property by Multnomah County for the construction of the west approaches to the new Morrison Street Bridge has been averaging $500,000 per block or about four times the assessed values.

Appraisals of private property in this vicinity have estimated the value of vacant land to be about $8 per square foot. This figure averages approximately four times the assessed value of vacant properties.

Demolition

Statements by several wrecking and salvage firms in the city indicate that the cost of clearing and grading property in the downtown area averages about 65¢ per square foot of floor area for masonry buildings.*

Urban Renewal

It is probable that this area can qualify for urban renewal funds under the 10% non-residential exception clause of the 1954 Federal Housing Act. This clause provides that up to 10% of the total amount of capital grants authorized by the Federal law can be used as grants-in-aid for the clearance and redevelopment of areas which are not clearly predominantly residential in character and which are not appropriate for redevelopment for predominantly residential uses.

Under this provision, "The slum clearance and redevelopment section must contain a substantial number of slum, blighted, deteriorated, or deteriorating dwellings or other living accommodations, (dormitories, rooming houses, hotels, flophouses and similar places of shelter other than dwellings) the elimination of which would tend to promote the public health, safety and welfare in the locality involved."

A condition for approval of such a project is that at least 20% of the total existing floor area in the section must be used for dwelling purposes or living accommodations. As previously mentioned, there were 116 dwelling units listed in the 1950 census in the Journal site, of which 93% were substandard. However, a more detailed investigation would be necessary to determine if 20% of the total floor area in the site is being used for dwelling purposes.

There can be little doubt that the elimination of this blighted area would benefit the city as a whole in many ways.

RECOMMENDED DEVELOPMENT

The Journal site can adequately accommodate a coliseum and sufficient exhibition space to provide for all of Portland's needs, except the P.I. Provisions of parking area for patrons of the Center is dependent on the

* See "Downtown Parking Report", Portland City Planning Commission and Bureau of Traffic Engineering, Feb. 1955, p.15.

