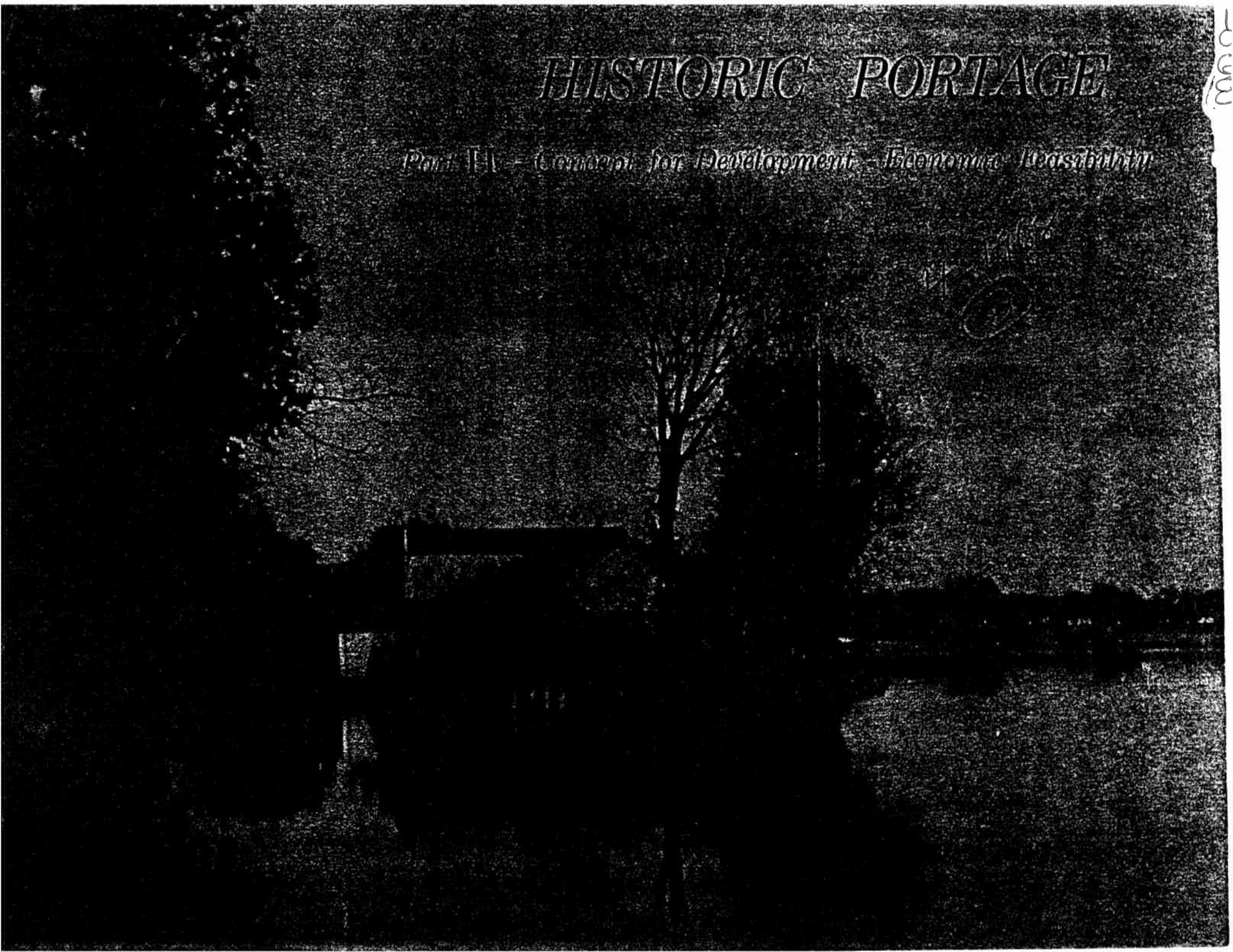


HISTORIC PORTAGE

Part III - Concepts for Development - Economic Development

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FINAL REPORT - PART II
CONCEPT FOR DEVELOPMENT - ECONOMIC FEASIBILITY

A STUDY OF THE FEASIBILITY AND IMPLEMENTATION
OF DEVELOPING THE HISTORIC AND RELATED RESOURCES
OF THE PORTAGE AREA

AS A PART OF THE SOUTH CENTRAL WISCONSIN REGION

FOR

THE GOVERNOR'S PORTAGE CANAL IMPLEMENTATION COMMITTEE
STATE OF WISCONSIN

BY

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22 April 1968

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Introduction...

On 30 October 1964, Governor John W. Reynolds of Wisconsin announced that he was appointing a special study committee composed of representatives of a number of interested State agencies and the City of Portage to *"Carefully Assess the Overall and Long-Range View of the Canal's Future"*. The potential of the Canal Area as a recreational and historical asset was to be a particular concern of the committee's deliberations. The committee was formally appointed on 21 December 1964. It was organized with two sub-committees to (1) evaluate the Portage Lock problem and to (2) investigate further possibilities of historic development of the Portage Area. The recommendations of the committee were presented in a report to Governor Warren P. Knowles on 15 November 1965. As a result of this, Governor Knowles appointed a new committee to prepare implementation plans and recommend that a budget be established. The Board of Government Operations transferred \$20,000 from the Governor's Executive Budget to the committee for their use in furthering this work. To validate each of the committee's recommendations, to expand them or to discover new considerations, it was determined that an in-depth study should be initiated by professionals experienced in the development of historic resources.

A proposal as prepared by Frank and Stein Associates Incorporated of Lansing, Michigan was accepted on 21 March 1967. Approval of a contract with the Bureau of Engineering was finalized on 17 April 1967. The Board in charge was changed from the Bureau to the committee by amendment on 5 July 1967.

The Interim Report

Frank and Stein Associates Incorporated submitted an interim report to the Governor's Portage Canal Implementation Committee on 1 September 1967. That report was concerned with an analysis of the existing conditions, the establishment of hydraulic feasibility, the development of a preliminary concept and of the economic feasibility of that preliminary concept. The Interim Report has been published and is available for examination. It is not, therefore, felt necessary to restate the material contained therein concerning the existing situation and the hydraulic feasibility.

