

## SUMMARY OF RESEARCH PROGRESS OF STANFORD RESEARCH INSTITUTE

Stanford Research Institute was hired by the Exposition and Recreation Center Commission on August 16, 1954. This informal progress report is submitted to fully inform the Commission of work accomplished, initiated, and planned by the Institute.

The following is what has been done:

1. To avoid duplication of effort, a collection has been made of all known past work accomplished by individuals and groups. Interviews have been held with principal interested parties. This information has been compiled as background material and a ready source of reference.
2. Interviews have been effected with local organizations which may be integrated within the proposed facility. Problems of compatibility of the various activities have been thoroughly considered in these interviews. Also, physical requirements of the groups and activities have been obtained where possible; these requirements pertain to types of buildings, size of buildings, seating capacity, exhibition space, parking or transportation facilities, total land area required and any limitations as to type of site.
3. From a review of past work and the above interviews, a factual summary of physical and management criteria for determining compatibility is being developed. This summary will be presented to the Commission on September 10th. From consideration of this summary, objectives and limitations are anticipated, such as; organizations (Fair, P.I., etc.) to be integrated into the over-all plan for the center. An agreement on the minimum and maximum facilities to be studied will result.
4. Correspondence has been forwarded to thirty-three cities requesting a description of existing and planned facilities, costs of construction, operating cost data, attendance and revenue data for specific activities,

and site or location considerations. A detailed tabulation is being made of these responses. This will be followed by a detailed questionnaire formulated to complete the compilation of desired data. For the present time the Montgomery, Alabama, coliseum is being used as a yardstick for comparing the various facilities and relating them to the Portland situation.

5. Data is being assembled to assist in analysis of relevant population, attendance, revenue, recreational trends which are vital to planning a facility for future use.

6. A detailed questionnaire is being prepared to be sent to potential users of the proposed facility covering physical facility requirements, attendance and revenue experience, business arrangements, etc.

The above information and data will be used to focus on the following problems:

1. Will the center be integrated with other local activities, P.I., Fair, or will it be an independent facility?

2. Based on the committee decision to (1) above, what is the best composition of the proposed center?

3. When the components of the facility are decided upon, how many acres will be required to accommodate the facility?

4. What dollar costs may be incurred, both for construction and land acquisition? (Land acquisition costs will be gauged in terms of most publicized sites.)

5. What are the probable revenues that can be anticipated from the proposed facility?

6. Will revenue estimates change with selection of a downtown vs. suburban site?

7. Given final committee decisions as to composition and size as measured against cost and available funds, where is the best location for the facility?

8. Stanford Research Institute considers site selection as the final step in the planning process, but stresses the need for collection of data on all possible sites, elimination of obviously unsuitable sites, and determination of site availability while initial steps of research are in progress.

## EXPOSITION-RECREATION CENTER PROJECT

## PROGRESS REPORT NO. 2

From the effective date of its contract with the Commission, the Institute has had an average of two to three persons working on various phases of the problem. In addition to collecting all existing material relating to the Center and interviewing key individuals whose views are felt to be important, correspondence has been initiated with over thirty city or private operators of arenas and auditoriums. Answers have already been received from 17 of these, which give much worthwhile advice.

Both of these questionnaires mentioned in our proposal are being prepared, the first of which is to be sent to operators of similar facilities whether contacted previously or not. Since a vast amount of detailed information is to be obtained from these people the questionnaire will be limited in extent, at first, with the understanding that further questions will be asked regarding selected facilities or will be clarified by direct interview. We feel not only that the interview method will be more productive of essential information, but it will also afford us an opportunity to inspect those centers and buildings which appear most nearly to meet Portland's needs. For the present, all details relating to design, organization and administration of facilities will be omitted, if they do not contribute importantly to the economic picture we are seeking to describe first.

The second questionnaire-inquiry will be directed to an even wider audience of potential users of Portland facilities, both local and national. This will seek not only to outline the features desired in an arena or auditorium located here, but will also set up this "ideal" in relation to facilities actually used by the same groups or organizations in other cities.

In several discussions with the city attorney's office, a number of basic questions have been raised. We feel that a formal opinion should be given the Commission in order

to complete the legal framework within which the Center must be set up. In brief, these questions relate to:

a) the extent to which the Commission is legally or morally bound to construct all the facilities mentioned in Section 14-103 of Article 1, Chapter XIV, and to provide for the types of events also specifically mentioned in the same section. Specifically, is it obligated to incorporate facilities peculiar to the Pacific International's requirements and a war memorial feature?

b) the actual accounting procedure which will govern the Commission's fiscal operations, particularly relating to the service of the bond issue. What is the net revenue referred to in Section 14-104 as the amount over "cost of operation and maintenance", and the source of operating funds for the Center in case income is insufficient.

c) the propriety of applying any profit from non-related operations (as for instance, rental of storage space) toward bonded indebtedness, operating expenses, or further capital expenditures.

d) the possibility of constructing exposition and recreation facilities at two locations.

e) the right of the Commission to acquire land by condemnation.

In addition to these fundamental questions, there may be other points for similar handling or fixing of policy by the Commission, such as:

f) what type of facilities for "sports, recreation and entertainment purposes", also "park and recreational facilities", as mentioned in two places in Section 14-103 is it appropriate for the Commission to provide, without encroaching in the recreational sphere of other city agencies or otherwise exceeding its legal and proper functions.

g) what policy should govern the provision of Center facilities either for a nominal charge, that is, less-than-cost, or completely free of charge?

h) in view of the sometime uncertain punctuation of Chapter XIV as it has been mimeographed, it would be well to verify the original certified language and also to have a meeting of minds as to the proper definition of several terms used in this chapter as for instance, "coliseum", "playfield", and "stadium", also, what seems to be used as a

compound term-"coliseum stadium."

In addition to more or less obvious comments as to the city's needs and pros and cons about various sites, following are salient general points brought out in the five interviews held with the Mayor and City Councilmen at which Mr. Krieg was present, in addition to Messrs. Sibbett and Troute of Stanford Research Institute:

a. There are differences of opinion as to the necessity of including Pacific International facilities, the necessity of having a single integrated center at One location, and the relative merits of centrally located versus suburban sites.

b. Several Councilmen mentioned the desirability of redevelopment of blighted areas in downtown locations. (it is desirable that the question of federal funds be explored through the proper channels in order to eliminate present uncertainties.)

c. Question was raised whether it is necessary or appropriate to set up recreation areas or outdoor facilities of the type provided at present by the city park and recreation system.

d. There were a variety of views on whether conventions can be accommodated in any except a downtown location, and whether there is possible duplication of facilities normally provided by hotels.

e. It was emphasized that the Center would probably have to be subsidized by the City in order to meet its operating expenses.

f. It was felt by at least one Councilman, that the county fair issue is still alive; it was also brought out that the Pacific International will be able to consider any site assuming its basic facilities are provided.

With the completion of the above, Objective I of the SRI proposal will have been substantially covered, except that we have felt at this time it was unnecessary specifically to contact spokesmen for the Portland Meadows Race Track and the Rose Festival. An attempt is being made to reconstruct the formal discussions held some time in the past with State National Guard authorities relative to the inclusion of Armory facilities.

It is felt that the Commission's next step is to determine the compatibility of certain accessory facilities required by the P.I., Armory, County Fair and convention

accommodations. In the absence of any ruling, that they are mandatory, these must still be considered optional features over and above an assumed basic multipurpose building. The analysis to be presented will be in terms of physical and management requirements plus as much data as can be gathered on the net investment required for the additional facilities. Following the decision mentioned, there can be full agreement as to the minimum hypothetical facilities which will be studied, and particularly as to the minimum area involved, which represents a limitation in the consideration of sites.

EXPOSITION-RECREATION CENTER PROJECTPROGRESS REPORT NO. 3OBJECTIVE I

Objective I of SRI's Proposal for Research comprises a survey of the background and legal framework of the Exposition-Recreation Center project and consultations with all interested parties "to determine other agencies' interest and possible participation in the Center's planning, construction and operation."

A. This work has been completed, to the extent considered necessary at this time, with the following exceptions:

1. Clarification of the legal framework of the Commission's work is awaited, following the submission at the meeting of September 13 of a number of questions which were transmitted by the Executive Secretary to the City Attorney.

2. Although considerable data is now available as a result of discussions with the Pacific International Association, it has been suggested to the Executive Secretary and to several Commission members that the PI be requested to clarify its "offer to negotiate" dated January 30, 1953. This is not a question of mere formality but involves a definite statement of the minimum requirements of the PI for new space, including parking area, and its proposed terms for priority use of this space as a tenant of the city. In order that an analysis may be made of the "feasibility of their (the PI's) use of the Center's facilities" and the form of "their future cooperation", the PI is making available to SRI data bearing on the earning potential of its present buildings. Information required as a basis for Commission action should also include any alternative plans which the PI may have made for continued use of its present arena and exhibit space or for provision of new space through plans not involving the city.

3. While close liaison has been established with the City Planning Commission, it has not yet been possible to analyze their report on the various sites still being considered.

B. The following comments stand out from the discussions which have been held with various groups in furtherance of Objective I:

1. Mayor Peterson and the other Four Commissioners.

Separate interviews were held at the City Hall with each of the five members of the City Council, and an attempt was made to get their opinions on the principal features of the Center, which are summarized as follows: (In each case, the absence of a recorded opinion is not in itself significant.)

- a. Concentration of Activities: Two of the men interviewed favored the development of more than one site, while one felt that a single site should be chosen.

b. Inclusion of P.I.: One considered that this was not mandatory, while two others felt it was either necessary or desirable.

c. Combination with County Fair: Only one opinion was stated - to the effect that the Fair issue is still very much alive and that it would be unfortunate if certain facilities were duplicated.

d. Provision of Outdoor Participant-Sports Facilities: Three opinions were expressed - one to the effect that the Center should be specifically for professional and semi-professional sports only, one that it was inappropriate to provide for these facilities because they duplicate other plans of the Park Bureau, and a third that such facilities were not a necessary consideration.

e. Importance of Conventions and Trade Shows: The strongest opinion was that these were important - and more so than sports. There were two other comments, to the effect that conventions and trade shows were either (a) not a factor, or else, (b) a minor consideration.

f. Type of Site Favored: Individual close-in locations (the "Between bridges" and South Auditorium sites) received two clear preferences, and two other statements singled them out as "possible" or "recommended for consideration". One remaining councilman favored the Vanport site. Vanport was opposed outright by two of the others, and one felt that it should not be chosen for the principal or only facilities of the Center.

g. Redevelopment: The same four who preferred the close-in locations also favored the redevelopment of blighted areas as a factor in choosing a site for this project.

## 2. County Officials.

At a meeting with the County Commissioners it was stated that they had never discussed the integration with the Pacific International Livestock Exposition of their respective facilities. The Commissioners had simply made plans to provide larger facilities for the Fair on a site of a minimum of 175 acres. In their view, the Fair does not need and cannot use a large coliseum-type building, although it could possibly use cattle barns as well as joint parking area in common with the PI. The Fair is an outdoor, family affair, with largely night attendance. It must have a race track, carnival, and numerous separate buildings. It must retain a rural atmosphere and it must be centrally located in the county, that is - east of Portland.

Vanport was considered unacceptable and for the following reasons the 181st and Halsey site was favored over it: better climate, better drainage (i.e., no flood danger), lack of competition from Jantzen Beach. It was thought to have a more central location for the County, with adequate access from the city.

In interviews with three other county officials, there were individual opinions echoing the views of the County Commissioners as to the absence of compatibility between the Fair and either the city's proposed Center, or the PI. However, apart from personal antagonisms involved, it was recognized that this unwillingness to consider a joint facility arose in large part from the understanding that the Exposition-Recreation Commission was committed to Vanport as a site.

It was stated somewhat forcibly that neither the PI nor the Commission appeared interested in offering any advantages to the Fair but expressed their "invitation" in terms amounting to "taking Vanport or leaving it." The Fair would be lost in PI facilities. It should include in its development, park area, picnic grounds, and other recreational facilities for the people of the County.

Notwithstanding the strong opinions expressed in support of an independent Fair, it was brought out that the County had \$100,000 earmarked for preliminary site work which would not be spent until the City's plans were further crystallized. There seemed to be room for a joint working out of common requirements between the PI and the County, either with or without the City. However, the Fair needed ample area for future expansion far ahead of its present size, and it was largely for this reason that the total area required was estimated at 200 acres. Sites along the Banfield Expressway were also favored because of the good access to the center of the city which was claimed even for the 181st and Halsey site. There are several sites closer in to the city on either side of the Expressway, such as the Meier and Frank property (to the north), from 122nd to 148th, the Skylife Airport (to the south of the Expressway), between 132nd and 148th, and the Glendoveer Golf Course just south of Skylife. Although the airport site as such may no longer be available, and although there are some land-use and zoning problems in the area, it may still be possible to assemble 200 acres of reasonably acceptable land in this vicinity. It was felt that these sites have probably not been adequately considered either by the PI or by the City.

The County will have a large but indeterminate sum of money available from its eventual sale of the present Fairgrounds. This will go toward development of any site - for its own exclusive use or for jointly used facilities. The opinion was expressed that the City and the County cannot afford to build facilities that are duplicating to any important degree. Over 80% of the voters of the County also have a direct interest in the Exposition-Recreation Center as residents of the City. This conjunction of interest requires that there be some compromise between an ideal Fair set-up on the one hand and an ideal City Center on the other, both of which together would unduly raise the tax rate to property-holders in the area. As instances of compromise with the Fair's aims, it was brought out that some large coliseums in other cities are used during Fairs for circuses or other central attractions. Also there are instances wherein a single large exhibition building, like that of the PI, is used for housing various animals, in place of the separate barns used in the typical Fair.

With respect to the PI, some question was raised about the alternative plans which they were understood to have made to carry on in their present location in case the Exposition-Recreation bond issue was not voted. It was proposed that these plans be reviewed because the best interest of the city might conceivably lie in assisting the PI with these plans, while retaining the bulk of the \$8,000,000 for another type of center. As another reason for scrutiny of the PI proposal, there was criticism of representations in the pre-election campaign to the effect that the PI-Vanport program would mean a return of half of the total sum spent, in a period of 10 years.

With respect to a possible combination site for the Fair and either the PI or the City's center, there seemed no fundamental reason why the Fair

could not pay rent for use of facilities controlled by someone else, although it might naturally prefer to exercise control itself. It would be a question of working out some reasonable agreement for scheduled use of various events or having the entire area governed by a joint body.

### 3. Chamber of Commerce.

Since the Chamber has no committee working on this problem, direct contacts were limited to Mr. V. A. McNeil at the Visitors Information Center. As his advice related solely to the types of conventions which may use Portland's facilities in the future, this will enter into the later analysis of the probable use of the Center.

### 4. City Planning Commission.

Preliminary discussion with the Planning Director indicated that the forthcoming report would cover five "close-in" sites (Broadway and Steel Bridge, South Auditorium, Lloyd-Benson High School, and Power Plant and Journal) one further out, but still within the city proper, (Ross Island-Oaks Park) and two (the East Vanport and Morningside Hospital) beyond the city limits. No consideration is apparently being given to the sites mentioned as possibly acceptable for the County Fair.

At the request of the City Council, the Planning Director planned to visit seven cities where there are exposition-recreation developments of interest from his point of view. As soon as word of this trip was received, efforts were made to coordinate Mr. Keefe's itinerary with that of Stanford Research Institute personnel. Mr. Keefe is still visiting three cities which are on the SRI list, but all information obtained by SRI during the visits of its staff will be made available to the Planning Commission.

### 5. Armory Officials.

Discussion with National Guard officials has been only preliminary; together with earlier contact by Planning Commission personnel, this has served to indicate the main requirements of an Armory program, in its relation to the Exposition-Recreation Center. Pending receipt of information from other cities, it is felt that the inclusion of an Armory in Portland's center should await the selection of a site which may be large enough to accommodate this additional building. In other words, the complications are so great and the expected benefits to the city are so limited that it is felt the Armory should not enter into the planning picture at this stage.

Although there are instances of joint participation with cities or counties elsewhere in Oregon, it was stated that the ownership and control of the Armory building by the state was obligatory, thus creating an obvious problem. The Federal and State governments would together finance the construction of the building, but it was considered desirable that the city donate the land required, a total of from 10 to 15 acres, exclusive of parking. A fairly central location was specified, with good access by highway. There would be some permanent seating in balcony space, in addition to bleachers for games and temporary seating on the main floor.

In addition to common use of parking, the main point of contact with the Exposition-Recreation Center is in the possible provision by the Armory of open exhibition space for trade shows. Furthermore, to ignore the

National Guard in planning a center would mean that the Armory might compete with the City's coliseum or auditorium building for such shows, for sports events, or for other gatherings. It is possible that an Armory might incorporate a memorial feature, as - for instance - facilities for meetings of veterans or allied organizations.