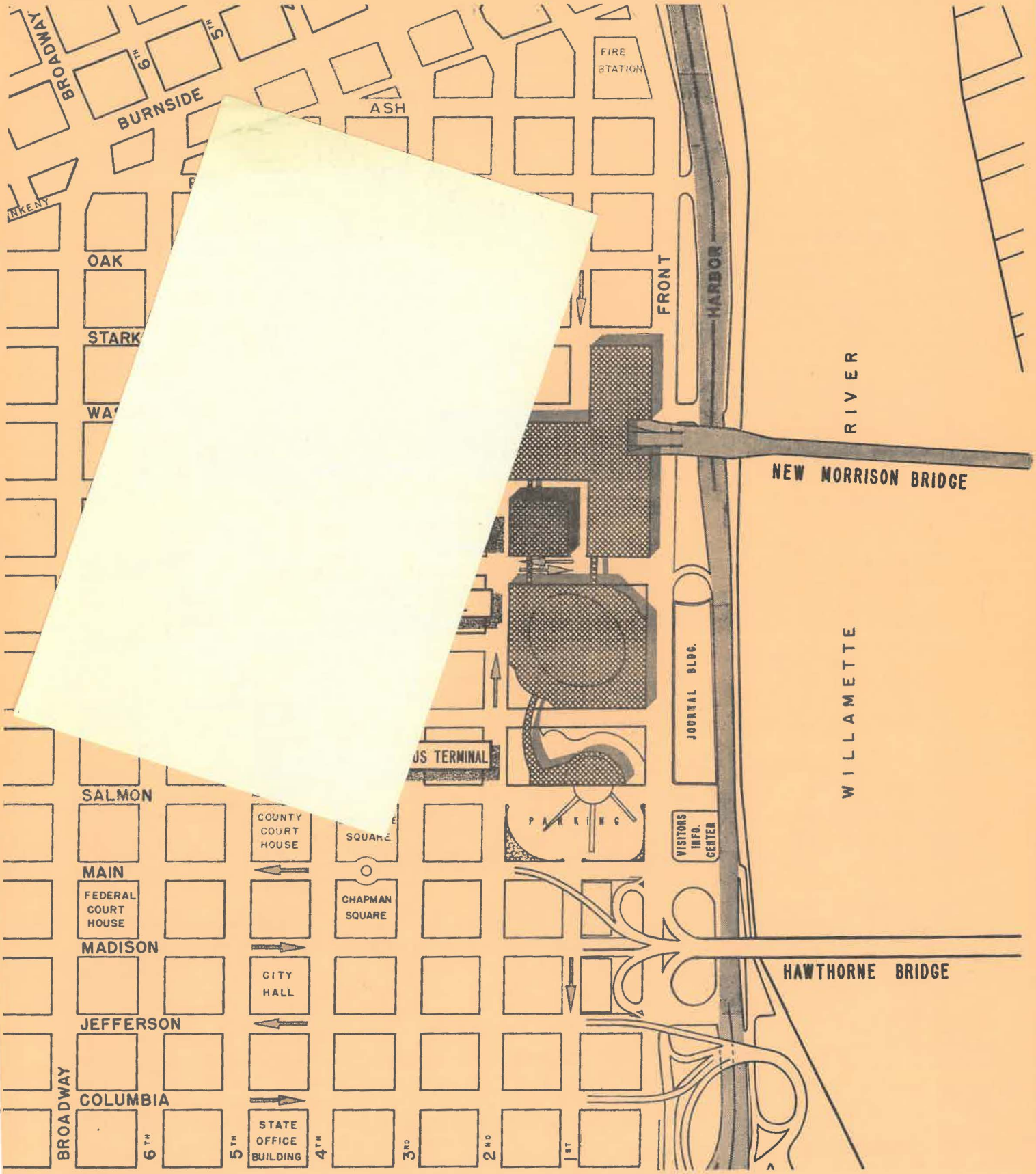


PLATE 32

CIRCULATION & RECOMMENDED DEVELOPMENT

JOURNAL SITE

EXPOSITION RECREATION CENTER

PORTLAND CITY PLANNING COMMISSION

JULY 1955

NORTH

SCALE IN FEET

0 200 400

construction of the proposed parking facility at the western terminal of the Morrison Street Bridge. Although 2700 spaces are contemplated in this structure now, the parking demand generated by the E-R Center in this location would make feasible the extension of the proposed structure another block to the west. The capacity of this enlarged facility would be approximately 3500 cars.

Also envisioned in the development of this area is the construction of a theatre-concert hall on the block bounded by SW Alder, SW Morrison, SW First, and SW Second, and the location of a long-haul bus terminal on the two blocks adjacent to the south of the coliseum site. The feasibility of locating a long-haul bus terminal on these blocks is discussed in the Portland City Planning Commission report, "Bus Transportation in Downtown Portland," adopted in January 1953.

In order to avoid complication of traffic flow caused by the closure of SW Yamhill from SW Second to SW Front, it is recommended that Morrison Street be widened to permit two-way traffic movements on that street between SW Second and SW Front.

Since urban renewal assistance is a possibility in the acquisition of this site, two cost estimates have been made--one based on the use of urban renewal funds for acquiring and clearing the land, and the other based on development by the E-R Commission alone.

A recommended development plan is shown on Plate 32.

Plan 1--With Urban Renewal Funds

If urban renewal assistance is obtained, the following facilities are the maximum which can be provided on this site within the available $8,000,000.

Arena	8000 permanent seats 3000 temporary seats
Permanent Exhibit Space	160,000 square feet
Theatre-Concert Hall	2500 seats

Parking facilities which can be used by people attending the Center, but which will not be provided or controlled by the E-R Commission are:

Morrison Street Bridge Facility	3500 spaces
Journal Building Facility	500 spaces
Curb and Private Lots Within Three Blocks of Site	1662 spaces

Minimum available spaces in these facilities for evening and week-end events should be 2500 spaces in the bridge garage and 1100 spaces in surrounding facilities. A maximum crowd of 18,000 persons could thus be accommodated at a ratio of one automobile for every five people in attendance.