The Final Report - Part I

Part I - The Reconstruction of Fort Winnebago was submitted on 3 January 1968. This report was limited to an analysis of the site of Fort Winnebago, preliminary plans of the reconstruction, cost estimate for the work involved and recommendations for the conduct of archeological investigations of the site. Included, as an appendix, is a report of a preliminary archeological investigation of the site conducted by the State Historical Society of Wisconsin.

Concept for Development...

The concept for development presented in the Interim Report was preliminary in nature. On-site investigation has revealed that the plan, as presented, does not fully utilize the potentials of the site. The final concept has been derived through a study in depth of the problems involved and is intended to achieve the maximum impact on tourism, historical interpretation and future community growth. Although in general approach it resembles the concept presented in the Interim Report a number of major modifications have been made to improve the plan.

The basic land use concepts presented in the Interim Report are little changed. The location of the Visitor Center and the emphasis upon the Wisconsin Lock Areas are the principal modifications. Certain lands considered in the preliminary concept are unsuitable for use due either to high acquisition costs or the difficulty involved in modifying the existing functions. The final concept stresses the relationship of canal activities to the Urban-Commercial areas of the city.

Visitor Access -

The primary access routes are eastbound Highway 33 and southbound Highways 16 and 51. Westbound 33 and northbound 16 and 51 will provide less incoming tourist traffic. Emphasis upon strengthening the visual appearance of the Visitor Access Zone should be placed on the first mentioned routes from Highway 78 into the heart of the city. Proper zoning, a uniform sign ordinance and carefully planned planting and beautifications can create an inviting

Intersection 7B & 16
Major city approach from north and Wisconsin Belts.

Primary Visitor Approach Zones
strengthen the appearance of major entrances to the city by proper zoning, sign ordinances and planting to create an inviting approach for the visitor and Portage citizen.

Wisconsin River

Visual reorientation to Wisconsin R. along drive into city.

Intersection 16 & 55
Major entrance to Portage from south.

Interstate 90 north

Highway 7B

Indian Agency House and Winnebago Lacks restore to working condition. North side of canal. Proposed site for future outdoor theatre.

Natural quality of this zone to be preserved.

Highway 55

Historical Reconstruction of Fort Winnebago

Auto circulation to Fort Area
Portage Canal

Major Residential zone

Existing natural character and needs to be maintained.

Boat dock - pick up & drop off point for canal water trail. Future parking zone set back from canal.

Major Recreational zone linking canal to park grounds and Wisconsin River.

Major Industrial zone. Places certain limitations on recreational development south of canal zone. Noise factor.

Fox River

Urban-commercial zone reoriented to canal zone. New tourist and area interpretation center. Park expansion oriented towards canal and Wisconsin River. Provide additional parking areas for tourist. Improvement of Wisconsin locks. Remove culverts now in canal and replace with appropriate bridge structure. Canal boat trip arrival and departure area.

Highway 51 & 16

Site Analysis

approach to both visitor and the people of Portage. Control and development of these areas are properly a function of the City Government. In order to function well, however, planning of such action should be carefully integrated into the overall plan.

Visitor Center Area -

Wisconsin Avenue and Cook and Edgewater Street traffic covers in the downtown business district of Portage. Traffic along Edgewater should be encouraged, for here the opportunity to provide visual orientation to the Wisconsin River is greatest. The development of the primary contact area in the vicinity of the Wisconsin Lock is therefore highly desirable. Development recommendations will be made under a later discussion of the area.

The Historic Area -

The primary sites of historical significance are located northeast of Portage, between the existing Surgeon's Quarters #2 and the Indian Agency House. It is extremely desirable to preserve and to recreate here the original appearance of the area. In creating a "living history" it is essential to eliminate as many "time paradoxes" as possible. The development of this area will therefore be much different from that suggested for the Visitor Center Area.

Access to the Historical Zone -

The Portage Canal provides the most important link between the two primary areas mentioned

above. The canal can provide, not only a transportation link, but also a visual and interpretive link, between the two areas. Automotive transport, either via westbound US 33 or Wauona Trail is direct and easily marked. Full utilization of free auto or bus transportation combined with boat travel on the canal will insure full utilization of the Historic Area.

The following discussion will cover first the proposed concepts for development of:
The Canal, The Historic Area and finally the Visitor Center Area.



COMMUNITY ORIENTED

RURAL ORIENTED

commercial area, no present orientation to the canal, small existing park has some relation to the Wisconsin River and the Portage Canal

Industrial zone, quality of canal is maintained.

residential area provides visual edge, an industrial area behind the residential area cannot be seen, but does produce a noise problem and limits tourist development.

agricultural orientation

meadow orientation, excellent natural quality area.

wooded, Winnetapp lock, excellent natural quality area, Indian agency house.

meadow, Fort Winnebago, Fox River, Fort is situated on 30' hill.

Potential for park expansion, improve visual link between river and lock, improve relationship commercial area and canal.

Potential for pedestrian circulation along the canal.

Potential for pleasant relationship between residential area, fair grounds and canal.

Potential for excellent relationship between farms and canal.

Potential for natural setting and first possible view of Fort Winnetapp (boat tour)

Potential for natural setting, maintain relationship to Indian agency house.

Potential for canal and river relationship to Fort. View from Fort should be protected from non-historic development.

Provide tourist information and interpretation centers, park expansion, re-orientation of commercial to canal, boat tour to Fort, parking provided in the park and surrounding commercial areas.

Provide pedestrian circulation for possible future development to the east, improve planting.

Provide zoning and building restrictions to maintain quality and scale of development. Provide link between canal and expanded development of the fair grounds.

Provide zoning and building restrictions to maintain quality of edge of canal.

Protect natural quality and provide views and orientation (boat tour)

Protect natural quality, provide parking for major entrance to Fort, restore lock to working condition to allow boat access to Fox River and Fort.

Provide boat landing, main entrance to Fort, parking and vehicular circulation should be concealed in the woods.

Bridges must be re-built to provide boating and pedestrian circulation along the canal.