#### SCOPE OF WORK TO BE DONE

A. Since Objective I is practically complete, it would be desirable for the Commission to clarify several questions of principle which will help to define the scope of further work by Stanford Research Institute. Three such questions should be answered at this time:

1. Should the Commission try to reconcile the requirements of the Pacific International Association with those of the Fair or with any other possible solution of the P. I.'s problem? Or, alternatively, should the Commission affirm that they are considering no alternative to the provision of P. I. facilities within the exposition-recreation center?

2. Should the Commission make an attempt to reconcile the requirements of the County Fair with those of the City's recreation center? The alternative will be to rule out further discussion of joint facilities because the area being considered will be less than that required by the Fair and because the particular sites now under study by the City Planning Commission are wholly unacceptable to the County Commissioners.

3. Should SRI examine, from the point of view of the city, the soundness or economic justification of the Commission's accepting the offer of the PI to the city? The alternative is a definite determination that new facilities for a livestock exposition are an integral part of the exposition-recreation center, bearing in mind that the inclusion of the P. I. may limit the choice of locations for the center.

If the answer to each of these questions should be in the negative, as has been intimated by some individual Commission members, the balance of the work to be performed by SRI will concern itself with a primary building of arena type, with adjoining animal and exhibition buildings, and a memorial feature. The provision of additional space for an Armory, for a future football or baseball stadium, or for recreational sports should depend on the availability of land and money after fulfillment of the primary goal. In considering these additional facilities, anticipated revenue will probably not play an appreciable part.

B. In addition to the above decisions as to principle, it would be desirable that the Commission call to the attention of SRI any specific problems which it desires to have analyzed, such as:

1. The present municipal auditorium in its relationship to the proposed Center.

2. The value and availability of land in potential sites (data to be secured in collaboration with the Executive Secretary of the Commission.)

3. The cost of any particular facilities considered additional to the primary or minimum layout of the Center, such as tennis courts, etc.

OBJECTIVES II AND III

A. For objectives II and III of the Proposal, the following work is in progress:

1. Two staff members are in the midst of a 2-3 week schedule of visits which, with some additional assistance should yield detailed data on 40 to 45 arenas and auditoriums throughout the country. Questionnaire (1) has been sent by mail to an additional 45 managers of buildings in order to secure at least some information of the same nature where a visit was not justified. This program of direct contact was discussed with the administrative head of the International Association of Auditorium Managers, representing about 100 buildings in this country and Canada; initial reactions indicate that it has the full approval of the managers who have already been contacted.

2. Information is being gathered from Chambers of Commerce or Planning Commissions on about 50 metropolitan areas in order to show how they are meeting Portland's problem at present or in proposed plans. (See questionnaire (2) ).

3. Questionnaire (3) is being sent to a large number of potential users of Portland's exposition-recreation center in order to determine the conditions under which it will be patronized by rent-paying tenants. This is a list which can continue to be expanded as further suggestions are made regarding events which could use the building.

B. Tabulation of Data:

A preliminary analysis has been made of 138 arena or auditorium buildings throughout the country known to have a total capacity of at least 4,000 seats (excluding from this list only the college-owned facilities). These buildings are located in 79 so-called metropolitan areas (according to census classification) and 19 other cities, there being 89 other metropolitan areas without buildings of this type. Ownership of the 138 buildings is as follows, broken down also by type of building:

Ownership	All Types	Auditoriums	Arenas, Amphitheatres, Coliseums, etc.	Other Types or Unknown
City	42	29	11	2
Joint City and County	3	2	1	-
Other Public Body	42	3	25	14
Private	34	6	20	7
Unknown	17	4	13	1
	<u>138</u>	<u>44</u>	<u>70</u>	<u>24</u>

Among those of "other types" are thirteen labelled as Armories (most of them being owned by the State or National Guard), and 3 which appear to be primarily ice arenas. 19 of the buildings are connected with a Fair and 8 with a livestock exposition. The balance of 95 are auditoriums, memorial halls, theatres, and exhibition halls or have an unknown affiliation.

Regarding the physical layout of the buildings: 37 of them have facilities for ice, the area involved averaging about 17,500 sq. ft.; 42 have stages, both permanent and temporary (it is possible that still more of the auditorium-type buildings have stages, without this having been specified); average total seating capacity is about 7,400, while 27 out of 134 (those whose capacity is known) are able to handle 10,000 or more. These 27 largest buildings are distributed as follows, by population group.

Cities or metropolitan areas up to 150,000	-	5
- " " 150,000 to 500,000	-	4
- " " 500,000 to 1,000,000	-	6
- " " over 1,000,000	-	<u>12</u>
		27

It appears that, with only two exceptions, all the 32 metropolitan areas of over 500,000 population have buildings of the type analyzed. In the group with population from 150,000 to 500,000, 38 out of 82 are so provided. In the metropolitan areas under 150,000, only 11 out of 54 have buildings of minimum 4,000 seat capacity. The distribution of all buildings according to population is as follows:

U. S. AUDITORIUMS, ARENAS, ETC. (NON-COLLEGE OWNERSHIP) HAVING TOTAL SEATING CAPACITY OF 4,000 OR MORE

Size Group of City of Metropolitan Area	Cities	Build- ings	Ownership				Type of Building				Special Affiliation		Can Provide	
			City	Other Public	Pri- vate	Other or ?	Audi- torium	Arena*	Armory	Other or ?	Fair	Live- stock Exp.	Ice	Stage
To 150,000	30	31	10	16	1	4	10	17	2	2	7	3	5	14
150,000 - 500,000	38	46	15	15	9	7	15	22	6	3	7	2	11	11
500,000 - 1,000,000	17	25	11	5	6	3	9	14	1	1	3	2	6	11
Over 1,000,000	13	36	9	6	17	4	10	17	4	5	2	1	15	6
Totals	98	138	45	42	33	18	44	70	13	11	19	8	37	42

\*Included under this term are also coliseums, amphitheatres, indoor stadiums, so-called "Gardens", and Field Houses.

## EXPOSITION-RECREATION CENTER REPORT

## PROGRESS REPORT NO. 4

## OBJECTIVES II and III

A field survey of thirty-two cities has been completed. Cities visited were selected on the basis of two criteria: (1) all cities with metropolitan area population between 500,000 and 1,000,000 and (2) all new or important facilities of the general type being considered for Portland. In each city, interviews were held with building managers and chambers of commerce to obtain information on the details of the city's facilities and plans. City planning commissions, fair boards, recreation commissions, and other similar agencies were contacted in those cities where plans were being formulated for new facilities.

Completed questionnaires are being received now from facility managers in other cities and from potential users of the proposed Portland Center.

Analysis of these questionnaires is not complete, but some aspects of the findings can be reported to the commission at this time. These findings are preliminary and do not represent final conclusions relative to the Portland Center.

In this survey, two fundamental questions are of special interest and concern: (1) what type of facility has proven most successful and has been recommended by managers and commissions, and (2) where should such a facility be located in a city or metropolitan area. The summary presented in this report is pertinent to these fundamental questions.

## Preliminary Summary of Questionnaires and Field Trips

## 1. Land area occupied by facilities including parking:

- 15 are less than 5 acres.
- 7 are more than 5, but less than 50 acres.
- 7 are more than 50, but less than 150.
- 5 are more than 150 acres.

## 2. Location:

- 15 are in the central downtown area.
- 4 are within 2 miles of city center.
- 11 are from 2 to 5 miles from city center.
- 4 are 5 to 8 miles from city center.

## 3. Driving time from center of business district to facility:

- 22 are within 10 minutes driving time.
- 6 are from 10 to 15 minutes driving time.
- 6 are more than 15 minutes driving time.

## 4. Served by regular public transit:

27 are and 7 are not served by regular public transit. 31 state that regular transit is necessary for successful operation and 3 state that it is not necessary.

## 5. Cab fare from center of city to facility:

16 are within 50 cent cab fare.  
 5 are 50 cent to \$1.00.  
 12 are \$1.00 to \$2.00.  
 1 is \$2.25.

## 6. Railroad sidings:

Twenty three do not have siding; eleven do have siding. Seven feel a siding is necessary; twelve state it is desirable but not necessary, and fifteen state it is not necessary.

## 7. Nineteen of these facilities are multiple event; fifteen are single event facilities.

## 8. Principal location factors to consider as recommended by managers. They are listed in order of considered importance:

Downtown, Central location.  
 Public transit access.  
 Parking convenience.  
 Highway access.  
 Center of population.  
 Truck access.

## 9. Parking facilities:

24 operate some type of parking facility and 10 operate no parking facility.

14 who operate parking facilities state they are adequate for their crowds, and 10 state they are inadequate.

6 do not charge for parking; 18 do charge.

Of the 18 who do charge, only 2 charge over 50 cents per performance.

## 10. Summary of parking suggestions:

Have parking on all sides of the building, so all cars can be closer to the building.

Lots must have numerous exits to facilitate rapid clearance of crowds.

Lots must be surfaced, and it is advantageous if the parking can be under cover, although few felt this possible because of cost.

Lots must be managed, and patrons guided into and out of parking spaces.

## 11. Permanent seating capacities and comments regarding size:

11 are less than 6,000 - five of these are "just right", 4 made no comment, 2 said "better be too small than too large."

4 are 6,000 - 7,000 - all are "just right."

6 are 7,000 - 8,000 - 4 are "too big," 1 "is just right", and one no comment.

4 are 8,000 - 9,000 - 2 are "too big", 1 "may be too big" and 1 is "just right."

2 are 9,000 - 10,000 - Both are too big.

5 are over 10,000 - All are too big.

(The above comments are those of the building managers.)

12. Arena Size:

<u>Width</u>		<u>Length</u>	
Less than 90'	3	Less than 200'	9
90' - 99'	3	200' - 209'	6
100' - 109'	8	210' - 219'	4
110' - 119'	5	220' - 229'	5
120' - 129'	9	230' - 239'	3
130' - 139'	2	240' - 249'	2
140' - 149'	0	Over 250'	5
Over 150	1		

Largest arena: 300' X 156', including area under an overhanging balcony.

13. Square feet of exhibit space available, other than the arena floor:

- 11 none
- 9 less than 51,000
- 3 between 51,000 and 75,000
- 2 between 75,000 and 100,000
- 2 between 100,000 and 150,000
- 2 in excess of 200,000
- 5 are indeterminate because of numerous buildings on fairgrounds.

14. 16 have more than one building on the site, and 18 have only one building.

15. 30 lease concessions, and 4 operate their own.

16. 17 have ice facilities installed.

17. 6 of these facilities are located on State Fairgrounds; 5 of these cities are either building or have bond issues in force to provide new, downtown facilities.

18. 5 cities have state fairground areas in suburban locations in addition to a city or private facility in another location. Except for accommodating fairs, these facilities attract little use in competition with the downtown facility.

19. No cities visited had integrated armories with arenas or auditoriums.

An optimum facility is defined as one which provides a maximum of service to all members of the community and creates the lightest economic burden.

There is a type of facility recommended as most desirable or optimum by professional building managers and commissions. It is a properly designed and equipped multi-purpose building in which several events can be held simultaneously. It contains an arena, a theater or music hall, exhibit space, and meeting rooms with outside entrances. It should also contain banquet and catering facilities, proper and adequate sanitary facilities, adequate storage space, and proper maintenance and operating equipment in addition to many details too numerous to list here.

The four parts to this building - the arena, the theater or music hall, the exhibit space, and the meetings rooms - could be (1) separate buildings on one site, (2) separate building on more than one site, or (3) combined as one building. The latter is recommended by cities studied because the location requirements for each are essentially the same, the parts complement each other in utility and service, and there are specific economies attained by having them combined on one site.

Best Location:

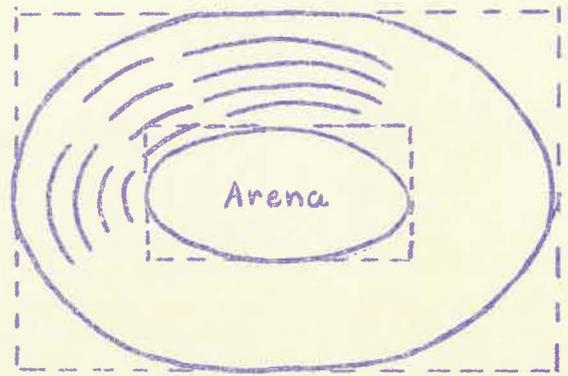
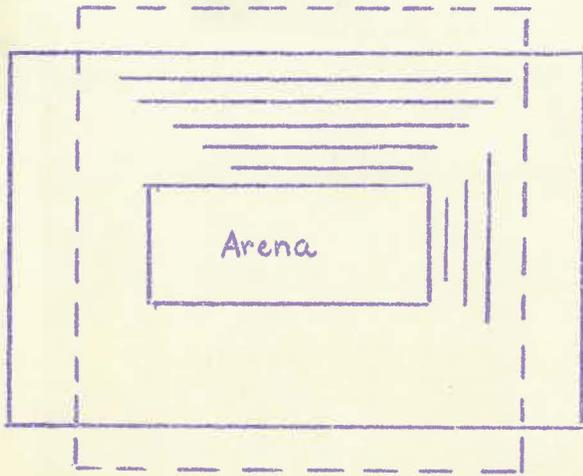
There is also a best site or location for the above facility. It should be (1) centrally located, preferably within walking distance of downtown hotels and stores, (2) accessible by private car or public transit with equal ease from all parts of the city or metropolitan area, (3) served by adequate covered parking around the building with egress to numerous main arteries making smooth, rapid dispersal of crowds possible, (4) a site compatible with its surroundings.

## SCOPE OF WORK IN PROGRESS:

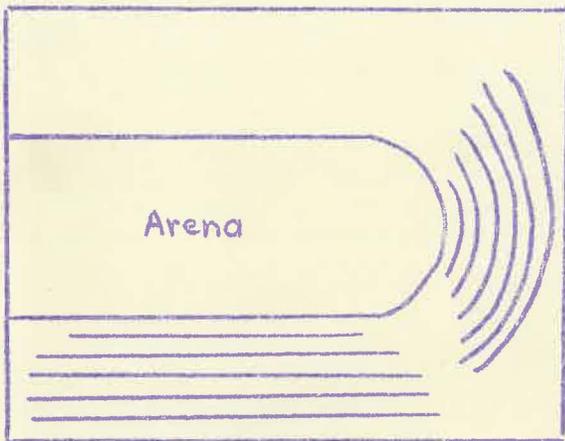
Objectives II and III will be reported in complete form at the commission meeting on November 15, 1954.

Objective IV is now in progress and will be reported to the commission on November 15, 1954. It is anticipated that this will be complete, but availability of acceptable appraisal estimates and coordination of the study with other organizations may delay a final report on this objective. This objective is the heart of this study and must be completed with careful and complete coordination. Site availability and feasibility listed in Objective V are pertinent to Objective IV; therefore progress of the city planning commission in site analysis is important to completion of this objective.

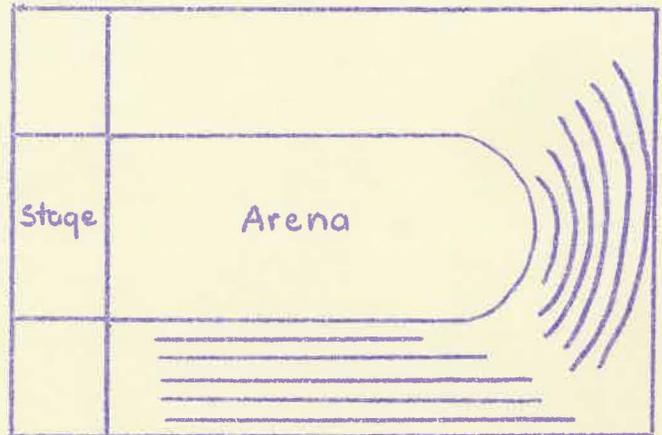
TYPES OF BUILDINGS



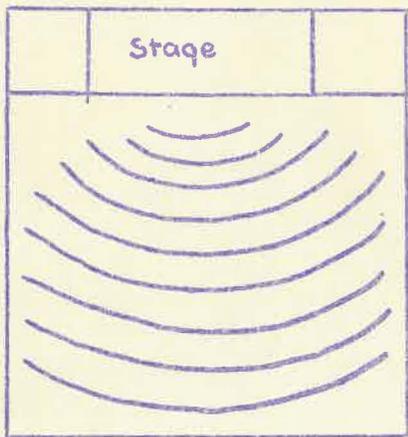
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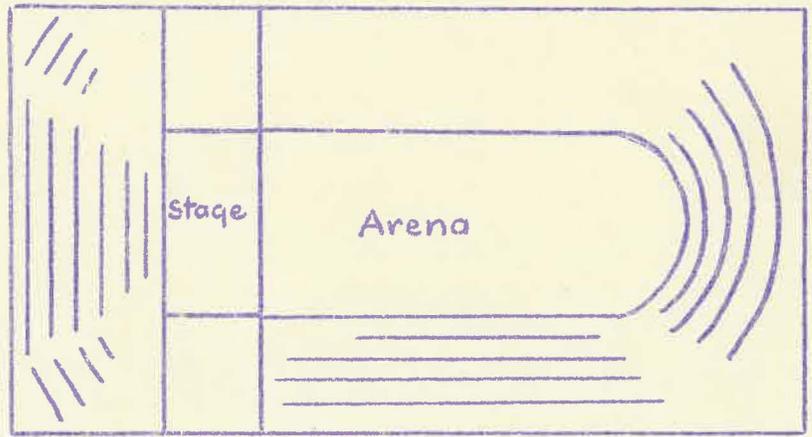
II



III



IV



V

## EXPOSITION-RECREATION CENTER REPORT

## PROGRESS REPORT NO. 5

Parts I and II of this report present summaries of questionnaire which were prepared to gather data pertinent to objectives II and III of the SRI proposal. These summaries and the summary report presented to the commission on November 1, 1954 are being utilized in the analysis outlined in Objective IV of the SRI proposal.