ESTIMATED COST--WITH URBAN RENEWAL FUNDS

1.	Acquisition of 4 blocks (cleared)	160,000 sq. ft. @ $8 per sq. ft.	$1,280,000
2.	Coliseum		3,500,000
3.	Exhibition Space	160,000 sq. ft. @ $7 per sq. ft.	1,120,000
4.	Footbridge from Coliseum to Bridge Parking Garage		10,000
		TOTAL COLISEUM COST	$5,910,000
5.	Acquisition of 1 block (cleared)	40,000 sq. ft. @ $8 per sq. ft.	$ 320,000
6.	Theatre-Concert Hall		1,250,000
7.	Footbridges from Theatre-Concert Hall to Bridge Parking Garage		20,000
		TOTAL THEATRE-CONCERT HALL COST	$1,590,000
8.	Design and Contingencies		$ 500,000
		TOTAL DEVELOPMENT COST	$8,000,000

Explanation of Costs

Items 1 and 5 are based on the sale of the cleared land to the E-R Commission by the local urban redevelopment authority for $8 per square foot.

On this basis, the local one-third share of the write-down cost would be computed as follows:

Cost of acquiring 5 blocks (4 x assessed values)	$3,342,000
Demolition and clearing	250,000
Utilities relocation	250,000
TOTAL SITE COST	$3,848,000
Resale price	$1,440,000
Write-down	$2,408,000
Local share (one-third of write-down)	$ 801,700

As mentioned previously, it is possible that certain civic improvements on the site can be considered as payment on the local one-third share. However, if the E-R Commission were to assume the entire local share, it would still save approximately $1,650,000 in the acquisition and preparation of this site.

Items 2 and 6	See Stanford Research Report, pp. 28 & 30
Item 3	See page 140 of this report
Item 8	Approximately 10% of improvement cost is allowed for professional fees and unforseen costs.

ESTIMATED COST--WITHOUT URBAN RENEWAL FUNDS

1.	Acquisition of 4 blocks		$2,640,000
2.	Demolition and clearing		240,000
3.	Relocation of utilities		250,000
4.	Footbridge from Coliseum to Bridge Parking Garage		10,000
5.	Coliseum		3,500,000
6.	Exhibition space	130,000 sq. ft. @$7 per sq. ft.	910,000
		TOTAL SITE AND BUILDING COST	$7,550,000
7.	Design and contingencies		450,000
		TOTAL DEVELOPMENT COST	$8,000,000

A D V A N T A G E S O F A C O M M U N I T Y - W I D E N A T U R E

The removal of the old dilapidated buildings from this site would be advantageous to the city as a whole by eliminating part of a blighted district. An Exposition-Recreation Center on the Journal site would undoubtedly stimulate private construction and rebuilding of other run-down buildings in this vicinity.

The provision of a large coliseum and exhibition space at this location near the heart of the downtown area would constitute a convention facility which could be matched by very few cities.

The construction of an Exposition-Recreation Center on the Journal site would, by creating a night-time parking demand, increase the financial feasibility of a large parking facility in connection with the new Morrison Street Bridge. Such a facility would not only be vital to the successful operation of the Center, but would partially satisfy a critical parking need in the downtown area.

The influx of people into the downtown area resulting from the location of the Center on the Journal site would increase the economic activity in the downtown district, and thus help to reverse any tendency towards the decline of the core area. The economic health of this district is vital to the economy of the entire community.

A C K N O W L E D G E M E N T S

The City Planning Commission wishes to express appreciation to the many individuals and organizations who have assisted in the compilation of material used in this report.

Among those who have contributed significantly to the study are: Fred T. Fowler, Traffic Engineer; Alden F. Krieg, Exceutive Secretary of the Exposition-Recreation Commission; Walter H. Muirhead, President of the Ross Island Sand and Gravel Company; Office of the City Engineer; Housing Authority of Portland; U.S. Corps of Engineers; Port of Portland; U.S. Weather Bureau; Multnomah County Planning Commission Staff; State Highway Commission; Pacific International Livestock Exposition; State of Oregon Military Department; Hotel Association of Portland; Stanford Research Institute; Pacific Power and Light Company; Portland General Electric Company; Pacific Telephone and Telegraph Company; Portland Gas and Coke Company.