Railroad and highway bridges allow for boating access along the canal.

the Portage Canal

THE CANAL

The restored Portage Canal is one of the two revenue producing facilities in the proposed development. Incoming visitors should be encouraged to ride the boats provided in order to receive a more satisfying experience during their visit. The figure per page 7 graphically defines the characteristics of the canal, the potential for development of the various areas and recommendations for development.

The canal exhibits two basic environments. The western end reflects an urban setting while the eastern end is essentially rural in character. The dual aspect can be used to effectively transfer the visitor "back in time" as part of the interpretive experience. The Urban Section extends roughly, from the Wisconsin River to the railroad bridge. The canal, and the experience of the visitor would start near the Wisconsin Lock.

The park near the lock provides enough space to develop a tourist orientation area and provides an opportunity to establish a relationship between the Wisconsin River and the canal. The general character reflects the commercial activity of a busy city. The boat ride would start in this area. Moving eastward, the character rapidly changes to an industrial zone. Most of the industries retain their canal orientations and would enhance, rather than detract from the character of the canal. Once past the industrial zone the character again changes, becoming more residential. At present, the residential area ends at the railroad bridge. The Fair Grounds and other publicly owned lands on the southern side of the canal and along

Wauona Trail, the historic portage, are linked to the canal in this location. It is proposed that a landing place be established here as an intermediate stopping point. This landing place could serve as the nucleus of future development if success of the project warrants further expansion of facilities to accommodate more visitors. The intermediate stopping point would add to the interest along the canal for the boat traveler and provide overflow parking on peak days. Ticketing could be arranged to allow the round-trip visitor to board the boat at any point and return to his auto.

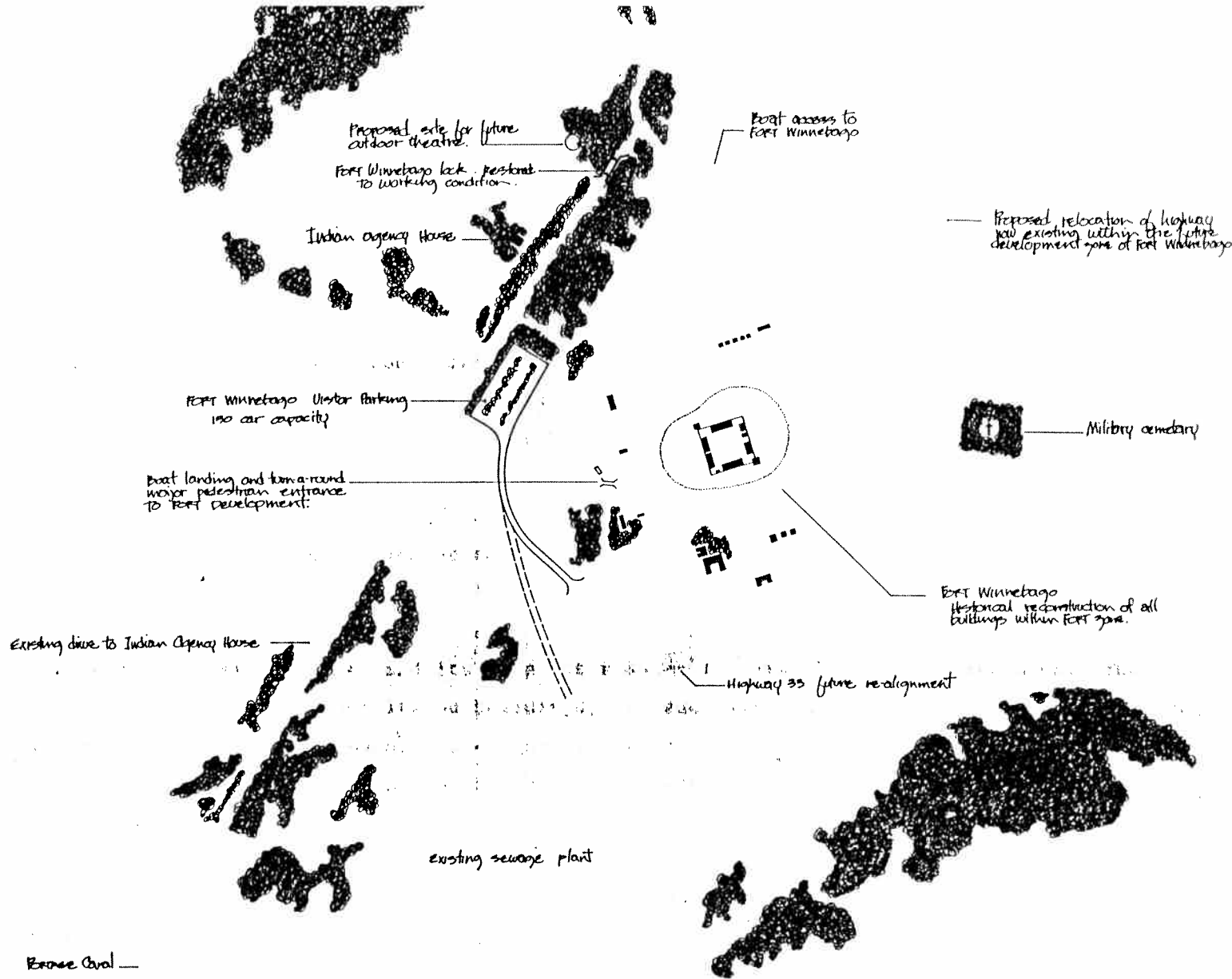
Proceeding eastward from the railroad bridge, the visitor enters a rural scene which has almost the same character as that of canal days. First, an area of agricultural orientation where small farms and farm buildings edge the canal. Economic growth of the community could modify this land use but it is felt that proper zoning would preserve the character and protect the quality of the view from the canal. East of the Highway 33 bridge the scenic vistas change from tilled fields to open meadows where the visitor is given his first view of the restored Fort Winnebago. The natural quality of the scene is excellent. To this point the visitor has traveled "back in time" moving from city to farm and now to uninhabited wilderness. This experience can be heightened by a carefully planned narration as the boat is moving toward the Historic Area. Fleeting glimpses of the fort in the distance create an anticipation of what is to come.