Objective IV is not complete as of today, however an outline of this work is presented in part IV of this report. It is anticipated that the analysis will be ready for discussion with the commission by November 22, 1954.

## Part I

Summary of SRI mail questionnaires from facility managers.

As of November 11, 1954, thirteen responses had been received from facility managers. Because of conflict of purpose, two of these referring to state or regional fairs were discarded, leaving for analysis a total of 11 questionnaire responses (New Orleans Municipal Auditorium; Richmond Masque Auditorium; San Antonio Municipal Auditorium; Birmingham Municipal Auditorium; West Chester, New York County Center; Canton, Ohio, Memorial Auditorium; Atlanta Municipal Auditorium; Tampa Armory; Washington's Uline Arena; Boston Gardens; and Grand Rapids Stadium).

A. Location, Site and Accessibility:

1. Land Area:	<u>Less than 5 acres</u>	<u>5 - 50</u>	<u>Over 50</u>	<u>not indicated</u>
	6	3	0	2

2. Distance from Business District:	Within <u>1 mile</u>	<u>1 - 2 miles</u>	<u>2 to 5</u>	<u>not indicated</u>
	8	2	1	1

3. Driving time: 10 are within 10 minutes driving time from the business center.

4. Public Transit: All are served by one or more forms of public transit. Of this eleven, only one felt it unnecessary and 2 did not indicate one way or the other as to the necessity.

5. Cab fare from City Center	Within <u>50¢</u>	<u>50¢ - \$1.00</u>	<u>\$1.00-\$1.50</u>	<u>not indicated</u>
(Normal)	6	3	1	1
(Maximum)	3	4	3	1

6. Railroad Sidings:	Out of 10 for which this information is known:	
Availability -	4 have	6 do not have
Desirability -	6 deem necessary	4 consider unnecessary

*File*

7. Location Factors:	Down- town	Population Center	Good Hiways	Good Pub.Trans.	Truck Access	Not indicated
	8	--	3	4	--	5 1

2 place particular emphasis on adequate parking space. 2 are emphatic relative to proximity to business and hotel centers. One of these two believes downtown location must be obtained even at the expense of curtailed parking facilities. 2 place emphasis on the ready access to good highways and the availability of connecting auto ramps or lanes.

B. Parking Facilities:

- 8 operate parking facilities in conjunction with building; 3 do not. These latter 3 rely on private parking lots in neighborhood.
- Of the 8 that operate lots - 6 are adjoining, 2 are within 50 ft. of the facility. Only two are believed to be adequate, the other six depending to a large degree on street and private parking for overflow.
- These facility-run lots vary in size from 40 to 2500 car capacity, with an average of 880 cars.
- Ratio of cars to patrons:  
 Definitely indicated by those without lots: 1 to 3; 1 to 4.  
 Ratio for 4 with lots: 1 to 2.2, 4, 4, 3. Average = 1 to 3.5
- 4 do not charge; 3 charge 50¢ or less, 1 doesn't indicate.
- Comments varied. 5 either place heavy emphasis on parking or would enlarge present facilities. Again, 1 indicates you can't get a good location AND good parking space.

C. Main Building

1. Arena Dimensions - (1 has no real arena, as it is really a stage auditorium):

Length	Width	Arena Area (1,000's sq. ft.)
60' - 99' (1)	60' - 79' (1)	5.0 - 9.9 (1)
100 - 139 (0)	80 - 99 (3)	10 - 14.9 (1)
140 - 179 (3)	100 - 119 (3)	15 - 19.9 (3)
180 - 219 (3)	120 - 139 (2)	20 - 24.9 (2)
220 - 259 (2)	140 - 159 (1)	25 - 29.9 (2)
260 - 280 (1)	Average (10) = 106'	30 - 34.9 (1)
Average (10) = 188'		Average (9) = 20,400 Sq. Ft.

- Arena Shape - 2 oval, 4 rectangular, 2 other, 2 not indicated.
- Flooring - All concrete (1 terrazzo) top surface.
- Arena Seating -

	3,000 3,999	4,000 4,999	5,000 5,999	6,000 6,999	7,000 over 7,999 8,000	Total
Permanent	0	2	3	3	1 Boston	(10)
Ice Events	1	4	1	1	1 Gardens	(9)
Basketball	2	4	0	1	2 has 13,900 permanent for all events.	(10)

5. Total Cost - Figures range from \$300.00 WPA gift in 1941 to 3½ million dollars Boston Gardens built in 1928.

4 are under 1 million	1 built before 1920.
4 are from 1 to 2 million	5 built in 1920's
1 is 3½ million	1 built in 1930's
	3 built in 1940's
	1 built in 1951.

6. Exhibit Space- (1 does not have any)

	<u>Under 10,000</u>	<u>10,000-20,000</u>	<u>20 - 30,000</u>	<u>30 - 40,000</u>
number -----	2	2	4	2

7. Other Meeting Rooms - (2 do not indicate)

5 have 2 other rooms, 2 have 3, 1 has 10, 1 has 17 (one has a small theater - 500 seats)

8. Banquet Facilities - 7 have

3 do not have  
1 does not indicate

4 are 2,000 or less  
2 are from 4,000 - 5,000

D. Remaining Items:

1. Other Buildings - 5 do not indicate

5 do not have  
1 has an ice plant in separate building.

2. Concessions - 9 have, 1 has none, 1 does not indicate. These vary from 1-14 in each, from snack bars to bars. The Boston Gardens (a privately owned arena) indicated concessions as most profitable part of operation.

3. Recreation Facilities - 1 has a pool, 4 have none, 6 do not indicate.

4. War memorial Feature - 1 has, 9 have none, 1 does not indicate.

5. Financial Data: 4 avoid free bookings, or charge non-profit groups at cost. 2 indicate usage at 150 - 180 booking dates per year. Revenues yielded in 1953 run from \$47,546 (theater type); \$117,216 \$170,000; \$192,000. Yet the latter believes it will always be a deficit type business.

## SUMMARY OF USER INFORMATION ANALYSIS

There were two basic types of potential users of the proposed facility: convention-exhibition events and promotional events. No attempt was made to differentiate between conventions and exhibition type events, due to the fact that both meeting space and exhibition space in some amount was required by both.

A. Convention - Exhibition Events

Two sources of information were used in the analysis of this basic type of user. First, SRI questionnaires mailed to prospective users, of which approximately 25 percent or 27 questionnaires were returned. (These will be referred to as the "SRI group".) And second, information obtained from the Portland Convention Bureau on over two hundred convention-exhibition events not now coming to Portland and which were classified as to the degree of possibility of their coming to Portland if adequate facilities were available. (These will be referred to as the "Bureau group".)

Limiting factors: Both groups pointed out the fact that the primary limiting factor is that all three requirements--meeting space, exhibition space, and banquet facilities--of this type of event should be in one or adjoining buildings. Portland, at the present time, lacks such accommodations.

Of the 177 convention-exhibition events listed by the Portland Convention Bureau as being most likely to come to Portland if adequate facilities were available, 124 or 70 percent listed the lack of adequate exhibit space as being a limiting factor. In addition, 165 or 93 percent listed Portland's lack of meeting room space as either the primary or an additional limiting factor. The lack of adequate banquet facilities was not often rated as the principal limiting factor, but was mentioned by 47 percent of these events as being a requirement which Portland lacked.

Timing: Both groups indicated that the great majority of events were held annually, usually in the period from April through July, but often in the early fall, and that they were of 4 to 5 days duration.

Attendance: Although the SRI group failed to show an attendance pattern, the Bureau group showed a marked concentration of attendance figures in the range from 1000 to 2000 persons. This points out the fact that although Portland can adequately house these groups at the present time, they are not coming to this city because of the lack of other facilities.

Exhibit Space: The Bureau reports indicated that in 60 percent of the cases the exhibition requirements were satisfied by an area of 20,000 square feet or less. An additional 28 percent required from 20,000 to 60,000 sq. ft. Only 12 percent needed over 60,000 sq. ft., with one event requiring 215,000 sq. ft.

## SUMMARY OF USER INFORMATION ANALYSIS

B. Promotional Events

Ten questionnaires were returned out of 25 mailed. These include: 3 ice shows, 1 ice hockey, 1 variety show, and 5 returns from local promoters or organizations. The information analyzed was restricted to 4 categories: arena size, arena seating, principal location factors, and comparable facilities favored.

Arena Size: An average of the five sets of dimensions submitted indicate an arena size of 75' x 185' or 13,900 sq. ft.

Arena Seating: Six of the eight reporting indicated maximum seating capacities of 10,000 or less. Five, or one-half, could be handled with an arena of 7,000 or less. One local promoter quoted 20,000 as an ideal capacity.

Principal Location Factors: Of the six specifying this information, four indicated a centralized location as a prime requisite; three emphasized good highway access and parking; and one mentioned good public transportation as a necessity.

Comparable Facilities Favored: The Milwaukee Arena and the Fort Wayne Coliseum headed the list with two votes each.

EXHIBIT SPACE ANALYSIS

A schedule of anticipated exhibit space utilization was made in order to estimate the intensity of use of various sizes of exhibit halls; hence, a measure of potential income versus construction and maintenance costs. The major users of exhibit space as listed in this schedule are either shows that have been held in Portland in the past and could reasonably be expected to return in the future, or a representative sample of the conventions that might be expected to come to Portland if the exhibit space were available.

Schedule of use:

<u>EVENT</u>	<u>LENGTH OF RUN</u>	<u>EXHIBIT SPACE REQUIREMENTS</u>
Pacific International	10 days	400,000 - 500,000 sq. ft.
Auto Show	10 days	80,000 - 200,000
Home Show	10 days	50,000 - 80,000
Sport Show	10 days	50,000 - 80,000
Industrial Fair	10 days	50,000 - 80,000
Garden and Flower Show	10 days	20,000 - 50,000
Food Show	4 days	14,000 - 20,000
Conventions:	3 at 5 days	4,000 - 14,000
	1 at 5 days	20,000 - 40,000
	1 at 5 days	80,000 - 200,000

Based on a rental charge of one cent per square foot per day and a depreciation and maintenance cost of fifty cents per square foot per annum, it was found that from 40,000 - 80,000 square feet (based upon either the minimum or maximum requirements of the users) represented the break-even point. This indicates the cost of building and maintaining an exhibit area in excess of 80,000 sq. ft. would probably be greater than the anticipated rental return over the life of the facility.

PART IV

OBJECTIVE IV

The following courses of action represent the fundamental choices available to the commission:

1. Erect the required arena and exhibit facilities:
  - (a) In a central location, not adjacent to the existing auditorium and do nothing to the auditorium.
  - (b) In a central location, not adjacent to the auditorium, but also remodel the auditorium.

2. Erect the required arena and exhibit facilities:
  - (a) In a suburban location and do nothing to the auditorium.
  - (b) In a suburban location and also remodel the auditorium.
3. Provide an ideal facility (as defined in Progress Report No. 4):
  - (a) In a central location and erect an entirely new facility containing arena, exhibit space, and theater.
  - (b) Built the arena and exhibit space adjacent to the existing auditorium.
    - (1) Do nothing to the auditorium, or
    - (2) Remodel the auditorium.

Construction costs, land costs, and costs of operation and maintenance vary with each course of action. Anticipated use and possible earnings also vary with each course of action. A detailed analysis is in progress to make comparison of the various courses of action with respect to cost of construction, anticipated earnings based on a specific use of the facility, and the effect of each on satisfying Portland's future anticipated needs for similar facilities.

EXPOSITION-RECREATION CENTER PROJECTPROGRESS REPORT NO. 6

(A preliminary report which does not represent an Official Research Report of Stanford Research Institute.)

OBJECTIVE IV

The purpose of this objective is to analyze the effect of location and composition on the use and earning capacity of the proposed Exposition-Recreation Center. Meetings have been held with individual commissioners to discuss assumptions, method, and the detailed data of the analysis. Summaries of the data are presented in this report in tabular and graphic form, as follows:

- Table I - Portland Activities Applicable to New Exposition-Recreation Center
- Table II - Percent Capacity and Number of Performances for Principal Shows and Largest Basketball Games
- Table III - Estimated Annual Income from Principal Events with Varying Amounts of Exhibit Space
- Figure I - Estimated Annual Income from Principal Events
- Figure II - Estimated Annual Attendance at Principal Events
- Figure III - Comparison of Central vs. Suburban Location--Income and Attendance
- Figure IV - Estimated Limitation on Land and Exhibit Space Acquisition (Land not over \$100,000 per acre)
- Figure V - Estimated Limitation on Land and Exhibit Space Acquisition (Land over \$108,000 per acre)

The experiences of other cities (presented to the Commission in previous progress reports) lead to the following preliminary conclusions, which are fundamental to the analysis of Objective IV:

- (1) An ideal facility is one which provides a maximum of service to all members of the community and creates the lightest economic burden. It is a multi-event, multi-purpose facility which will accommodate all types of activities with a minimum of conflict.
- (2) Principal location factors are (in order of importance):
  - (a) A central location
  - (b) Highway access
  - (c) Public transit access
  - (d) Convenient parking

(Satisfaction of these factors is assumed as essential in providing an ideal facility.)

- (3) Metropolitan areas appear to ultimately need a centrally located civic-activity center, and this need does not seem to be satisfied by a suburban facility.

Because it is used in the analysis, the term "central location" requires definition. A central location is a location within the central area of Portland; this is defined as the area bounded on the west by the Pioneer Post Office (the approximate center of the business district) and on the east by Holladay Park (the approximate center of population), and it includes an area approximately 1.5 miles wide between the Broadway Bridge on the north and the Hawthorne Bridge on the south.

Preliminary conclusions which can be drawn from the analysis of Objective IV are:

Income: If assumptions are met, a central location is favorable in the long run.

If parking is not provided in a central location, the economic balance shifts in favor of a suburban location.

Attendance: A centrally located facility, with parking, will attract more events and larger crowds than the same facility in a suburban location.

Composition: There appears to be no demand for more than 200,000 square feet of exhibit space except as stated by the Pacific International Livestock Exposition. Data in Table III indicate the effect of exhibit space on estimated income and Figures IV and V present the interdependence of composition (measured in square feet of exhibit space) and location.

Limits of Land Cost: A \$3.5 million arena with parking and 400,000 square feet of exhibit space can be provided on land costing \$70,000 per acre or less; but where land costs are \$108,000 per acre or more, the most exhibit space that can be provided is 183,000 square feet.

#### OBJECTIVE V

Because of the interdependence of composition and location, it is essentially impossible to complete this objective before the Commission has made some fundamental decisions:

- (1) Will the Commission coordinate an Urban Redevelopment program with site selection for the Center?
- (2) Is there a fixed amount of exhibit space the Commission wishes to provide in the Center?
- (3) How does the Commission wish to include the Pacific International Proposal in this analysis?

TABLE I

PORTLAND ACTIVITIES APPLICABLE TO NEW  
EXPOSITION-RECREATION CENTER

Event*	Last Location	Performances	Average Attendance	Total Attendance	Percent Capacity	Percent Capacity Event Would be in Arenas with:		
						6,000 Perm. Seats	8,000 Perm. Seats	10,000 Perm. Seats
P.I. Rodeo (1952)	P.I.	10	6,000	60,000	90	100	75	60
Circus (1953)	Armory	12	1,913	22,962	75	33	25	20
Ice Show (1953)	Ice Arena	30	3,000	90,000	75	40	31	26
One-Night Shows (1953)	Auditorium	4	2,800	11,200	65	31	26	21
Band Concerts (1953)	Auditorium	4	4,000	16,000	95	53	44	35
College Basketball (all 1953)	P. U. Gym	6	1,200	7,200	55	16	13	10
	(P.U.) Armory	5	1,400	7,300	55	19	16	13
	(P.S.C.) High Schools	12	1,000	12,000	50	13	11	9
Promoted Basketball (1953)	Armory	1	2,250	2,250	85	30	24	17
	High Schools	2	1,600	3,200	80	21	17	13
Boxing (1953)	Auditorium	4	2,000	8,000	40	22	18	15
Wrestling	Armory	52	1,000	52,000	35	11	10	8
				240,112				

Exhibits*	Last Location	Days	Average Attendance Per Day	Total Attendance	Space Sq.Ft.
P.I. (1952)	P. I.	10	5,000	50,000	436,000
Auto Show (1953)	Meyer Whse.	10	7,000	70,000	180,000
Home Show (1953)	Meyer Whse.	10	2,300	23,000	80,000
Food Show (1954)	Fair	4	5,000	20,000	20,000
Garden Show "	Fair	4	10,000	40,000	20,000
Dog Shows (1953)	Armory	2	4,000	8,000	16,000
Do It Yourself (1954)	P.I.	10	3,150	31,500	75,000
				242,500	
				482,612	

\* - Events and exhibits listed for last representative year in which they were held.