The Planning Commission is also indebted to the Housing Authority of Portland and the Portland Civil Service Board for printing this report.

UNIVERSITY HOMES

A STUDY OF THE FEASIBILITY
OF THE UNIVERSITY HOMES AREA
AS AN EXPOSITION – RECREATION SITE

PORTLAND CITY PLANNING COMMISSION
PORTLAND, OREGON MARCH 1957

UNIVERSITY HOMES

SUMMARY

This study is concerned with the feasibility of developing an Exposition-Recreation Center on a site known as the University Homes area.

The report is made at the request of the E-R Commission and can be considered as a supplement to a previously published report[1] which contains the same sort of feasibility studies for various other sites.

The principal advantages and disadvantages of the University Homes site are as follows:

Advantages

1. Level site

   The site is relatively level over most of its area, thus minimizing grading cost. The elevations are high enough so that no flood problems will be encountered.

2. Adequate area

   The area recommended for acquisition is adequate to accommodate all basic E-R needs plus P.I. facilities and the National Guard armory.

3. Rail access

   Rail service to the site can be easily provided at a minimum cost.

4. Relatively inexpensive acquisition

   This site has a relatively low site acquisition and preparation cost compared to other locations having existing buildings, flood and foundation problems, or requiring expensive access construction.

Disadvantages

1. Off-center location

   The location of the site on the periphery of the urban area over six miles from downtown Portland necessitates a longer

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[1] Portland City Planning Commission, Exposition-Recreation Center Sites, July, 1955.

trip for persons living on the opposite side of the urban area than a central location would. The off-center location precludes the inclusion of convention and theater facilities in the development.

2. Poor highway access

Although one proposed expressway and one major street would pass adjacent to the site, large numbers of vehicles would be forced to use local residential streets getting to or from the site.

3. Poor mass transit access

Only one mass transit route passes within easy walking distance of the site.

4. Conflict with neighborhood

The aspects of noise, odor, large buildings, and traffic congestion could be quite undesirable to the residential areas to the west, south and east of the site.

5. Limited facilities

Although the site is large enough for all basic E-R needs, the more extensive types of facilities such as football and baseball stadiums, which should be possible on a campus-type facility, cannot be accommodated.

6. Removes residential site

With the potential industrial development in the north part of Portland, it is quite feasible that residential land will be at a premium in the near future.

Recommended Development

It is recommended that any E-R development on the University Homes site be located on the 57 acres to the northwest of the proposed new location of Chautauqua Boulevard. Although more area could be acquired across Chautauqua Boulevard, such acquisition would not be practicable because neither the trafficways nor the expanded site would be adequate to accommodate facilities requiring more than 57 acres. All basic functions plus the P.I. needs can easily be built on the recommended site.

Estimated Cost

To acquire the proposed University Homes site, relocate existing utilities, provide rail access, and grade and pave parking areas will cost approximately $503,000.

CHARACTER OF SITE

Location

The University Homes site is located in the north part of Portland approximately six miles from the center of the west side Central Business District. It is an irregular tract within the area bounded by Columbia Boulevard on the north, the Union Pacific Railroad tunnel on the west, Willis Boulevard on the south and N. Hamlin Avenue on the east. (See Figure 1)

Areas

The 95.54 acres comprising the potential site are distributed as follows: (does not include streets to be vacated)

West of Chautauqua - North of Houghton	30.48 acres
East of Chautauqua - North of Houghton	27.90 acres
East of Chautauqua - South of Houghton	25.68 acres
West of Chautauqua - South of Houghton	2.08 acres
TOTAL UNIVERSITY HOMES TRACT	86.14 acres
Privately Owned Blocks	9.40 acres
TOTAL POTENTIAL SITE	95.54 acres

Topography

The majority of the site is relatively level. There is a slope of approximately 1 per cent from south to north, which increases to a somewhat steeper grade along the northern edge of the area. The lowest contour along Columbia Boulevard is still approximately 5 feet above the 1948 flood level, so no flood problem should be anticipated.