The canal leaves the open meadow and enters deep and shaded woods near the Agency House. During the early years visitors would be debarked here at a minor orientation area and be

directed to visit the Agency House or Fort Winnebago. The visitor proceeding to the fort would walk out of the woods and be confronted by the imposing fort on the other side of the Fox River. A pedestrian bridge would allow the visitor to cross the Fox and enter the restored area.

In future years, the Winnebago lock should be rebuilt. Visitors could then be locked through to the Fox, and proceed upstream to be debarked at the foot of the hill on which Fort Winnebago stands.

The major problem which exists in achieving this proposed canal trip is the matter of bridges on Wisconsin Avenue and Adams Street. The Interim Report rejected the restoration of bridges as being too expensive. It was estimated that such restoration would cost over \$250,000 for each bridge. Re-examination of the problem revealed an alternate solution: In order to preserve the relationship between the canal and the two rivers, it is necessary to have free access to travel the entire length of the canal. As restoration of bridges is extremely expensive, we propose that the existing culverts be replaced by short-span concrete bridges at an estimated cost of \$70,000 per bridge. These bridges, though not historic, would permit passage of boats and pedestrian walks.



the Historic Area

THE HISTORIC AREA

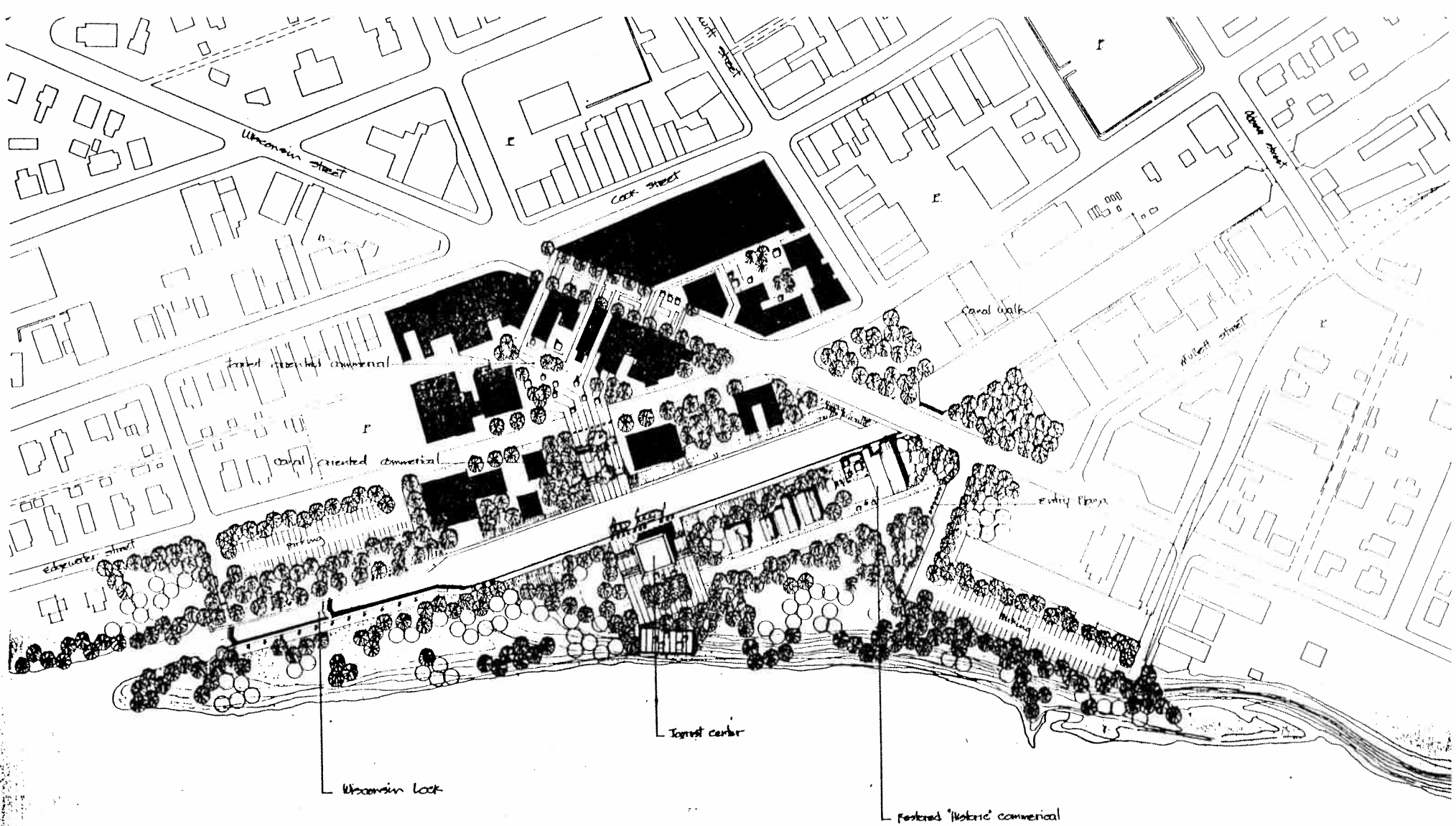
The restoration of Fort Winnebago has been fully discussed in Part I of this report. The following comments relate, therefore, to other considerations of the area: The Historic Area is bounded roughly by the Highway 33 bridge over the canal, the Agency House, Winnebago Lock, the Military Cemetery and the City Sewage Disposal Plant, plus sufficient lands to protect the appearance and vistas both toward and away from Fort Winnebago. It is essential that this area be under exacting control of its visual elements. Every effort should be made to avoid "paradoxes" which detract from creating the "feeling of living history". One such "paradox" which restricts development of the fort site is the present location of Highway 33 which cuts through the original fort grounds. Its presence does not prevent the reconstruction of the fort, and its deep cut reduces its visual impact on the area. The restored fort, even without its outbuildings, can successfully operate as an exciting recreation of life at Fort Winnebago. Nevertheless, it is important that the highway be relocated south of its present location and the fort hill restored to its former contours at the earliest possible time.