TABLE II

PERCENT CAPACITY AND NUMBER OF PERFORMANCES FOR PRINCIPAL SHOWS AND LARGEST BASKETBALL GAMES\*

## ARENA CENTRALLY LOCATED

1957	Event	<u>6,000 seats</u>			<u>8,000 seats</u>		<u>10,000 seats</u>	
		Attendance	% Capacity	No. of Performers	%	No.	%	No.
	P.I. Rodeo	78,000	90	15	90	11	90	9
	Circus	29,900	90	6	90	5	90	4
	Ice Show	117,000	90	18	90	13	90	11
	One-Night-Show	21,840	60	4	49	4	42	4
	Band Concerts	20,800	69	4	55	4	45	4
	Basketball (1953)	9,360	32	4	25	4	21	4
	(1952) (O'Briens) (15,000)	19,500	130	2	103	2	85	2
	<u>1965</u> 20% increase for population							
	P.I. Rodeo	93,600	90	18	90	13	90	11
	Circus	35,880	90	7	90	5	90	4
	Ice Show	140,400	90	21	90	17	90	14
	One-Night-Show	26,208	73	4	60	4	50	4
	Band Concerts	24,960	83	4	66	4	54	4
	Basketball (1953)	11,232	37	4	29	4	24	4
	(1952) (O'Briens)	23,400	156	2	123	2	102	2
	<u>1975</u> 20% increase for population							
	P.I. Rodeo	112,390	90	21	90	16	90	13
	Circus	43,056	90	8	90	6	90	5
	Ice Show	168,480	90	25	90	20	90	17
	One-Night-Show	31,450	87	4	72	4	61	4
	Band Concerts	29,952	100	4	79	4	65	4
	Basketball (1953)	13,478	45	4	36	4	29	4
	(1952) (O'Briens)	28,080	187	2	148	2	122	2

TABLE II (continued)

ARENA IN SUBURBAN LOCATION (5 - 1) \*\*\*

1957	Event	6,000 seats		8,000 seats		10,000 seats		
		Attendance	% Capacity	No. of Performers	%	No.	%	No.
	P.I. Rodeo	70,200	90	13	90	10	90	8
	Circus	16,910	90	5	90	4	90	3
	Ice Show	105,300	90	16	90	12	90	10
	One-Night-Show	19,656	54	4	44	4	38	4
	Band Concerts	18,720	62	4	50	4	40	4
	Basketball (1953)	8,424	28	4	22	4	18	4
	(1952) (O'Briens) (15,000)	17,550	117	2	92	2	76	2
1965 20% increase for population								
	P.I. Rodeo	84,240	90	16	90	12	90	10
	Circus	32,292	90	6	90	5	90	4
	Ice Show	126,360	90	19	90	15	90	13
	One-Night-Show	23,587	65	4	54	4	45	4
	Band Concerts	22,464	73	4	58	4	48	4
	Basketball (1953)	10,108	33	4	26	4	22	4
	(1952) (O'Briens)	21,060	140	2	111	2	92	2
1975 20% increase for population								
	P.I. Rodeo	101,151	90	19	90	14	90	12
	Circus	38,750	90	7	90	5	90	5
	Ice Show	151,632	90	23	90	18	90	15
	One-Night-Show	28,305	79	4	64	4	54	4
	Band Concerts	26,957	90	4	71	4	59	4
	Basketball (1953)	12,130	40	4	32	4	26	4
	(1952) (O'Briens)	25,272	168	2	133	2	110	2

TABLE II (continued)

#3 of 3

## ARENA IN SUBURBAN LOCATION (5-2) \*\*

Event	Attendance	6,000 seats		8,000 seats		10,000 seats	
		% Capacity	No. of Performers	%	No.	%	No.
P.I. Rodeo	62,400	90	12	90	9	90	7
Circus	23,920	90	5	90	4	90	3
Ice Show	55,600	90	14	90	11	90	9
One-Night-Show	17,472	49	4	40	4	34	4
Band Concerts	16,640	56	4	44	4	36	4
Basketball (1953)	7,488	25	4	20	4	16	4
(1952) (O'Briens) (15,000)	15,600	104	2	82	2	68	2
<u>1965</u> increase for population of 20%							
P.I. Rodeo	74,880	90	14	90	11	90	9
Circus	28,704	90	6	90	4	90	3
Ice Show	112,320	90	17	90	13	90	11
One-Night-Show	20,966	58	4	48	4	40	4
Band Concerts	19,968	67	4	53	4	43	4
Basketball (1953)	8,985	30	4	24	4	20	4
(1952) (O'Briens)	18,720	125	2	29	2	81	2
<u>1975</u> increase for population of 20%							
P.I. Rodeo	89,912	90	17	90	13	90	10
Circus	34,445	90	7	90	5	90	4
Ice Show	134,784	90	20	90	16	90	13
One-Night-Show	25,160	70	4	57	4	48	4
Band Concerts	23,962	80	4	63	4	52	4
Basketball (1953)	10,782	36	4	28	4	23	2
(1952) (O'Briens)	22,464	150	2	118	2	98	2
* Seating Capacities:	6,000 perm. seats	8,000 perm. seats	10,000 perm. seats				
Rodeo	6,000	8,000	10,000				
Circus	6,000	8,000	10,000				
Ice Shows	7,500	9,500	11,500				
One-Night-Show	9,000	11,000	13,000				
Band Concerts	7,500	9,500	11,500				
Basketball	7,500	9,500	11,500				

\*\* 5-1 attendance equals 90% of central  
 5-2 attendance equals 80% of central

TABLE III

ESTIMATES ANNUAL INCOME FROM PRINCIPAL EVENTS  
WITH VARYING AMOUNTS OF EXHIBIT SPACE\*

		<u>Square Feet of Exhibit Space</u>				
		<u>None</u>	<u>100,000</u>	<u>200,000</u>	<u>300,000</u>	<u>400,000</u>
<u>1957</u>	Central	\$50,000	\$ 83,000	\$109,000	\$109,000	\$151,000
	Suburban	54,000	86,000	111,000	111,000	156,000
<u>1965</u>	Central	83,000	132,000	158,000	158,000	204,000
	Suburban	63,000	99,000	126,000	126,000	175,000
<u>1975</u>	Central	93,000	151,000	180,000	180,000	233,000
	Suburban	75,000	110,000	142,000	142,000	201,000

\* - Based on the assumption that exhibit shows which are not provided total stated space requirement will not be held at the facility. This is not considered an accurate assumption of what would probably occur, but is used to illustrate the effect of exhibit space on total income.

# ESTIMATED ANNUAL INCOME FROM PRINCIPAL EVENTS COMPARISON OF CENTRAL VERSUS SUBURBAN LOCATION

FIGURE I.

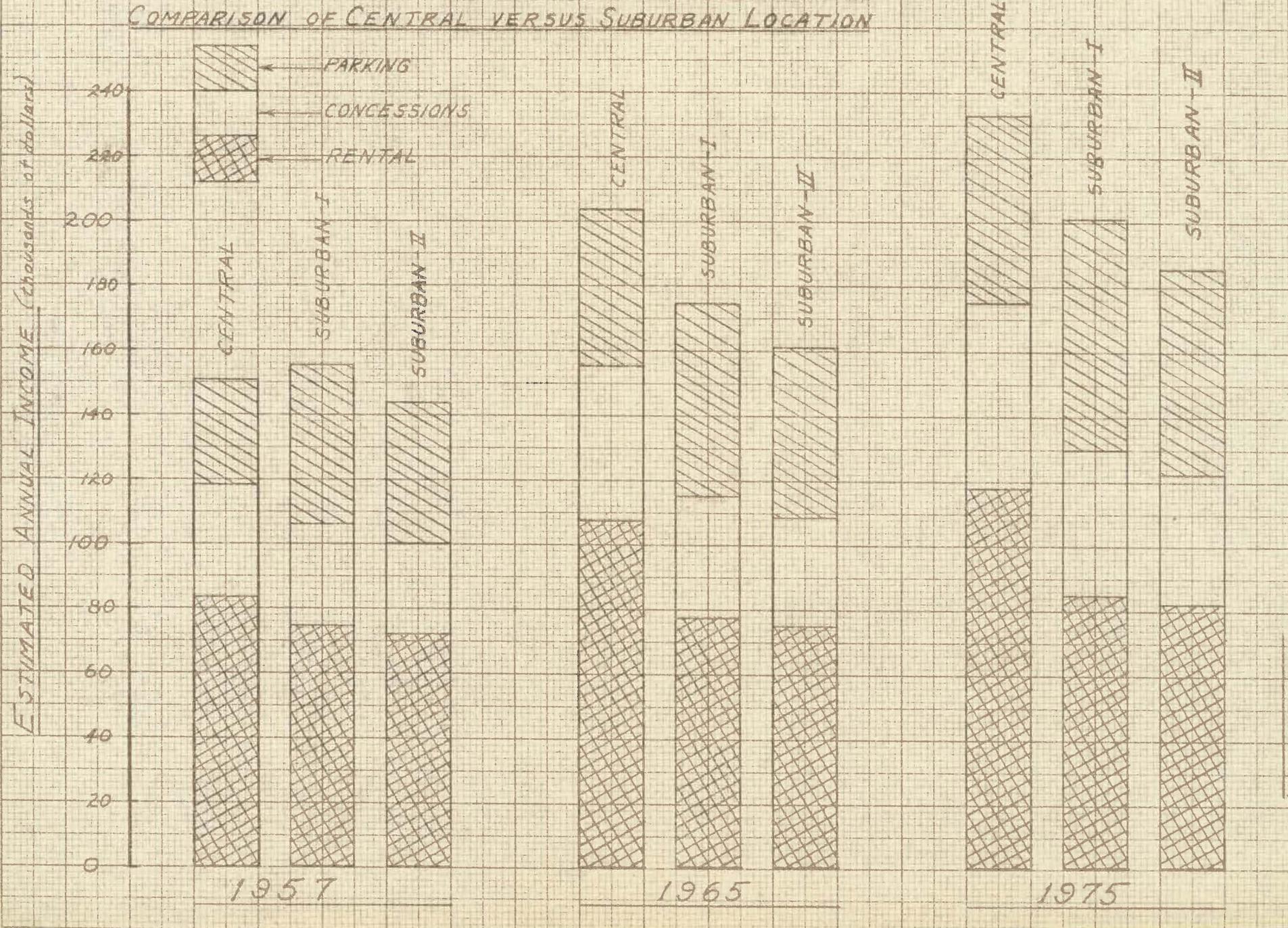


FIGURE I.