Use and Ownership

The University Homes area, as defined in Figure 1, is owned by the Housing Authority of Portland. The site, which was once covered with defense housing units, is now vacant.

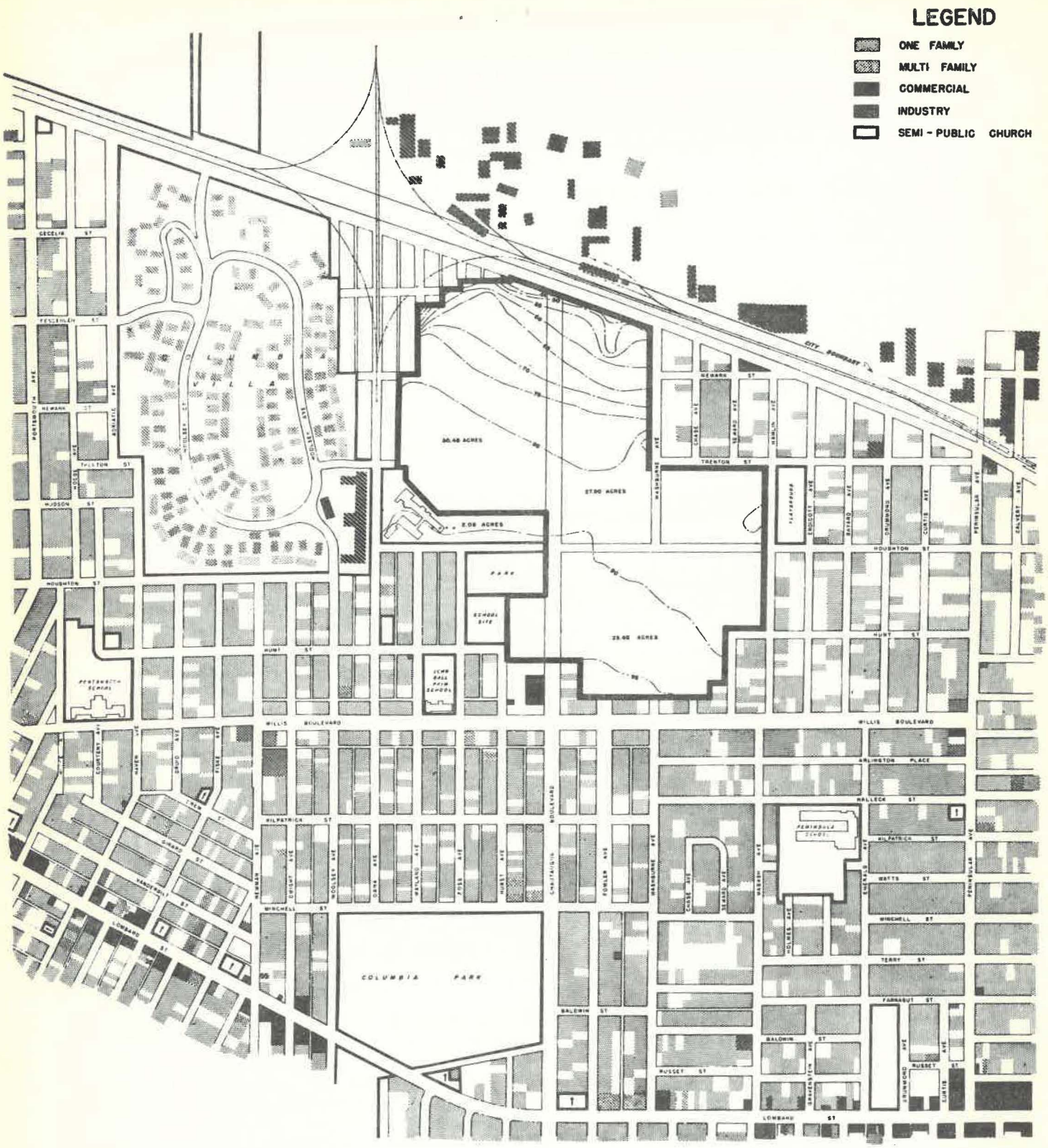

FIGURE I

LAND USE 1957

UNIVERSITY EXPOSITION HOMES RECREATION SITE CENTER

PORTLAND CITY PLANNING COMMISSION

NORTH

SCALE 0 500 FT.

MARCH 1957

still be over maximum desirable capacities, and Peninsula School would be very near to the desirable maximum capacity. If the University Homes area were developed for residential purposes, the area west of Chautauqua Boulevard would have approximately 200 dwelling units, and the area east of Chautauqua Boulevard would have approximately 150 dwelling units. The only adverse effect on schools of using this site for an E-R Center would be to place John Ball Primary School on the edge of its attendance district.

Parks

Recently, the Park Bureau purchased about ten acres, including the community building, in the southwest corner of the original University Homes area. Mr. Buckley of the Park Bureau has stated that they will need this property as a community center for the district and as a playground for the proposed school regardless of what happens on the University Homes site. However, they would be willing to readjust the park boundaries to permit an E-R site having a more efficient shape.

In any case, the Park Bureau will need to have Houghton Street west of Chautauqua Boulevard vacated and street access provided along the north side of the park.

ACCESS

The number of people living within five miles of University Homes and the driving distances between University Homes and other locations are approximately the same as for Delta Park.[1]

Existing Thoroughfares

There are two major thoroughfares that pass by the site and can serve to distribute traffic to other major traffic arteries in the area. Columbia Boulevard, adjacent to the northern edge of the site, has width for only two moving lanes of traffic. However, it connects with St. Johns to the west and with major north-south streets except Denver Avenue and Interstate to the east. Chautauqua Boulevard, having a capacity of four