Parking must be provided within the Historic Area as boat capacity will not accommodate all those who desire to visit the restored fort. Parking areas impose the severest test of design. A lot for 150 cars is suggested in the accompanying plan with roads running perpendicular to the view lines from the fort to reduce the visual impact of the traffic lanes. The design study phase should include careful study of the parking problems in order to define the most acceptable solution.

Development proposals have been submitted which suggest extensive construction in the vicinity of the Winnebago Lock. No development which is detrimental to the overall impressions of open, uninhabited space around the fort should be permitted unless necessary to successful operation of the fort. Such minor development as is required should be well concealed under vegetation cover, and painted to blend with the surrounding materials.

The Indian Agency House will have access either by way of the present road or across a foot bridge from the Winnebago Lock Area.

An outdoor theater has been proposed overlooking the Winnebago Lock. If such a theater is constructed, it should be located further to the north and fully screened from view from Fort Winnebago, on a new site determined in the design study phase of planning.



the Visitor Center and Commercial Area

THE VISITOR CENTER AREA

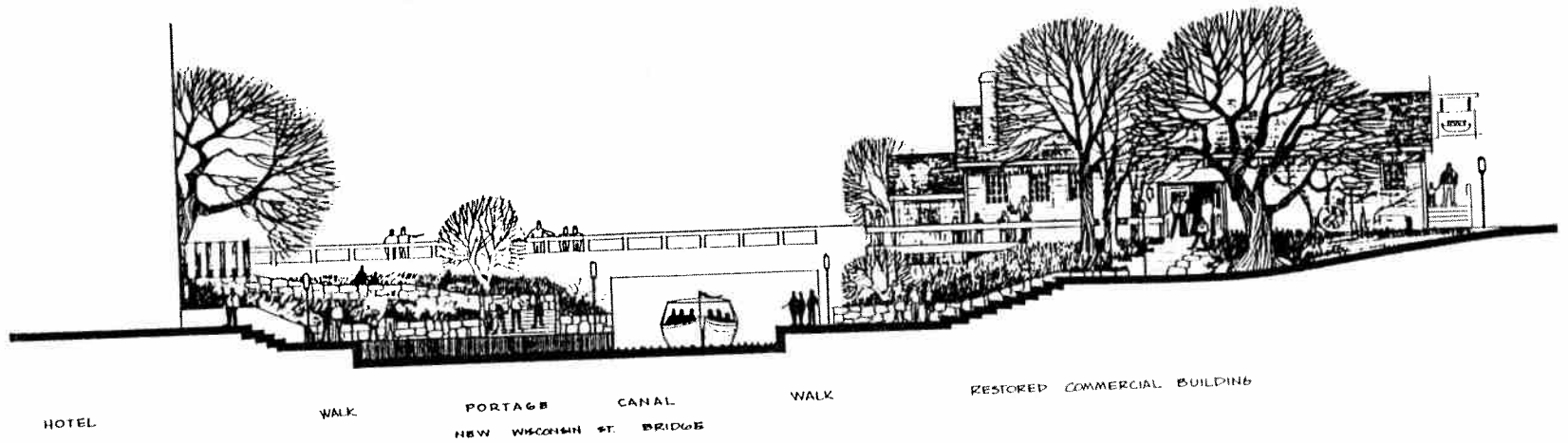
Any development of the historic resources of Portage should contribute to the economic stability of the city. The proposed Visitor Center Area has been designed not only to accomodate tourists and to interpret an element of the area's history, but also to play a vital role in improving the appearance of a rather unsightly area, integrate the tourist development with the commercial areas of downtown Portage, improve the pedestrian traffic ways between the town and the development and provide increased park acreage for the citizens of Portage and their visitors.

The Park -

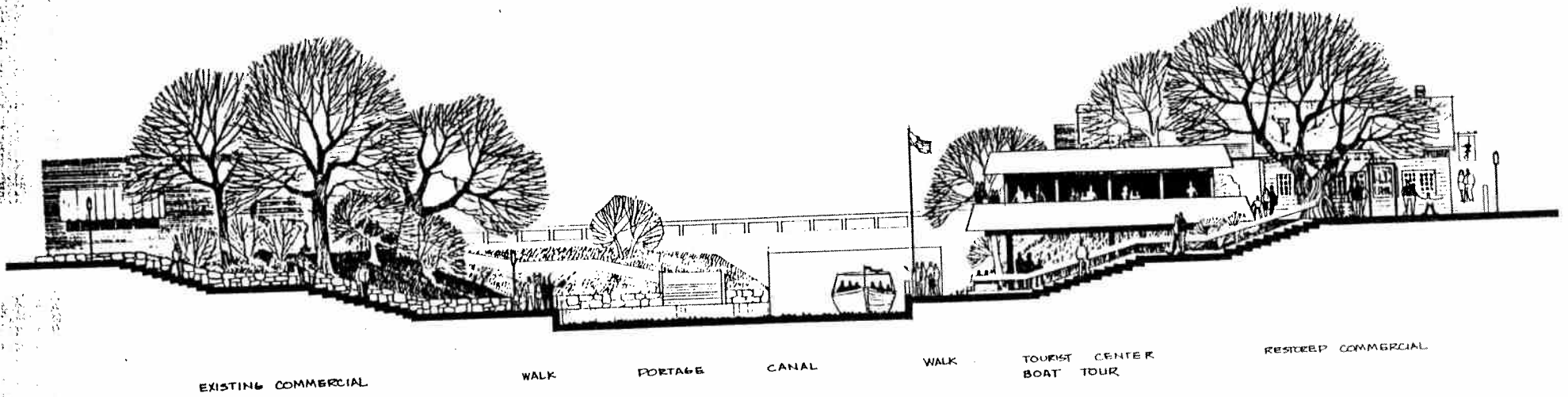
The narrow neck of land between the Wisconsin River and the Wisconsin Lock is one of the few places where the relationship of the canal with the river can be established. It is proposed that this park be landscaped as a natural area. The natural aspect of the point should be extended eastward along the levee to provide high level walkways from the parking areas to the Visitor Center.