# ESTIMATED ANNUAL ATTENDANCE AT PRINCIPAL EVENTS COMPARISON OF CENTRAL VERSUS SUBURBAN LOCATION

FIGURE II

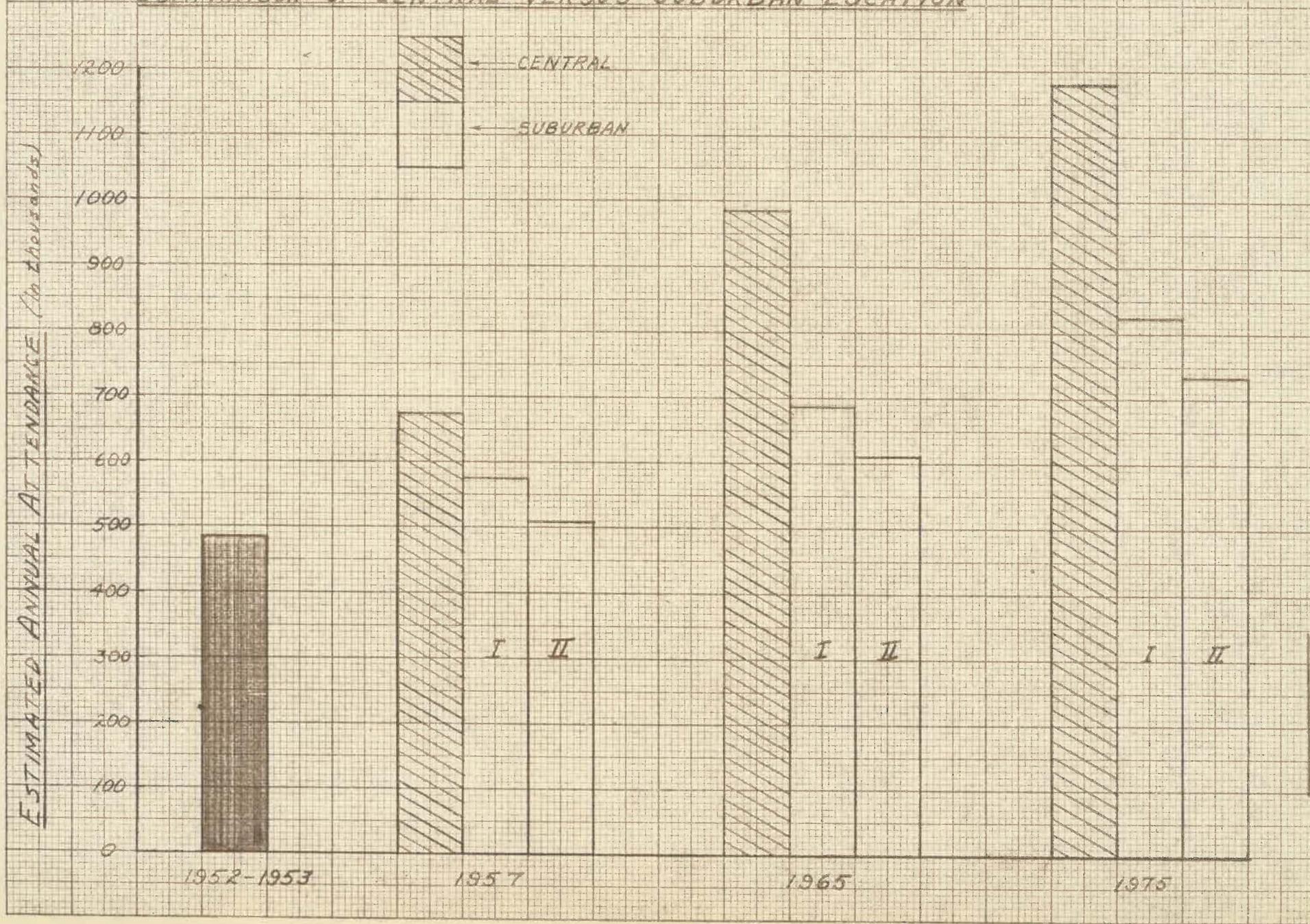


FIGURE II

COMPARISON OF CENTRAL VERSUS SUBURBAN LOCATION

FIGURE III

USING ESTIMATED ANNUAL ATTENDANCE & INCOME FOR PRINCIPAL EVENTS

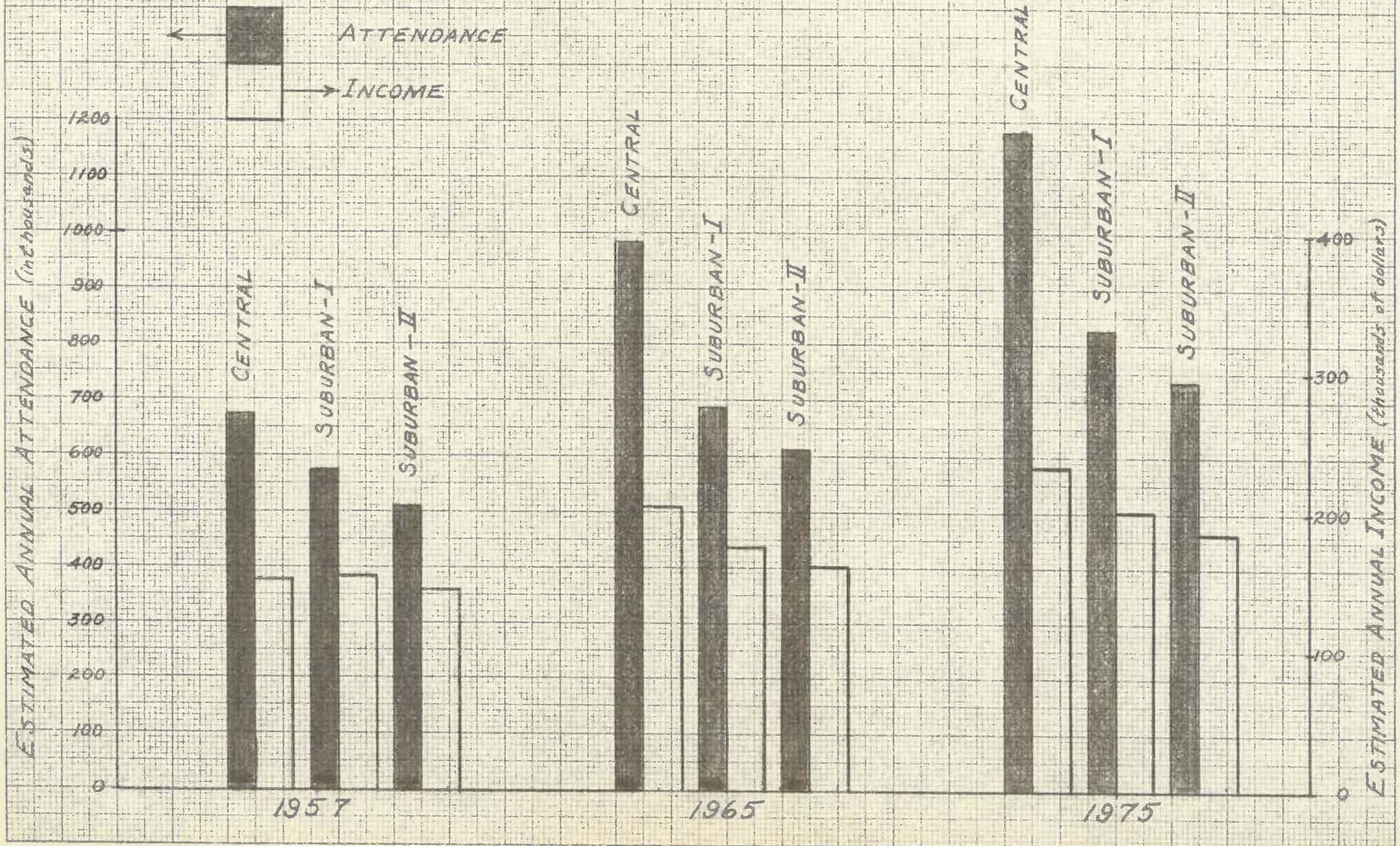
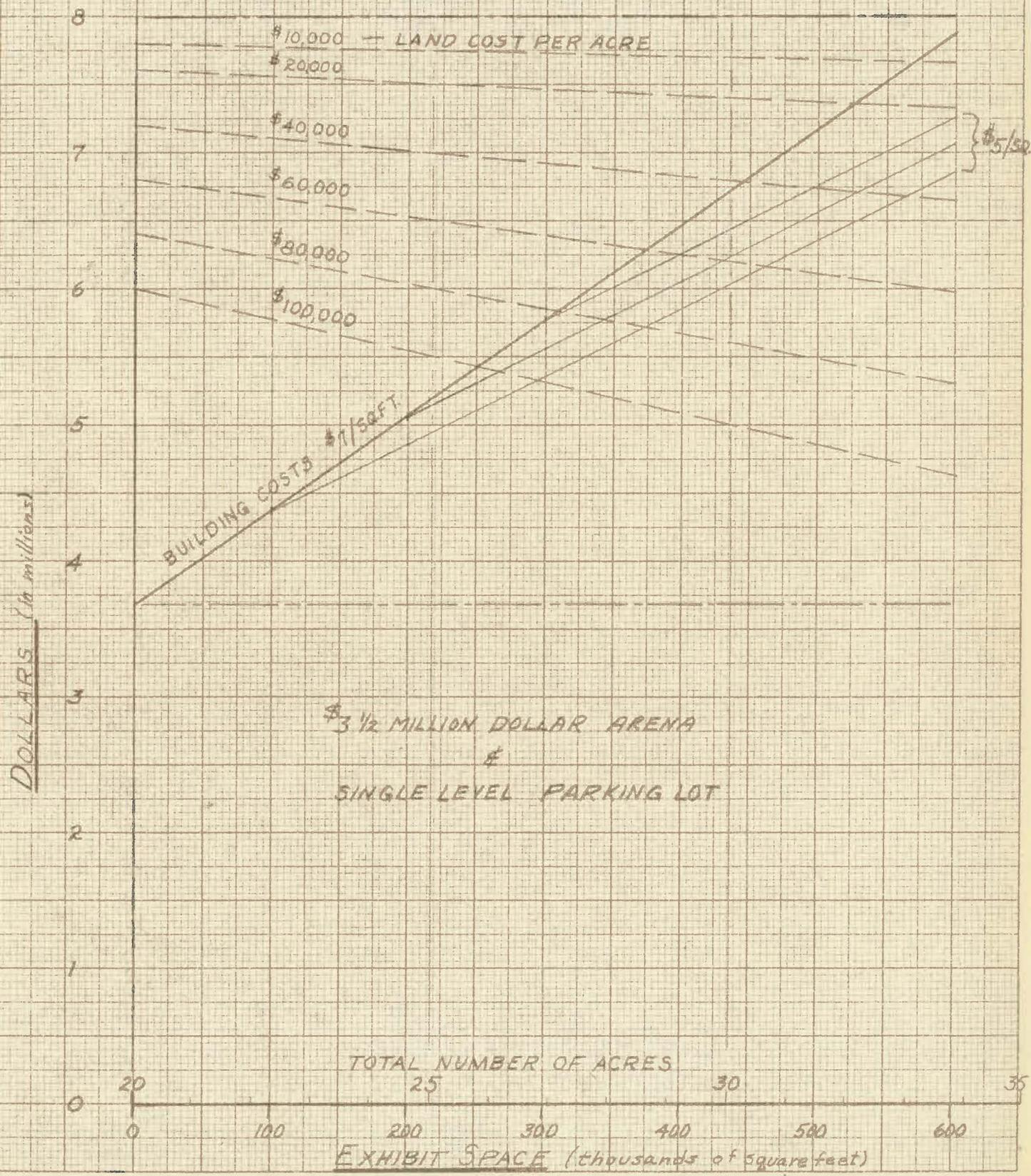


FIGURE III.

FIGURE IV.

ESTIMATED LIMITATION ON LAND & EXHIBIT SPACE ACQUISITION

LAND COST PER ACRE : \$100,000 OR LESS

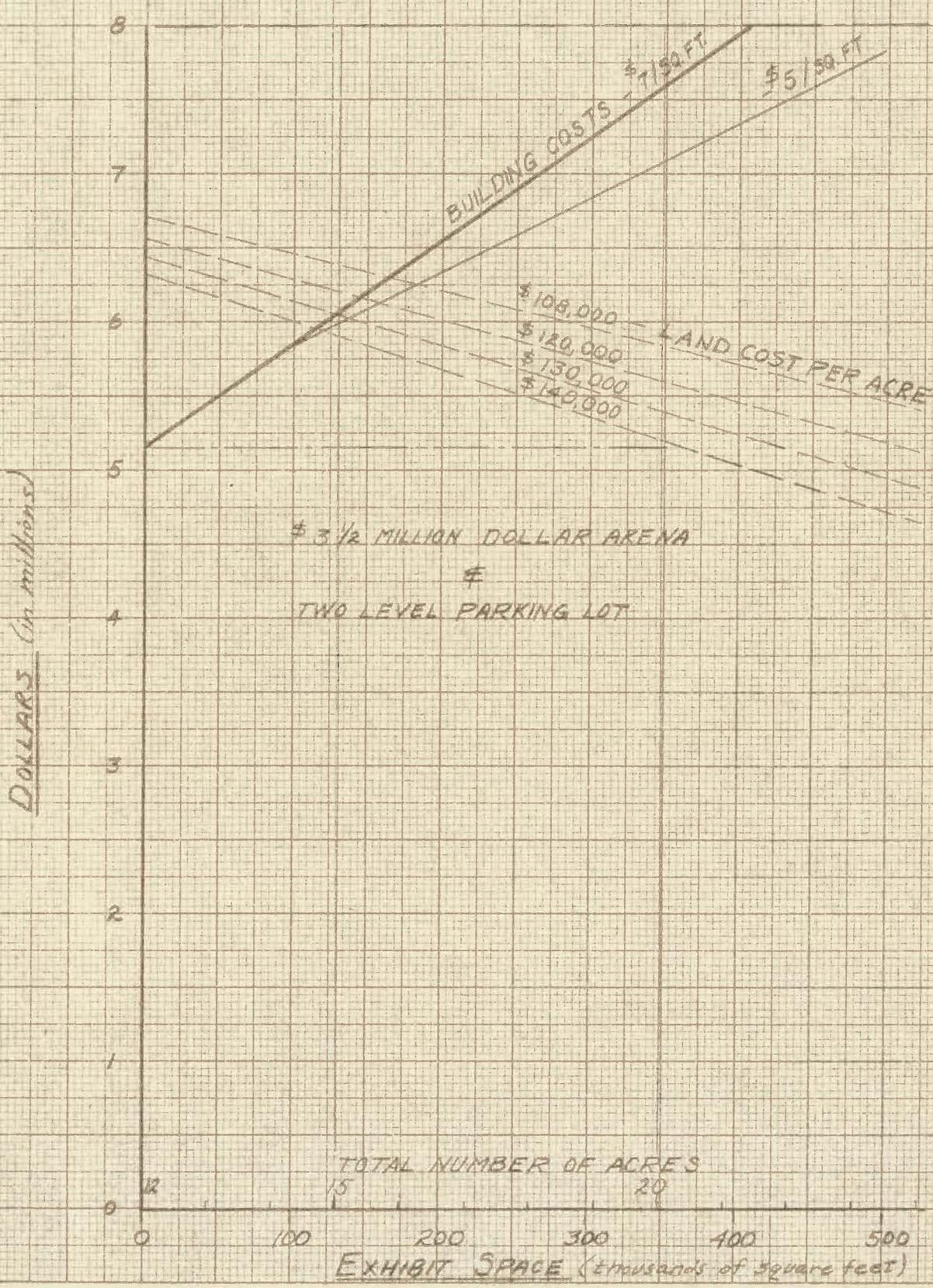


550-12 KEUFFEL & ESSBERG CO.  
10 X 10 to the 1/2 inch, 50% accounted  
MADE IN U.S.A.

FIGURE V.

ESTIMATED LIMITATION ON LAND & EXHIBIT SPACE ACQUISITION

LAND COST PER ACRE: \$108,000 OR MORE



959-12 KEUFFEL & ESSER CO.  
16 X 10 to the 1/2 inch  
MADE IN U.S.A.

## EXPOSITION-RECREATION CENTER

## PROGRESS REPORT NO. 7

(A preliminary report which does not represent an  
Official Research Report of Stanford Research Institute)

## OBJECTIVE V

Purpose of this objective: To analyze properties considered to be suitable as a location for the Center.

Summary comparisons of the various sites are presented in Tables I and II of this report. The distribution of population and the rate of population growth in the urban area is a fundamental consideration in this analysis. A summary of this follows:

Population Characteristics of the Portland area:

The over-all population growth and the relative suburban growth in the greater Portland area are indicated below:

Total Population (est.)	1955 667,000	1965 801,000	1975 955,000
Suburban Portion (est.)	40%	44%	53%

Distribution of the Population	1940	1950
Southeast	33	34
Northeast	24	26
Southwest	15	15.5
North	12.5	11
Clark County	10	7
Northwest	5.5	6.5

The growth of the North and Clark County areas in this decade (1940-1950) was due primarily to war production stimulus; however, since 1950, this has been neutralized by relatively faster growth in the east and southwest areas. It seems probable that future growth will continue to be relatively greater in the east and southwest. As a result, the center of population for the urban area (which is now approximately Holladay Park) will remain about the same or shift slightly south and east.

## PRELIMINARY COST ESTIMATES AND COMPARISONS

## I SOUTH AUDITORIUM SITE

Alternative A (without federal funds):

Estimated land cost (12 blocks)	\$ 2,825,000
Arena cost	3,500,000
Parking cost (ratio 1:5 or 2200 cars at \$750.00 per car)	<u>1,650,000</u>
TOTAL	\$ 7,975,000

Result: Arena with adequate parking is not possible, since a residual of \$25,000 (\$8,000,000 less \$7,975,000) is not sufficient to clear and prepare the site.

Alternative B (with federal funds):

Cost of acquisition:	\$ 2,825,000
Land (at \$1.75/ sq. ft.)	\$ 840,000
Improvements	1,985,000
Clear and prepare site (at \$0.60/sq. ft.)	<u>288,000</u>
Gross site cost	\$ 3,113,000
Less: Re-use value of land	<u>840,000</u>
	\$ 2,273,000
Federal grant-in-aid (2/3)	<u>1,515,000</u>
	\$ 758,000
Cost of land	<u>840,000</u>
Net site cost	\$ 1,598,000

Therefore:

Estimated total site cost	\$ 1,598,000
Arena cost	3,500,000
Parking cost	<u>1,650,000</u>
TOTAL	\$ 6,748,000
Remainder available (\$8,000,000 - 6,748,000)	<u>\$ 1,252,000</u>

Some choices for expenditures of residual: (see footnote 1/)

- (1) 160,000 sq. ft. of two-level exhibit space (including additional land)
- (2) build a new theatre on the present auditorium site.
- (3) 80,000 sq. ft. of two-level exhibit space (including additional land) and remodel present auditorium.
- (4) remodel auditorium and provide parking for 500 additional cars
- (5) remodel P.I. facilities.

## II BROADWAY BRIDGE SITE:

Alternative A (without federal funds)

Estimated land cost (20 blocks)	\$ 2,000,000
Arena cost	3,500,000
Parking cost (ratio 1:5 or 2200 cars at \$45.00 per car)	99,000
Clearance and preparation of site (at \$0.25/sq. ft.)	<u>200,000</u>

TOTAL	\$ 5,799,000
Remainder available (\$8,000,000 - 5,799,000)	<u>\$ 2,201,000</u>

## Some choices for expenditures of residual:

- (1) 300,000 sq. ft. of two-level exhibit space (including additional land).
- (2) build a new theatre, 60,000 sq. ft. of two-level exhibit space, and provide parking for 500 additional cars (including additional land).
- (3) remodel auditorium, provide parking for 500 additional cars adjacent to the auditorium, and 125,000 sq. ft. of two-level exhibit space (including additional land).
- (4) remodel P. I. facilities.

Alternative B (with federal funds):

Cost of acquisition:	\$ 2,000,000
Land (at \$1.50/sq. ft.)	\$1,200,000
Improvements	800,000
Clear and prepare site (at \$0.25/sq. ft.)	200,000
Gross site cost	2,200,000
Less: re-use value of land	1,200,000
	<u>\$ 1,000,000</u>
Federal grant-in-aid (2/3)	670,000
	<u>\$ 330,000</u>
Cost of land	1,200,000
Net site cost	<u>\$ 1,530,000</u>

## Therefore:

Estimated total site cost	\$ 1,530,000
Arena cost	3,500,000
Parking cost	99,000
TOTAL	<u>\$ 5,129,000</u>
Remainder available (\$8,000,000 - 5,129,000)	<u>\$ 2,871,000</u>

## Some choices for expenditure of residual:

- (1) 410,000 sq. ft. of two-level exhibit space (including additional land).
- (2) Build a new theater, 180,000 sq. ft. of two-level exhibit space, and provide parking for 500 additional cars (including additional land).
- (3) Remodel auditorium, provide parking for 500 additional cars adjacent to the auditorium, and 230,000 sq. ft. of two-level exhibit space (including additional land).
- (4) Remodel P. I. facilities.

## III EAST VANPORT (DELTA PARK)

Estimated land cost (99 acres)	(free)
Arena cost	\$ 3,500,000
Parking cost (ratio 1:3 or 3700 cars at \$45.00 per car)	167,000
Clearance and preparation of site:	
Fill (99 acres, 6 ft. at \$.30 per yard)	297,000
Estimated cost of piling	250,000
Sewage disposal	150,000
Road corrections	100,000
Other improvements (roads, grass, etc.)	250,000
Total estimated cost of prepared site:	<u>\$ 4,714,000</u>

Remainder available (\$8,000,000 - 4,714,000)      \$ 3,286,000

Some choices for expenditures of residual:

- (1) Provide maximum exhibit space, i.e., 400,000 sq. ft., between \$1,000,000 (@ \$2.50/sq. ft.) or \$2,200,000 (100,000 sq. ft. @ \$7.00 plus 300,000 sq. ft. @ \$5.00), and expend residual as desired.
- (2) Build a new theater with two-level parking for 500 cars on a separate site of 3 blocks for \$1,900,000 plus land and expend residual on exhibit space, more land, or convention-exhibit hall.
- (3) Remodel existing auditorium and provide two-level parking for 500 cars for \$1,280,000 and expend residual for exhibit space, convention-exhibit hall, more land.
- (4) Provide a convention-exhibit hall, two levels with a total of 80,000 sq. ft. for \$500,000 plus land and expend residual on exhibit space adjacent to arena, remodeled auditorium, or more land.