moving lanes of traffic, connects with Lombard and Willamette Boulevard to the south. Willis Boulevard (four lanes) is located near the southern boundary of the site. However, this cannot be considered a major thoroughfare since it extends only eight blocks to the east and west and does not intersect any major street except Chautauqua Boulevard. Willis Boulevard would serve only to distribute traffic to local residential streets.

Proposed Future Traffic Facilities

Plans by the State Highway Department for expressways and freeways in this area contemplate the construction of the Columbia Expressway (U.S. 30 Bypass), a four-lane divided highway along the northern side of the site, and the Burrage Freeway (U.S. 99W) less than one-half mile to the east with an interchange connecting the two. It is likely that the Burrage Freeway will be constructed in the near future, but any construction date for the Columbia Expressway is doubtful.

It is proposed that Chautauqua Boulevard be relocated to the east as shown in Figure 2 for the following reasons:

1. A larger unified site for development can be achieved.

2. Possible future extension of Chautauqua Boulevard north of Columbia Boulevard will not require removal of expensive industrial buildings.

3. The intersection of Chautauqua Boulevard and the Columbia Expressway should not occur close to the point where the Expressway will start down to underpass the Union Pacific Railroad lines.

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[1]Portland City Planning Commission, Exposition-Recreation Center Sites, July, 1955, p. 16.

Discharge Capacity

The number of existing and proposed traffic lanes leading to or from the site and their estimated capacity are shown in the following table:

	Present Lanes	Capacity	Future Lanes	Capacity
Columbia Boulevard	2	1,600 VPH	4	3,200 VPH
Chautauqua Boulevard	2	1,600 VPH	2	1,600 VPH
Local Streets	6	3,600 VPH	6	3,600 VPH
TOTAL	10	6,800 VPH	12	8,400 VPH

It is likely that there would be an average of one vehicle for every three persons attending an event. If a maximum seating capacity of 11,000 in the coliseum is assumed, the maximum number of automobiles for an event would be 3,700.