The Wisconsin Lock -

The provision of parking areas and landscaping of land north of the Wisconsin Lock is important to the success of the Portage development. Businesses which are now located between the lock and Wisconsin Avenue should be encouraged to cooperate in this beautification



SECTION THROUGH "CANAL VILLAGE"



SECTION THROUGH ORIENTATION CENTER

the Visitor Center Area

and landscaping. Canal level walkways provide for pedestrian circulation along the north side of the canal and a pedestrian bridge crossing on the lock gate permits a safe view of the lock while providing access to the Visitor Center and the south side of the canal.

"Canal Town" -

Although the area is restricted, it is possible to create a "Canal Town" between the Visitor Center and Wisconsin Avenue. Existing buildings are of the canal era and are oriented to the canal. Other structures moved in or replicated to form a small but interesting historic commercial area which does not compete with downtown businesses but adds diversity and interest to the canal zone adjacent to the private commercial developments. It is recommended that these shops be developed as part of the park. Such controlled development would serve as an example to others of what can be accomplished. In addition to the canal level walkway, elevated viewing platforms are suggested to enhance the vistas from the upper level.

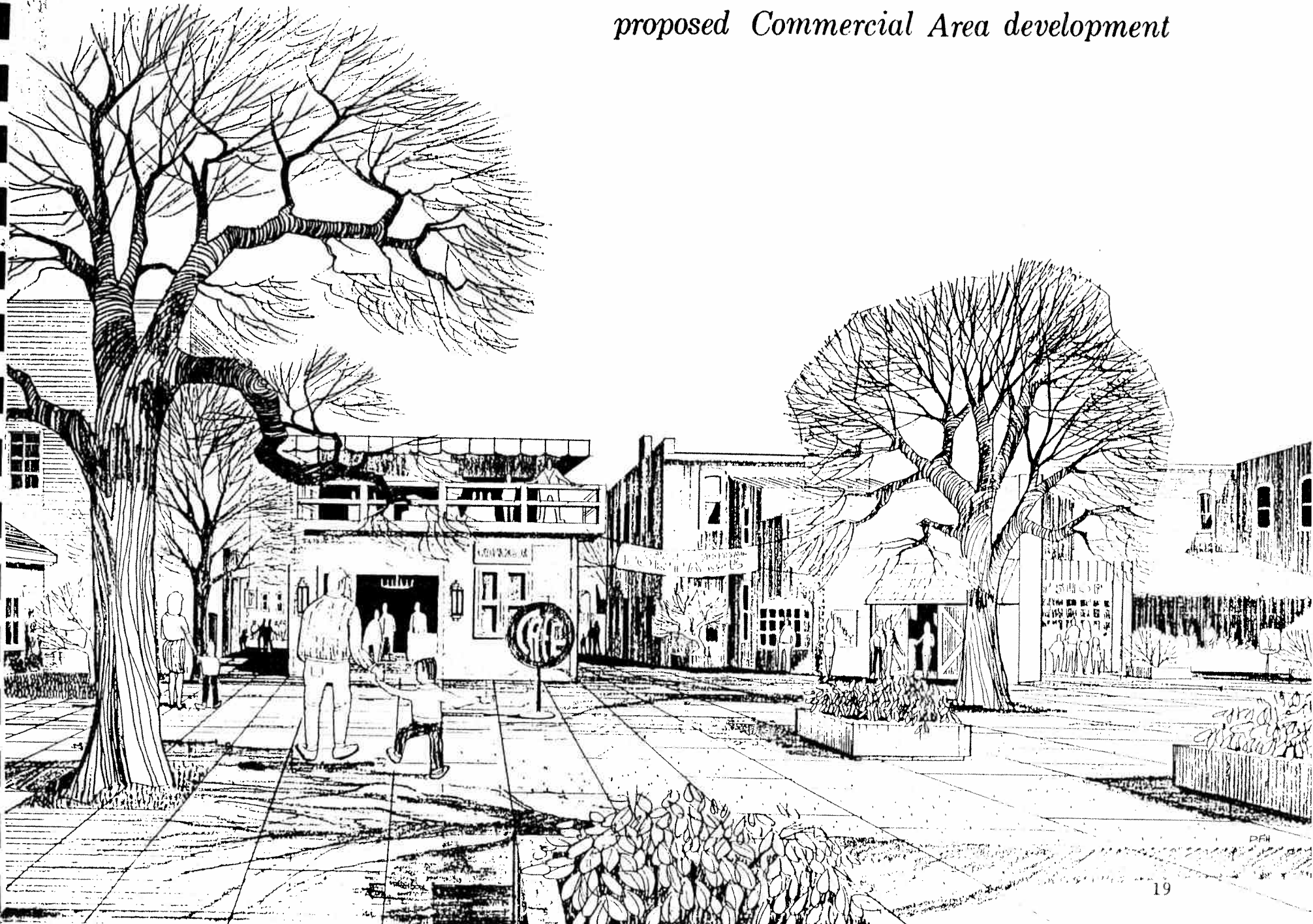
The Visitor Center -

A modern interpretive or orientation building is suggested to provide services to visitors. Ticket sales for the boat ride, Fort Winnebago and other attractions could be provided here. Lodging and restaurant reservations could also be made at this point. It would serve as a Primary Information Center about what there is to see and do. The building is located on a series of descending plazas, from the observation plaza at the elevation of the levee to the walkway at canal level. Boat storage could be provided under the Visitor Center during winter weather.

Bridges -

The replacement of existing culverts has been discussed previously. Pedestrian traffic across the busy Wisconsin Avenue could be reduced and pedestrian traffic between the Visitor Center and the Commercial Area would be improved. The pedestrian walkway would be extended, at canal level, along the south side of the canal to Adams Street and thus link with the large city parking lot at the corner of Adams and Edgewater.

proposed Commercial Area development



THE COMMERCIAL AREA

One of the most exciting potentials in Portage is the possibility of integrating the downtown business district into the Canal-Fort plans. It is proposed that another series of ascending plazas, from the Canal to Edgewater Street, be provided to connect the canal with the Commercial Area. It is to the advantage of local businessmen to cooperate in achieving some pre-established goals. This could best be accomplished through the establishment of some form of design review ordinances by the City of Portage.