There are infinite choices for expenditure of the residual if the arena were built on this site, and those listed above are only the principal obvious choices which can be combined in many ways.

1/ Unless otherwise specified, all exhibit space is two-level, priced at \$7.00/sq. ft. for one level and \$5.00/sq. ft. for the other - cheaper exhibit space would, of course, allow more square footage.

TABLE I - COMPARISON OF SITES

<u>Characteristics:</u>	<u>Journal</u>	<u>South Auditorium</u>	<u>Broadway-Steel Bridge</u>	<u>Power Plant</u>
Acreage	6	12	25	70
Estimated Cost	\$3,000,000	\$2,825,000	\$2,500,000	\$2,000,000
Ownership	Multiple	Multiple	Multiple	Multiple
Distance From: (in miles)				
Center of Business District	0	.5	1	1
Center of Population	1	1.5	1	1.5
Zoning Problems	-	-	-	-
Environment	Commercial	Comm. & Res.	Comm. & Res.	Industrial
Land Characteristics:				
Foundation Problems	-	-	-	X
Drainage Problems	-	-	-	X
Fill Needed	-	-	-	X
Access Roads Needed	-	-	-	X
Demolition Required	X	X	X	X
Flood Danger	-	-	-	X
Utility Costs to Site:				
Electricity	-	-	-	-
Water	-	-	-	-
Sewerage	-	-	-	\$ 50,000
Percent of Buses Within Walking Distance	100	52	28	13
Require Special Buses	-	-	-	-
Highway Access:				
Est. Population Distribution (%)				
Northeast	26	36	26	36
Southeast	34	25	34	25
Southwest	17	12	17	12
Northwest	23	27	23	27
Est. Street Carrying Capacity (%)				
Northeast	24	21	40	-
Southeast	31	27	14	-
Southwest	19	26	28	58
Northwest	26	26	18	42
Definite and Probable Congestion Pts.				
Northeast	Bridges	Bridges	Broadway	Harbor Dr.
Southeast	Bridges	Arthur St.	Union Ave.	Ross Is. Access
Southwest	Dwtwn. Traffic	-	-	Barbur Access
Northwest	Dwtwn. Traffic	-	Interstate	Harbor Dr.
Est. Minimum Time to Clear Lot (min.)	14	13	10	31

<u>Delta Park</u>	<u>East Vanport</u>	<u>Morningside</u>	<u>Colwood</u>	<u>Glendoveer</u>	<u>Inverness</u>
99	319	200	-	210	223
-	\$675,000	\$1,500,000	-	\$1,000,000	\$250,000
Single	Multiple	Multiple	Single	Single	Single
6	6	6	6	8	8
6	6	5	5	7	7
-	-	X	-	X	-
Mix	Mix	Residential	Res. & Rural	Residential	Res. & Rural
X	X	-	X	-	X
X	X	-	X	-	X
X	X	-	X	-	X
X	X	X	X	X	X
-	-	X	-	-	-
X	X	-	X	-	X
-	-	-	-	-	-
50,000	\$ 50,000	-	-	-	-
150,000	150,000	-	\$150,000	\$ 6,000	\$150,000
-	-	-	-	-	-
X	X	X	X	X	X
9	9	6	-	5	-
61	61	8	16	6	12
30	30	43	68	45	71
-	-	43	16	44	17
26	26	15	-	28	17
40	40	13	20	28	28
34	34	38	40	35	38
-	-	34	40	9	17
-	-	-	-	-	-
Union Ave.	Union Ave.	-	Col. Blvd.	-	-
Denver "	Denver "	-	" "	-	-
-	-	Stark & Minor	-	Glisan & Minor Sts.	Sandy Blvd.
-	-	-	-	Halsey	-
20	20	24	60	25	26

SOUTH AUDITORIUM

	Without	With	Possible Choices for				
	Federal	Federal	Expenditure of Residual				
	Aid	Aid	a	b	c	d	e
<b>Acquisition Cost:</b>							
Land	---	840					
Improvements	---	1,985					
Total	2,825	2,825					
Clear and Prepare Site	288	288					
Gross Site Cost	3,113	3,113					
Re-Use Value of Land	---	840					
Gross Less Re-Use Value	---	2,273					
Federal Grant (2/3)	---	1,515					
Net Improvement Cost	---	758					
(Land Cost)	---	840					
Net Site Cost	3,113	1,598					
Arena Cost	3,500	3,500					
Parking Cost	1,650	1,650					
Total Basic Cost	8,263	6,748					
Residual	---	1,252					

Possible Additional Facilities:	160,000	80,000		
Exhibit Space (sq. ft.) <sup>1/</sup>				
New Auditorium		X		
Remodel Auditorium		X	X	
Additional Parking			X	
Remodel P. I.				X
Convention-Exhibit Hall				
Comparative Operating Cost <sup>4/</sup>	Low	Low	Low	High
Comparative Utilization and Attendance <sup>5/</sup>	High	Low	High	Medium

- <sup>1/</sup> Unless otherwise specified, all exhibit space is two-level, priced at \$7.00/sq. ft. for one level and \$5.00/sq. ft. for the other - cheaper exhibit space would, of course, allow more square footage.
- <sup>2/</sup> Priced at \$7.00/sq. ft. for first 100,000 sq. ft. and \$5.00/sq. ft. for remainder.
- <sup>3/</sup> Priced at \$2.50/sq. ft.
- <sup>4/</sup> Low = All facilities on one site with minimum land  
 Medium = Split facilities with minimum land  
 High = Split facilities with maximum land
- <sup>5/</sup> Low = Only partial facilities provided  
 Medium = Split facilities  
 High = All facilities on one site

TABLE II

SUMMARY OF PRELIMINARY COST ESTIMATES AND COMPARISONS  
(dollars in thousands)

BROADWAY BRIDGE SITE

Without Federal Aid	Possible Choices for Expenditure of Residual				With Federal Aid	Possible Choices for Expenditure of Residual			
	a	b	c	d		a	b	c	d
---					1,200				
---					800				
2,000					2,000				
200					200				
<u>2,200</u>					<u>2,200</u>				
---					1,200				
---					1,000				
---					670				
---					330				
---					1,200				
<u>2,200</u>					<u>1,530</u>				
3,500					3,500				
<u>99</u>					<u>99</u>				
5,799					5,129				
2,201					2,871				
	300,000	60,000	125,000			110,000	180,000	230,000	
		Y					X		
			X					X	
		X	X				X	X	
				X					X
	Medium	Low	Medium	High		Medium	Low	Medium	High
	Medium	High	Medium	Medium		Medium	High	Medium	Medium

DELTA PARK

Possible Choices for  
Expenditure of Residual

	a	b	c	d
				Acquisition Cost
				Land
				Improvements
				Total
				Clear and Prepare Site
1,047				Gross Site Cost
1,047				Re-Use Value of Land
				Gross Less Re-Use Value
				Federal Grant (2/3)
				Net Improvement Cost
				(Land Cost)
1,047				Net Site Cost
3,500				Arena Cost
167				Parking Cost
4,714				Total Basic Cost
3,286				Residual
	400,000 <sup>2/</sup>	400,000 <sup>3/</sup>	400,000 <sup>3/</sup>	Possible Additional Facilities
		X		Exhibit Space (sq. ft.) 1/
			X	New Auditorium
		X	X	Remodel Auditorium
				Additional Parking
	X		X	Remodel P. I.
				Convention-Exhibit Hall
	High	High	High	Comparative Operating Cost <sup>4/</sup>
	Medium	Medium	Medium	Comparative Utilization and Attendance <sup>5/</sup>

EXPOSITION-RECREATION CENTER

PROGRESS REPORT NO. 8

(A final <sup>Progress</sup> report which does not represent an  
Official Research Report of Stanford Research Institute)

OBJECTIVE VI

I The City Attorney's office submitted an opinion to the Commission in a letter dated October 6, 1954, which contains the following: "...it is my opinion that the Commission is required to provide the facilities first listed; namely, a multi-purpose coliseum stadium, a playfield, an exposition and exhibition center and a war memorial, and to plan, construct and equip these in such a manner as to make them suitable for the use of conventions, expositions, sports events, concerts, shows of all kinds including livestock shows, automobile shows, housing shows, and ice shows, patriotic, educational and fraternal meetings and church conventions."

In summary:

The \$8 million bond issue approved by the voters is to provide:

1. a multi-purpose coliseum stadium,
2. a playfield,
3. an exposition-exhibition center,
4. a war memorial.

Suitable for:

1. conventions,
2. expositions,
3. sports events,
4. concerts,
5. shows of all kinds:
  - a. livestock shows,
  - b. automobile shows,
  - c. housing shows,
  - d. ice shows,
  - e. patriotic, educational, fraternal meetings and church conventions.

II The City of Portland has had a full slate of entertainment activities for many years by comparison with other cities in the United States. These events have been held in various buildings: The Municipal Auditorium is busy 200 days or more per year. Benson High School Auditorium is used about 175 days per year. The Armory has accommodated boxing, wrestling, basketball, and other events. Until June, 1953, the Ice Arena provided ice shows, basketball games, hockey, and public skating. Wrestling matches and other meetings are held in the Labor Temple. The Pacific International Livestock Exposition facilities have accommodated the livestock show, basketball games, boxing, the auto show, home show, and other events. Warehouses and the Multnomah County Fair grounds have accommodated other exhibit shows. Many athletic events take place in the school gymnasiums.

The Bond Issue of May 21, 1954, authorized \$8 million to provide a center which will suitably accommodate all these events, and at the descretion of the Commission, provide any other facilities they deem necessary.

To provide a facility which would meet the ideal specifications desired for each event may not be possible. This fact has been recognized from the beginning of this research. To determine what facilities could accommodate all events and whether they could be provided for \$8 million is the major objective. If it is impossible to provide facilities which are suitable for all these events, a policy decision by the Commission to determine priority of need becomes necessary. Another important question is whether or not the facilities provided will be a tax burden or whether they can be expected to show an operating profit which the Commission might invest in other facilities.

III After receipt of the preliminary site survey report by Stanford Research Institute, the Commission directed Stanford Research Institute to make a detailed analysis of four sites in compliance with Objective VI of the Proposal for Research. This analysis is complete and is submitted to the Commission; also included is a preliminary consideration of the Normandale Park site which the Commission requested at their last meeting.

In the comparative analysis of these sites, several considerations must remain constant:

1. What does Portland need and what facility is suitable to meet the need?
2. What can be provided for \$8 million?
3. What are the anticipated annual operating results? Will the facility be self-sufficient or a tax burden?

Stanford Research Institute concludes that the following facilities are necessary to "suitably" accommodate the existing and anticipated events listed in Chapter XIV of the May 21, 1954, Bond Issue:

1. An arena. This is an enclosed structure which will accommodate sports events, ice shows, livestock shows, exhibits, meetings, and other events.
2. A centrally located theater with directed sound acoustics and proper stage facilities, which will accommodate concerts, stage plays, lectures, meetings, and other events.

3. Exhibit space and meeting rooms in a central location which will suitably accommodate conventions and meetings.
4. Exhibit space which is necessary for auto shows, home shows, expositions and livestock shows.
5. Adequate parking facilities.

Any alteration of these accommodations requires determining priority of need and is a policy decision of this Commission. Each of the four sites has been developed to provide the above facilities within the \$8 million limit and suitably meet Portland's needs.

Expansion of any portion of the facilities provided would be at the expense of some other portion of the development. For example, increased expenditure for the arena or exhibit space would decrease the funds available for the theater or parking.

Summary sheets for each site development are attached.

POWER PLANT SITE

Provide:

Arena  
New theater  
Adequate parking  
140,000 sq. ft. of multi-purpose exhibit space

Estimated annual cost of operation:

Personnel	\$124,800	
Oper. and Maint.	<u>108,000</u>	
Total	\$232,800	\$232,800

Estimated annual income from principal events:

Concessions	\$ 35,000	
Parking	57,500	
Exhibit space rental	30,000	
Theater	<u>60,000</u>	
Total	\$182,500	<u>182,500</u>

Arena income necessary to break even: \$ 50,300

Number of days anticipated use  
of arena for principal events- (68)

Per day rental of arena necessary to break even \$ 740

Advantages:

1. In a relatively central location.
2. Reduces the possibility of competition from a centrally located arena.
3. Possible to have a new, integrated facility with low operating costs and a high degree of use flexibility.
4. Rail access available.
5. Possibility of some covered parking.
6. Old auditorium can be turned over for cooperative use by civic, fraternal, and veteran organizations.

POWER PLANT SITE (cont'd.)

Disadvantages:

1. Poor public transit access.
2. Although adjacent to Harbor Drive and the proposed Salem Expressway, access to and from these thoroughfares will be difficult and costly.
3. Additional bridge traffic congestion can be anticipated because 80% of the population is east of the river.
4. Potential flood and foundation hazards.
5. Expensive to expand.
6. Industrial environment detrimental to beautification of the site.
7. Multiple ownership of property makes site acquisition more difficult.

SOUTH AUDITORIUM SITE

Provide (with rehabilitation funds):

Arena  
Remodeled auditorium to provide proper theater  
Adequate parking  
140,000 sq. ft. of multi-purpose exhibit space

Estimated annual cost of operation:

Personnel	\$114,300	
Oper. and Maint.	<u>108,850</u>	
Total	\$223,150	\$223,150

Estimated annual income from principal events:

Concessions	\$ 35,000	
Parking	52,500	
Exhibit space rental	30,000	
Theater	<u>60,000</u>	
Total	\$177,500	<u>177,500</u>

Arena income necessary to break even: \$ 45,650

Number of days anticipated use  
of arena for principal events - (68)

Per day rental of arena necessary to break even: \$ 670

Advantages:

1. Centrally located.
2. Reduces the possibility of competition from a centrally located arena.
3. Excellent public transit access.
4. Possible to have an integrated facility with low operating costs, and a high degree of use flexibility.
5. No major foundation or utility access problems or potential hazards.
6. Some covered parking available on site.
7. Elimination of blighted area.

SOUTH AUDITORIUM SITE (cont'd.)

Disadvantages:

1. Additional bridge traffic congestion can be anticipated because 80% of the population is east of the river.
2. Expensive to expand.
3. Impossible to develop without the assistance of rehabilitation or other funds.
4. Must remodel existing auditorium rather than build a new theater.
5. Multiple ownership of property makes site acquisition more difficult.

BROADWAY BRIDGE SITE

Provide (without rehabilitation funds):

Arena  
New theater  
Adequate parking  
140,000 sq. ft. of multi-purpose exhibit space

or

Provide (with rehabilitation funds):

Arena  
New theater  
Adequate parking  
200,000 sq. ft. of multi-purpose exhibit space  
150,000 sq. ft. of cattle barns

Estimated annual cost of operation:

Personnel	\$114,300	
Oper. and Maint.	<u>104,100</u>	
Total	\$218,400	\$218,400

Estimated annual income from principal events:

Concessions	\$ 35,000	
Parking	52,500	
Exhibit space rental	40,500	
Theater	<u>60,000</u>	
Total	\$188,000	<u>\$188,000</u>

Arena income necessary to break even: \$ 30,400

Number of days anticipated use  
of arena for principal events - (68)

Per day rental of arena necessary to break even: \$ 450

Advantages:

1. Centrally located.
2. Reduces the possibility of competition from a centrally located arena.
3. Good public transit access.
4. possible to have a new, integrated facility with low operating costs and a high degree of use flexibility.

BROADWAY BRIDGE SITE (cont'd.)

5. Excellent highway access and the site is on the east side of the river where 80% of the population is located.
6. No major foundation or utility access problems or potential hazards.
7. Old auditorium can be turned over for cooperative use by civic, fraternal, and veterenal organizations.
8. Some covered parking available on site.
9. Elimination of blighted area.
10. Good chance of operating at a profit.

Disadvantages:

1. Expensive to expand.
2. Further development difficult without the assistance of rehabilitation or other funds.
3. Multiple ownership of property makes site acquisition more difficult.

## DELTA PARK SITE

### Provide:

#### 1. On Delta Park site:

Arena  
Adequate parking  
140,000 sq. ft. of multi-purpose exhibit space  
170,000 sq. ft. of cattle barns

#### 2. On Auditorium site:

New theater  
Adequate parking  
Remodeled auditorium for convention hall

### Estimated annual cost of operation:

Personnel	\$156,200	
Oper. and Maint.	<u>128,900</u>	
Total	\$285,100	\$285,100

### Estimated annual income from principal events:

Concessions	\$ 31,500	
Parking	64,500	
Exhibit space rental	38,500	
Theater	<u>60,000</u>	
Total	\$194,500	<u>194,500</u>

Arena income necessary to break even: \$ 90,600

Number of days anticipated use  
of arena for principal events - (60)

Per day rental of arena necessary to break even \$ 1,500

### Advantages:

1. Good highway access.
2. Expandable and adaptable to a park-type development.
3. Environment more readily adaptable to livestock shows.
4. Acquisition of property less difficult.