Assuming that the design of parking lots is such that dispersal capacity would not be limited there, it would take over an hour to disperse a capacity crowd over existing major streets and about 50 minutes over proposed future major streets. However, it is obvious that drivers will use all possible routes away from the site and thus large numbers of vehicles will filter out through all the local residential streets of the area. While this would be an undesirable situation, it would, nevertheless, be possible to disperse a maximum coliseum crowd in slightly less than 30 minutes. However, if facilities drawing larger crowds such as stadiums were included in the development, serious conditions of congestion would occur.

Mass Transit

At present, mass transit access to the University Homes site is very poor. The Fessenden line is the only route that comes near the site, passing within one-half block of it along Willis Boulevard, and this line terminates at Interstate Avenue, requiring at least one and in many cases two transfers to reach other parts of the city. The St. Johns Route along Lombard would necessitate a walk of over one-half mile.

It is possible that mass transit service to the site could be improved for large events by adding special trip buses.

Rail Access

The provision of rail access to the site is comparatively simple. A main line of the Union Pacific Railroad emerges from the tunnel at the northwest corner of the site and branches east, west and north from that point. A spur into the site, as shown in Figure 2, would be approximately 20 feet below grade near the center of the site. If the buildings were located in this area, rail access at the basement level would be a simple matter.

Taxi

At the current rates, the fare for a trip by taxi from the Multnomah Hotel to the University Homes site would be approximately $3.00.