The plaza crosses Edgewater Street and enters what is now a rather unsightly parking lot and the backs of a number of stores. These stores are unique in that they present a unified appearance. Although cluttered by telephone poles, unsightly signs and garbage cans they all have a unity of texture, brick color and a richness of detail which could make an interesting entry to town. The proposed court in the rear of these buildings opens to the main street through a number of narrow alleyways. A development, as suggested, would permit store owners to "double-front" their stores or provide smaller tourist oriented shops to serve the multitudes of visitors who will be attracted to Portage.

Economic Feasibility...

The Interim Report concluded that, historically and aesthetically, a development of the historical resources of Portage is possible and is desirable. Is it economically feasible?

In its essentials, economic feasibility is determined on the basis of estimated costs and estimated revenues. When dealing with a proposed historic development, the estimates of costs and revenues involved are based, necessarily, upon assumptions. Unlike a proposed dormitory, the estimates of both costs and revenues involve some degree of speculation. The acceptability of an economic feasibility study is entirely dependent, therefore, upon the acceptability and the validity of the assumptions used as the basis for the study.

We propose, therefore, to examine the assumptions which have been made or are to be made, in an attempt to define the validity of those assumptions which form the basis of our evaluation of economic feasibility.

LAND COSTS

The cost of land needed to make the development a reality, was not considered in the Interim Report. A recommendation of certain land purchases, within the city limits, were recommended on 11 January 1968. These parcels, in total, have an assessed valuation of about \$48,000. The improvements, thereon, have an assessed valuation of about \$125,000. Real estate sales in Portage have recently been averaging about 10% above assessed valuation. The land within the city limits would, at the lowest estimate, cost about \$191,000.

Land costs for the Fort Winnebago site and neighboring areas has not been determined. An acceptable estimate must be determined.

We will assume for this report, that total land costs within the city limits will be \$220,000, and that land in Pacific and Winnebago townships will cost \$230,000. It is also assumed that \$300,000 will be required the first year and \$150,000 needed in the second year of development.

DEVELOPMENT COSTS

Developments of historic resources are, by their very nature, spread over many years. Unlike a dormitory project, the construction involved is composed of a multitude of small projects. The date for completion of some of these projects is delayed by the necessity of research prior to construction. A phased development is not then a gimmick to improve economic feasibility, but rather a normal factor of such development. In the following figures, no Federal assistance in the form of grants or matching funds to help in the land acquisition, research, planning, preservation and restoration costs or any other element of the proposed development is considered. Such assistance is available and should be pursued.

SCHEDULING THE DEVELOPMENT

Fort Winnebago - A revised schedule for the reconstruction of Fort Winnebago is herein suggested. It is divided into two separate schedules: one involving those elements which

are essential to recreating the fort proper and one which involves those structures which are desirable but which are not necessary to the success of the fort or those which cannot be reconstructed until Highway 33 is relocated. As no unnecessary work is scheduled until the sixth year, a decision of whether or not to relocate Highway 33 and complete the reconstruction of the outbuildings may be deferred until success of the project is assured. For purposes of establishing the economic feasibility, the necessary work only is considered. This schedule and cost estimate supersede that presented in Part I.

10 Year Development Program - Fort Winnebago

	Necessary	Desirable	Necessary Total	Total
Year 1-Demolish Structure North of 33	13,000			
Construct Bridge	10,000			
Archeology	12,000		35,000	35,000
Year 2-Building A	45,000			
Building B	45,000			
¼ Palisade	2,000			
Well	6,500			
Eagle	500			
1 Gate	500			
Landscaping	3,500			
Archeology	12,000		115,000	115,000

	Necessary	Desirable	Necessary Total	Total
Year 3-Building F	122,000			
Building G	49,000			
½ Palisade	2,000			
Landscaping	4,000			
Archeology	12,000		199,000	199,000
Year 4-Building C	61,000			
Building E	61,000			
½ Palisade	2,000			
Landscaping				
Archeology	12,000		140,000	140,000
Year 5-Building H	49,000			
Building I	62,000			
½ Palisade	2,000			
1 Gate	500			
Outer Fence	10,000			
Landscaping	3,500			
Archeology	12,000		149,000	149,000
Year 6-Demolition of Structures				
South of 33	12,500			
Building D	32,500			
Blacksmith Shop		16,000		
Carpenters Shop		16,000		
Landscaping	1,000	1,000		
Archeology	12,000		58,000	91,000

	Necessary	Desirable	Necessary Total	Total
Year 7-Building J	28,000	65,000		
Stable		17,000		
Bakehouse	1,000	4,000		
Landscaping		12,000	29,000	127,000
Archeology				
Year 8-Sutler's Store		31,000		
Subsistence Store		27,000		
Landscaping		3,000		
Archeology		12,000		73,000
Year 9-Washhouse		62,500		
Landscaping		2,500		65,000
Year 10- New Hospital		178,000		
Landscaping		1,000		179,000
			\$725,000	\$1,173,000

Other developments - An assumed schedule for development of the remainder of the elements of the proposed Historic Portage Project has been devised. It is assumed that all of these elements are necessary to the completion of the project. The following table presents the elements as broad categories with their estimated costs ranked under the year of their assumed completion. Costs are tabulated in thousands of dollars.

DEVELOPMENT COSTS

PROJECT	YEAR OF COMPLETION							PROJECT COST
	1	2	3	4	5	6	7	
Land Acquisition	300	150						450
Approach Landscaping		25	25					50
Visitor Center Area								2
Wisconsin Lock Safety	2							10
Wisconsin Lock Hydraulics		10						43
North Park Development	20	20	3					100
South Park Development	30		70					200
Visitor Center Building		200						180
Restoration of Buildings*	20	60	40	40	20			100
Boat Purchases		100						20
Canal Bank Cleanup	20							25
Canal Bed Cleanup	25							15
Necessary Revetment	15							20
Waste Weir Reconstruction	20							70
Bridge #1 Replacement		70						70
Bridge #2 Replacement		70						60
Transitional Landing	20	40						80
Winnebago Landing	20	40	20					60
Winnebago Visitor Center		60						
Fort Winnebago								200
*Interpretation	20	50	50	50	20	10		725
Necessary Construction	35	115	199	140	149	588	29	
ANNUAL COST	547	1080	337	230	189	68	29	2,480

*No allowance has been made previously for this important element of a historic restoration. A proposed budget is herein suggested to purchase uniforms, guns, replicas of historic articles, audio-visual equipment, interpretive displays and other items essential to effective creation of "living history".