DELTA PARK SITE (cont'd.)

Disadvantages:

1. Not centrally located with respect to business or population.
2. Potential flood and foundation hazards.
3. No public transit access.
4. Not possible to have an integrated facility; therefore, higher operating costs and a reduced use flexibility will result.
5. Susceptible to competition from a centrally located arena.
6. Increased cost of duplicating exhibit space.
7. Little chance of operating at a profit.

NORMANDEALE PARK

Suburban:

Estimated land cost *(31 acres)	\$1,187,000
Clear and prepare site:	
1,330,000 sq. ft. @ 25¢/sq. ft.	<u>332,500</u>
Total cost of prepared site	\$1,519,500
Arenas	3,500,000
Parking (3700 cars)	<u>167,000</u>
	\$5,186,500

Central:

Auditorium land - three blocks	\$ 371,500
Clear and prepare site:	
120,000 sq. ft. at 60¢/sq. ft.	72,000
Remodel auditorium for convention hall	250,000
New theater	1,500,000
Parking (375 cars)	<u>17,000</u>
	\$7,397,000

Suburban:

Exhibit space: 100,000 sq. ft. at \$6/sq. ft.	<u>600,000</u>
<u>TOTAL COST OF DEVELOPMENT:</u>	<u>\$7,997,000</u>

Cost to expand to 44 gross acre site and provide additional exhibit space:

Estimated land cost	\$1,009,000
Clear and prepare site (428,000 sq. ft. @ 25¢/sq. ft.)	<u>107,000</u>
Added site cost	\$1,116,000
Additional exhibit space:	
40,000 sq. ft. @ \$6/sq. ft.	240,000
170,000 sq. ft. @ \$2.50/sq. ft.	<u>425,000</u>
<u>TOTAL COST OF SITE ADDITION:</u>	<u>\$1,781,000</u>

Cost to duplicate Delta Park facility: \$9,778,000

\*Absolute minimum land with less than one acre for circulation, landscaping, etc.

AS SHOWN IN PROGRESS REPORT NO. 7

TABLE I - COMPARISON OF SITES

<u>Characteristics:</u>	<u>Normandale</u>
Acreage	31
Estimated Cost	\$1,187,000
Ownership	Multiple
Distance From: (in miles)	
Center of Business District	3.5
Center of Population	2.0
Zoning Problems	Possible
Environment	Indus. & Res.
Land Characteristics:	
Foundation Problems	--
Drainage Problems	--
Fill Needed	--
Access Roads Needed	X
Demolition Required	X
Flood Danger	--
Utility Costs to Site:	
Electricity	--
Water	--
Sewerage	--
Percent of Buses Within Walking Distance	9
Require Special Busses	X
Highway Access:	
Est. Population Distribution (%)	
Northeast	14
Southeast	19
Southwest	32
Northwest	35
Est. Street Carrying Capacity (%)	
Northeast	42
Southeast	13
Southwest	13
Northwest	32
Definite and Probable Congestion Points	
Northeast	--
Southeast	60th
Southwest	53rd
Northwest	52nd, 53rd, 55th
Est. Minimum Time to Clear Lot (min)	39

## SOUTH AUDITORIUM - POWER PLANT

### ADVANTAGES:

1. A downtown yet multi-purpose site: most objectives of charter amendment met--
  - (a) Build sports coliseum
  - (b) New P.I. facilities
  - (c) Provide convention center
  - (d) Provide music hall
2. Opportunity to become integral part of downtown civic-cultural-education-exposition-recreation center: Yet can be accomplished in independent developments. No project hinges on another.
3. Superior access: At intersection of and with direct connections to two expressway systems which will permit stop-light-free travel to all sections of Metropolitan Portland ultimately.
4. On Third Avenue Bus Line which crosses and permits non-walking transfers to all other PTC bus lines.
5. Off-street parking requirements can be provided: Also provides 2 fringe parking facilities to meet downtown need.
6. Within inexpensive taxi distance and practical walking distance of hotels.
7. Clears a blighted area: Federal financial aid available.
8. On direct railroad connections.

### DISADVANTAGES:

1. Inconvenient separation of P.I. from arena: more costly and less satisfactory operation.
2. Off-street parking not financially feasible without federal aid.
3. Poor immediate access to P.I. site.

ESTIMATED COSTS

FIRST STAGE: Exposition-Recreation Commission unassisted

Coliseum Site

ITEM	QUANTITY	COST
1. Acquire and clear site	4 blocks	\$ 955,000
2. Build new sewer		35,000
3. Acquire City-owned block		40,000
4. Prepare City-owned block for parking		10,000
	SUB-TOTAL	<u>\$1040,000</u>

P.I. Site

5. Acquire, clear, and build sewer	30 acres	\$ 500,000
6. Build pedestrian-animal bridge to Coliseum		100,000
7. Pave parking area	36,700 sq. yds @ \$1.75	64,000
8. Fill	100,000 cu. yds @ 40¢	40,000
	SUB-TOTAL	<u>\$ 704,000</u>
9. Coliseum	8,000 permanent seats	\$3500,000
10. Exhibition Hall	100,000 sq. ft. @ \$2.50 sq. ft.	700,000 769,000
	SUB-TOTAL	<u>\$4969,000</u>
TOTAL FIRST STAGE		\$6713,000
Available for Second Stage		\$1287,000

*6.4 Times Asses Value.  
5.5/sqft.*

ESTIMATED COSTS (cont.)

SECOND STAGE: Exposition-Recreation Commission assisted by  
urban renewal funds

Coliseum Site

ITEM	QUANTITY	COST
1. Acquire land for parking	7 blocks @ \$1.75 sq. ft.	\$ 490,000
2. One level parking construction	1130 spaces \$100 per space	113,000
parking meters	\$70 each	<u>79,000</u>
TOTAL		\$ 682,000
3. For architect and contingencies		\$ 605,000
4. Renovate present Civic Auditorium		Separate bond issue
5. City's share of 1/3 write down for urban renewal (\$440,000)		Separate bond issue

JOURNAL

ADVANTAGES:

1. At the center of Portland: Within easy walking distance of all bus lines, hotels, offices, and shops. Located adjacent to expressway with connections to all parts of Metropolitan Portland ultimately. Excellent site for conventions, smaller meetings, and entertainment events.
2. Adjoins proposed 2700-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 sites 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.
5. Will furnish night-time clientele for proposed Morrison Bridge Terminal parking structure: Will increase income at this location which otherwise may have little night-time use.
6. Will clear blighted business district and stimulate private investment in renewing adjacent properties.

DISADVANTAGES:

1. Limited-purposes facility: To provide for P.I. would necessitate capital outlay in addition to \$8,000,000 already authorized.
2. Success hinges on building and mode of operation of Morrison Bridge terminal parking structure: This proposal beyond control of Exposition-Recreation Commission. If not built or rates too high, Coliseum revenues and service to community will suffer.

ESTIMATED COSTS

1. Acquire and clear site	(4 blocks)	\$3,300,000
2. Coliseum Building		
8000 permanent seats		3,500,000
160,000 sq. ft. exhibition space		<u>1,100,000</u>
TOTAL		\$7,900,000

*520<sup>m</sup>/month*

## ROSS ISLAND

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

Included in the study area are Ross, Hardtack and Finger 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 Ross Island are:

### ADVANTAGES:

1. Proximity to downtown facilities: This area is one and one-half air miles or three road miles from the center of the business district. Driving time over the Ross Island Bridge to the east approach at Rhone Street and McLoughlin Blvd. is eight minutes.

The center of population of the city is two and one-half miles north of this location.

2. Potential space:

First stage: With an average fill of three feet on sixty-five acres, the main island (Ross) would have one hundred fifty acres available for development.

Future: The total maximum area available with the use of fill would total about five hundred and **seven** acres.

3. Multi-stage development: Separate areas within the four hundred acres may be developed and used as the program expands and other agencies become interested.

For example, if in the first stage of the program the County Fair and the Exposition-Recreation were to divide the area of the main island, planning acquisition and costs of access would be reduced accordingly for each agency.

Ultimate use should envisage a world's fair and park.

File

4. Minimum conflict with existing environment: Water areas and differences in levels provide natural buffer conditions to protect residential areas.
5. 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 county fair.

DISADVANTAGES:

1. Difficult access: Highway connections will be expensive and will in some cases overload existing facilities such as the Sellwood Bridge during peak dispersal periods.
2. Acquisition costs: Because this site has a potential mineral value as a source of sand and gravel, acquisition may be difficult.
3. Costly land preparation: Initial development would require relatively little fill on the main island but future plans would require large amounts of fill.
4. Utilities costly: Sewage will need to be pumped 10,000 feet with possibly two pumping stations.
5. Oaks--east bank: This low, narrow portion of the area is not large enough to support the initial phase of the program.

ESTIMATED COSTS

TO EXPOSITION-RECREATION COMMISSION  
for Ross Island area acquisition and site preparation

FIRST STAGE

ITEM	QUANTITY	COST
1. Purchase of Ross, Haratack and Finger Islands	150 acres @ \$3,590	\$538,500
2. 65 acres of fill 3½' deep	375,000 cu. yds. @ 25¢ cu. yd.	93,750
3. East approach (elevated Underpass and access	1300 lin. ft. of 60' road deck @ \$10 sq. ft.	780,000 220,000
4. South approach thru Oaks 5300 lin. ft. of causeway	442,500 cu. yd. @ 25¢	110,000
5. Sewer	10,600 ft. @ \$5.20 ft.	62,120
6. Pumping station		7,000
7. Paving parking areas	20 acres @ \$1.75 sq. yd.	169,400
8. on site Roads	15,000 ft. 12¢ ft.	180,000
TOTAL		\$ 2,161,370
If this cost is shared equally with the County Fair amount for each		\$ 1,080,685

*5 x Asses Value.*

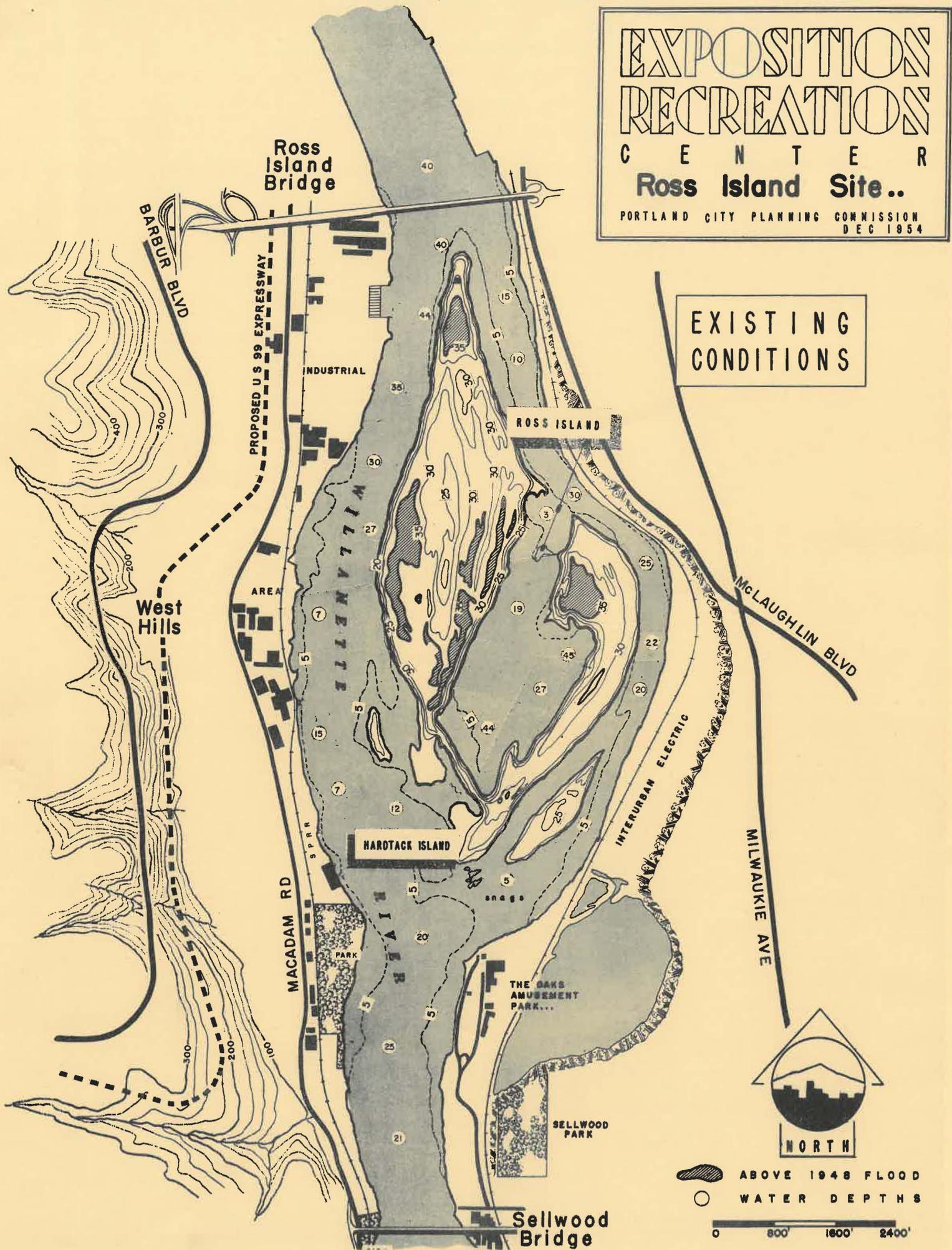
# EXPOSITION RECREATION

C E N T E R

## Ross Island Site..

PORTLAND CITY PLANNING COMMISSION  
DEC 1954

EXISTING  
CONDITIONS



RECOMMENDED

# Development

1<sup>ST</sup> STAGE



FUTURE



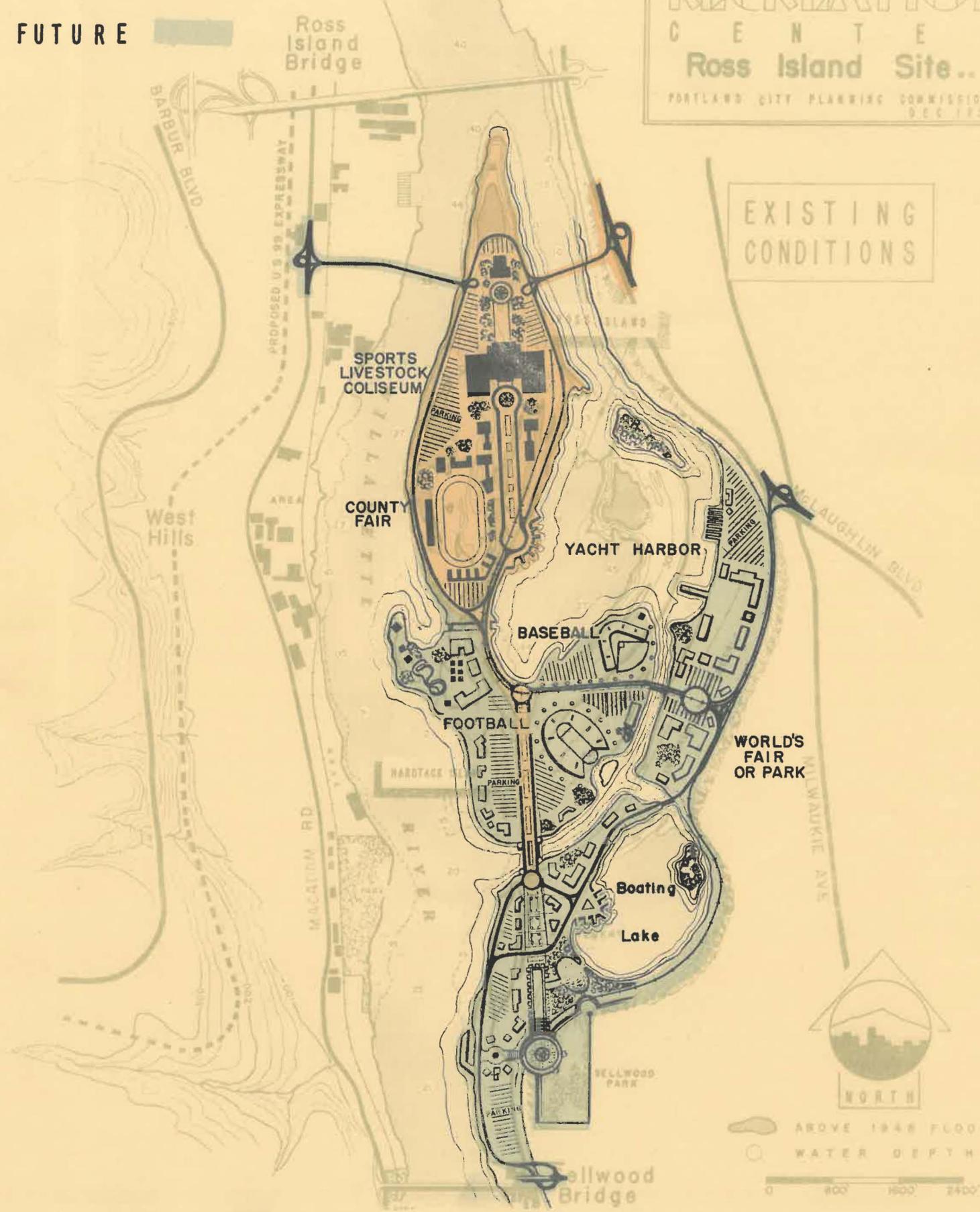
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C E N T E R