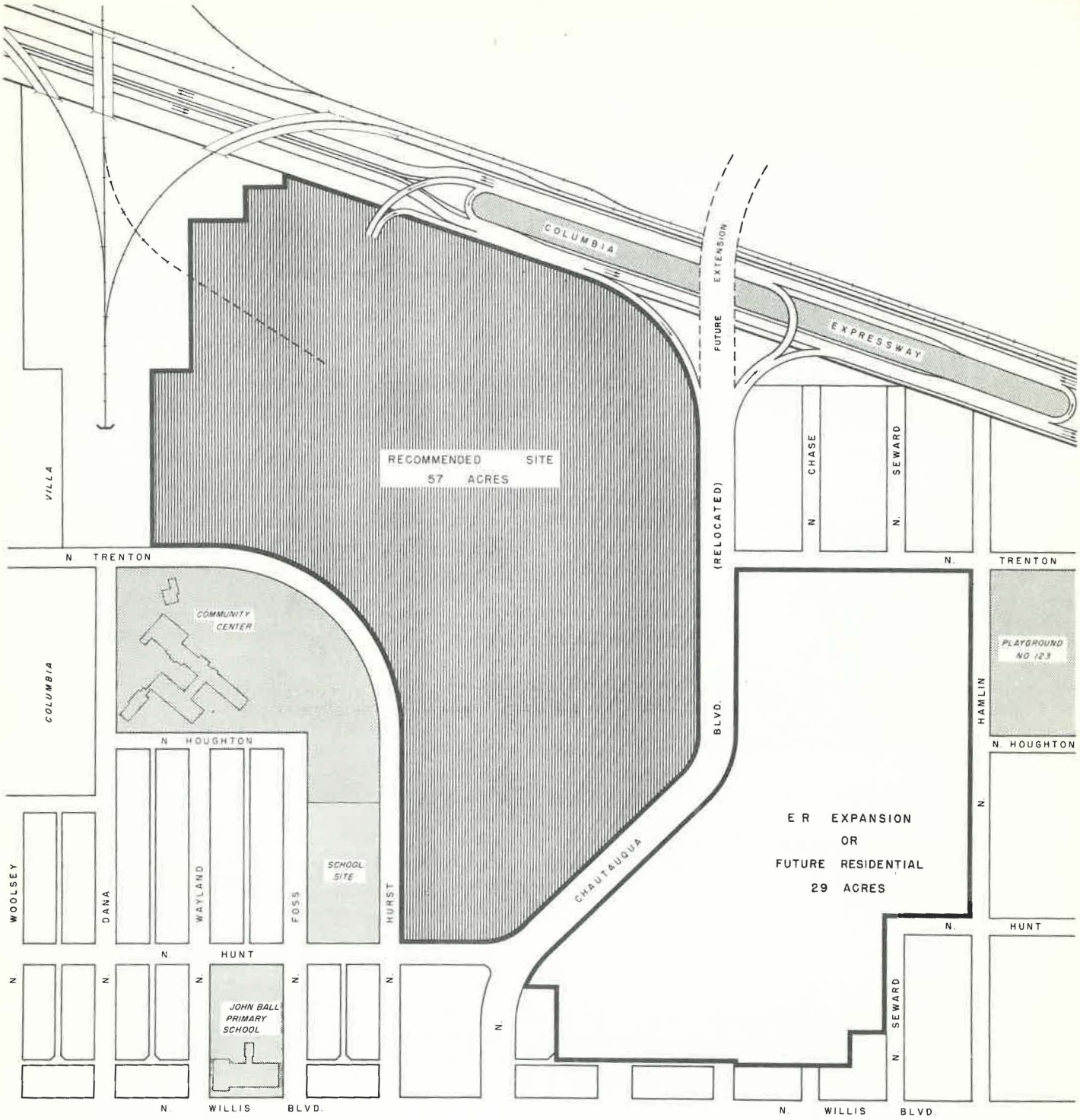

FIGURE 2

RECOMMENDED DEVELOPMENT

UNIVERSITY HOMES SITE
EXPOSITION RECREATION CENTER

NORTH

0 100 200 300

SCALE IN FEET

PORTLAND CITY PLANNING COMMISSION MARCH 1957

RECOMMENDED DEVELOPMENT

If the University Homes area is selected as a site for the development of an E-R Center, it is recommended that all Housing Authority property to the northwest of Chautauqua Boulevard relocated be acquired. It is also recommended that Chautauqua Boulevard be relocated as shown in Figure 2, that Houghton Street be vacated through the site, and property traded with the Park Bureau as shown.

This would provide a fairly level site of approximately 57 acres, which would accommodate all the basic E-R needs of a coliseum, exhibition space, a memorial, and necessary parking, and would also be adequate for P.I. needs. Sufficient space is also available on this or adjacent sites for the projected National Guard armory, but it is doubtful if an off-center location would be as satisfactory as a central site for this function.

It is possible to increase the total site area to slightly over 100 acres by acquiring privately owned property at the northeast corner of the site and the remainder of Housing Authority property southeast of Chautauqua Boulevard relocated. Since Chautauqua Boulevard, as a major street, cannot logically be dead ended at the southern boundary of the site, and since it cannot be rerouted completely around the area, it seems inevitable that the maximum site area mentioned above would be split in two by a major street.

Two other factors indicate the inadvisability of acquiring more than the 57 acres proposed. The maximum site possible would still not be adequate to accommodate outdoor stadiums, large playfields, or a centennial fair. If the area were large enough for these facilities, the existing and proposed trafficways could not handle the traffic without intolerable conditions of congestion.

Site Acquisition

It is estimated that the cost of site acquisition and preparation, as shown in Figure 2, (not including overpasses to the future Columbia Expressway) would be as follows:

1.	Acquisition of property - 57 acres @ $3,000	$171,000
2.	Repaving of Chautauqua Boulevard relocated	50,000
3.	Relocate sewers and service	60,000
4.	Rail access	
	Cut	10,000
	Siding	12,000
5.	Grading and paving parking	200,000
	TOTAL SITE PREPARATION COST	$503,000

Explanation of Costs

1. The attorney for the Housing Authority has stated that the Housing Authority must sell its properties for a fair market price based on an appraisal. As yet, no appraisal of the University Homes area has been made, but it is estimated that the market price would be from $2,000 to $5,000 per acre. The $3,000 per acre used is a nominal figure within this range.

2.
3.
4. } Estimate by City Engineer's office.

The existing water mains and power lines in the site will have to be removed, but no relocation is involved so there would be no cost to the E-R Commission.