## Ross Island Site..

PORTLAND CITY PLANNING COMMISSION  
DEC 1954

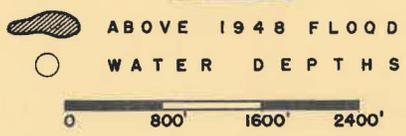
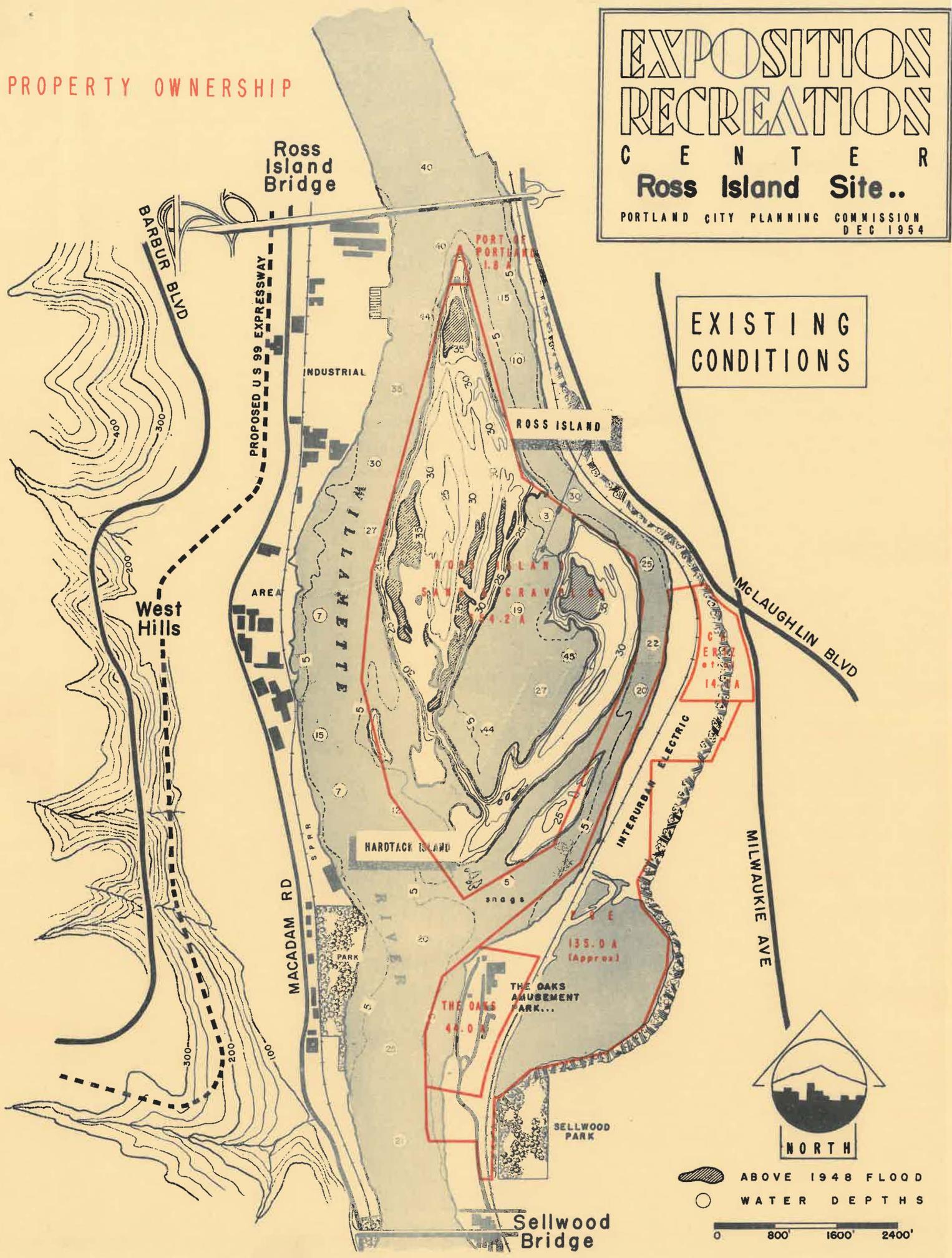
EXISTING  
CONDITIONS



PROPERTY OWNERSHIP

**EXPOSITION  
RECREATION  
CENTER**  
**Ross Island Site..**  
 PORTLAND CITY PLANNING COMMISSION  
 DEC 1954

EXISTING  
CONDITIONS



PROPERTY OWNERSHIP

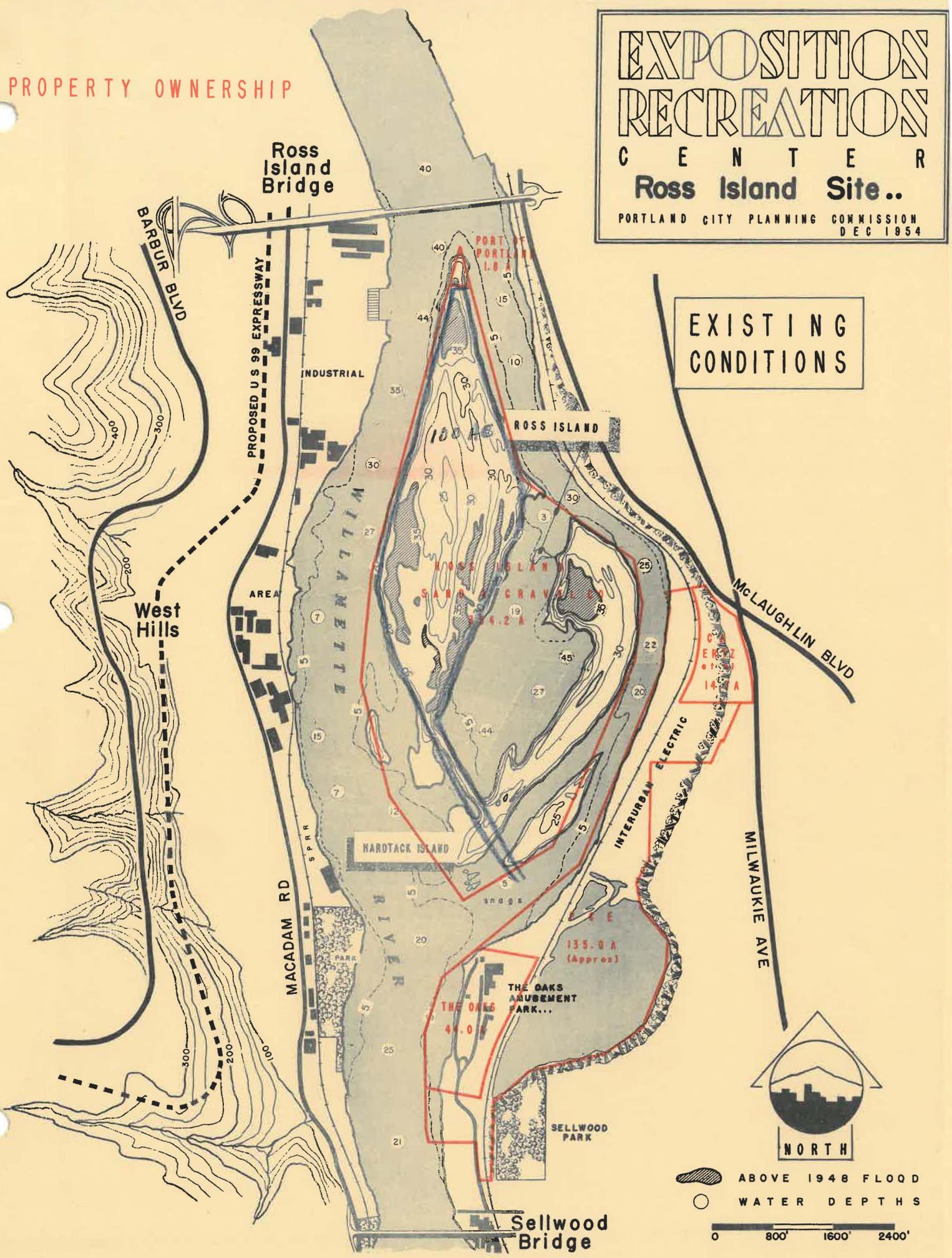
# EXPOSITION RECREATION

C E N T E R

## Ross Island Site..

PORTLAND CITY PLANNING COMMISSION  
DEC 1954

EXISTING  
CONDITIONS

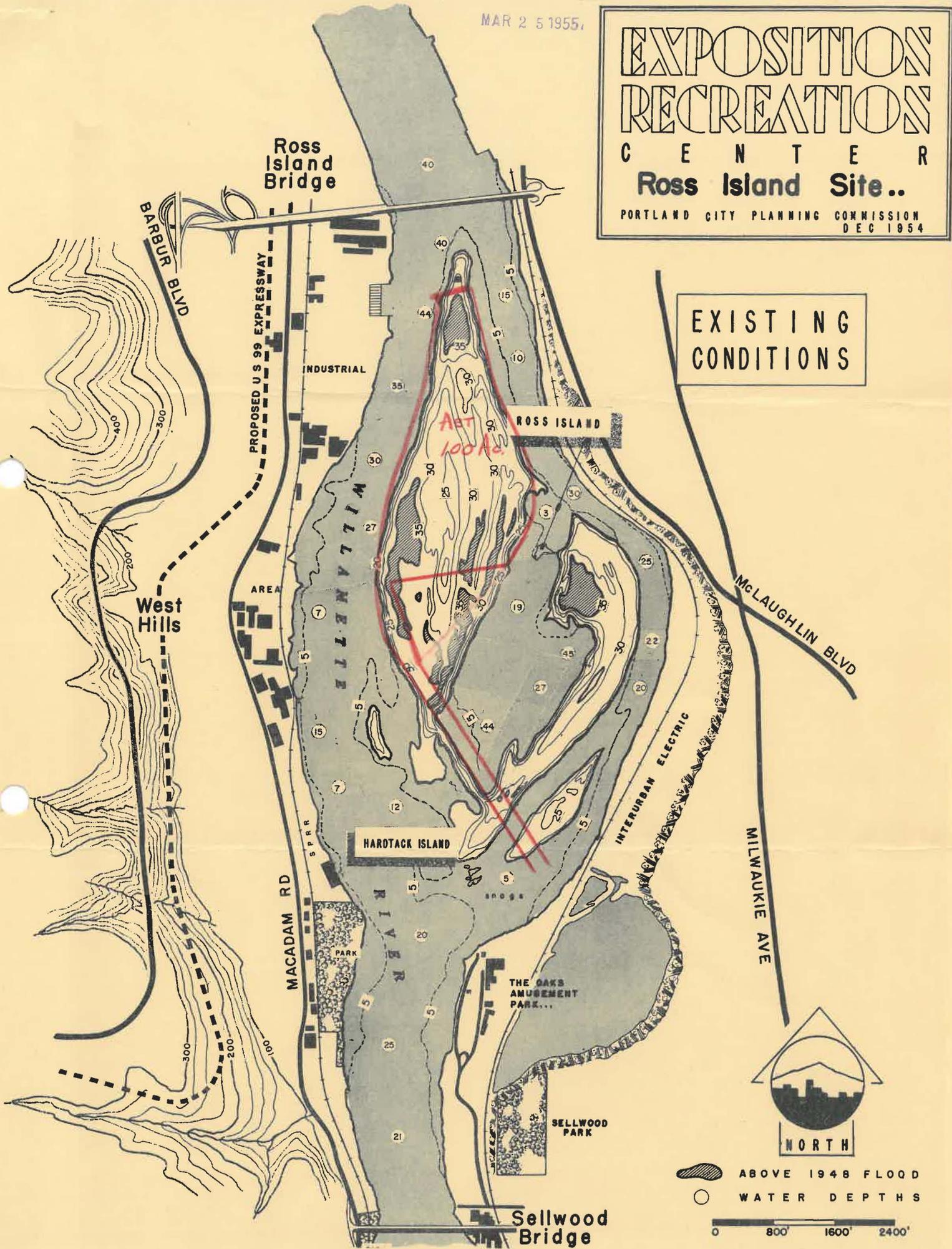


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# EXPOSITION RECREATION CENTER Ross Island Site..

PORTLAND CITY PLANNING COMMISSION  
DEC 1954

EXISTING  
CONDITIONS



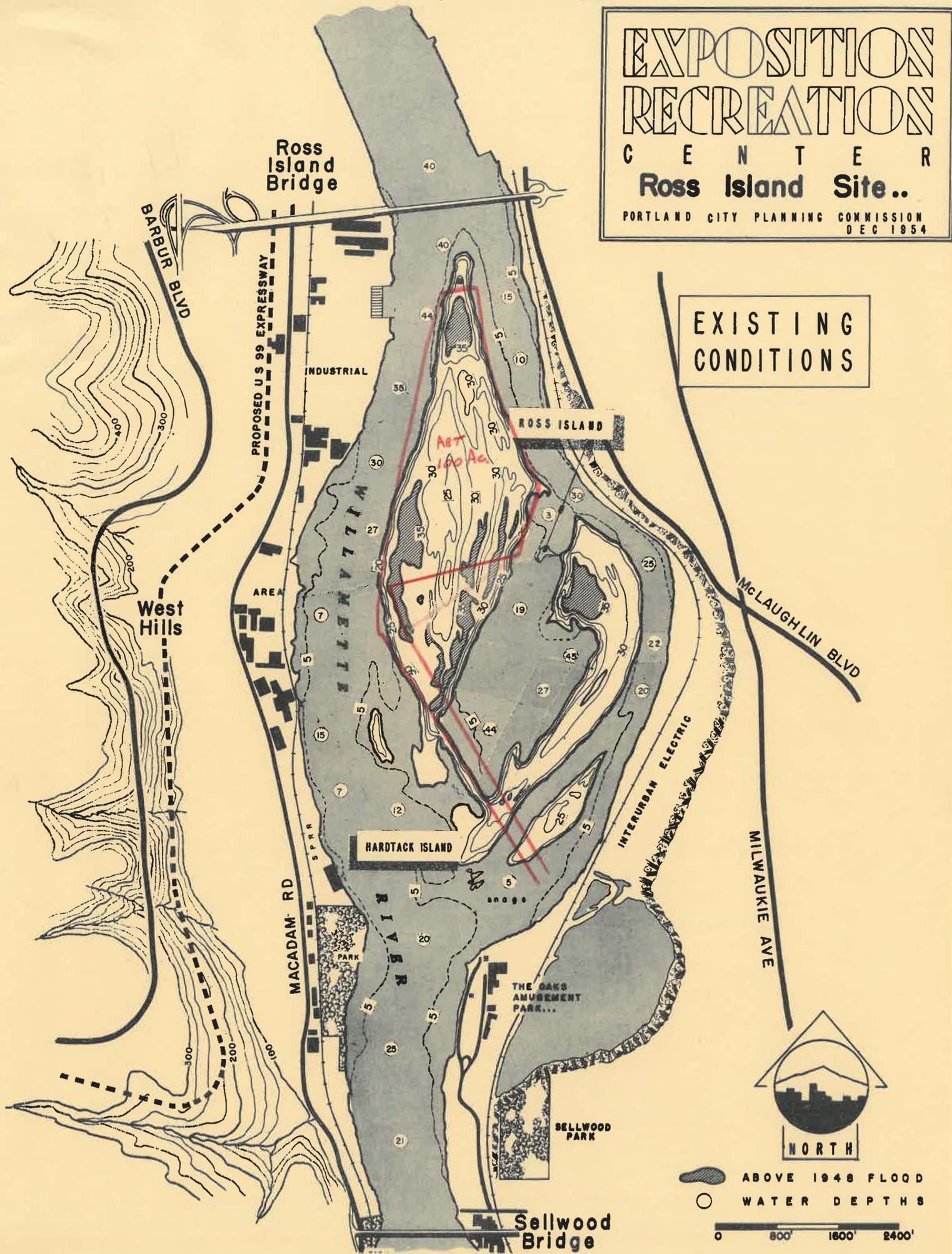
# EXPOSITION RECREATION

C E N T E R

## Ross Island Site..

PORTLAND CITY PLANNING COMMISSION  
DEC 1954

EXISTING  
CONDITIONS



PROPERTY OWNERSHIP

# EXPOSITION RECREATION CENTER

C E N T E R

## Ross Island Site..

PORTLAND CITY PLANNING COMMISSION  
DEC 1954

EXISTING  
CONDITIONS