DEVELOPMENT COSTS

Costs for land acquisition, planning, research and construction of the development are to be financed through lease arrangement with the State Building Authority. These costs are therefore, distributed over a period of years. As a factor of economic feasibility, the annual lease rate, not the cost of development, is the determining element. It is necessary to distribute the costs incurred over a logical development period. Therefore, lease payments need only be made on funds actually expended. In the preceding schedules, the development program is presumed to be the most rapid development possible. New funds required to finance a specific years work may be determined and it is possible to estimate the lease rate which must be met through revenues by applying the lease repayment rate of The State Building Authority of \$70 per \$1,000 for eight years and \$55 per \$1,000 for the remaining years.

The following table assumes that lease payments on new funds required would be deferred two years "during construction":

ESTIMATED LEASE PAYMENTS

*New Funds required in Thousands of Dollars

year	547	1,080	337	230	189	68	29	#Annual Lease Payment
1	38.3							Deferred
2	38.3	75.6						Deferred
3	38.3	75.6	23.6					38.3
4	38.3	75.6	23.6	16.1				113.9
5	38.3	75.6	23.6	16.1	13.2			137.5
6	38.3	75.6	23.6	16.1	13.2	4.7		153.6
7	38.3	75.6	23.6	16.1	13.2	4.7	2.0	166.8
8	38.3	75.6	23.6	16.1	13.2	4.7	2.0	171.5
9	30.1	75.6	23.6	16.1	13.2	4.7	2.0	173.5
10	30.1	59.4	23.6	16.1	13.2	4.7	2.0	173.5
11	30.1	59.4	18.5	16.1	13.2	4.7	2.0	165.3
12	30.1	59.4	18.5	12.7	13.2	4.7	2.0	149.1
13	30.1	59.4	18.5	12.7	10.4	4.7	2.0	144.0
14	30.1	59.4	18.5	12.7	10.4	3.7	2.0	140.6
15	30.1	59.4	18.5	12.7	10.4	3.7	1.6	137.8

*The total development costs of \$2,480,000 exceed the \$1,500,000 bonding limitation of the State Historical Society. Suggestion of a method for financing the remaining costs is given on Page 29.

#It is assumed that "during construction" deferral of lease payments will be for a period of two years for each segment of new funds required.

The proposed Historic Portage Development is multi-faceted. It presents solutions, not only to problems of historic preservation of the canal and Fort Winnebago, but also involves solutions to some of Portage's urban problems. The Senate bill which authorizes the State Historical Society to borrow funds to restore the canal and the fort stipulates that the City of Portage must give evidence of support by contributing at least 10% of the cost of development. It stipulates further that no more than \$1,500,000 is to be outstanding in revenue bonds at any one time. The development costs are estimated at nearly \$2,500,000. The \$1,000,000 in additional funds must cover from another source or the development schedule must be extended to permit the utilization of surplus funds to pay development costs.

Therefore, it is deemed advisable for the City of Portage to assume a more active role in the development and operation of the total project. When the organizational structure has been clarified, it may be possible for the City of Portage to finance a portion of the development costs while sharing in the revenues from the development and in the administration of the non-historic elements of the development:

Participation by the City of Portage presents several advantages:

Availability of federal assistance programs - numerous federal assistance programs are available to cities to aid in solving their urban problems.

Integration of Historic Development into total City Plan

At present, the City Plan for Portage does not include the potential for economic improvement presented by the Historic Portage Development. If this project is to work, the City Plan must be amended to include this major element.

OPERATIONAL COSTS

Operational costs are derived from The Department of Administration's Review of the State's Historic Site Program, Part II. When considering all four sites: Wade House, Villa Louis, Stonefield and Circus World, it is indicated that personal services average 47.3% of total operational costs. For purposes of this report, we will assume that personal services will equal approximately 50% of anticipated operational costs. We will assume the following minimum staff as necessary for operation of the development.

STAFF	*YEAR OF DEVELOPMENT								7, 8 & 9
	No.	3	No.	4	No.	5	No.	5	
Full Time	No.	3	No.	4	No.	5	No.	5	Costs Assumed to Increase 5% per year
Director @ \$14,000	1	14,000	1	14,000	1	14,000	1	14,000	
Asst. Director @\$10,000	0	-0-	0	-0-	1	10,000	1	10,000	
Secretary @ \$5,000	1	5,000	1	5,000	1	5,000	1	5,000	
Park Supervisor @\$5,700	1	5,700	1	5,700	1	5,700	1	5,700	
Seasonal Employees									
Guides - Clerks @\$1,400	8	11,680	10	14,600	11	16,060	12	17,250	
Maintenance Man @\$1,920	1	1,920	2	3,840	3	5,760	4	7,680	
Boat Operators @\$1,920	2	3,840	2	3,840	3	5,760	4,	7,680	
TOTALS		42,140		47,040		62,280		67,580	
Plus 100% for Other Costs		<u>42,140</u>		<u>47,040</u>		<u>62,280</u>		<u>67,580</u>	
Assumed Operational Costs		<u>84,280</u>		<u>94,080</u>		<u>124,560</u>		<u>135,160</u>	

*It is assumed that a two year "in construction" phase will precede operation. It should be noted that a limited staff will be necessary during the construction phase. However, certain revenue producing facilities will be in operation prior to the third year. These revenues should balance the administrative costs for the first two years.

REVENUES

Revenues from a historical development come from many sources: admission, fares, direct sales, concession and leases. Careful and creative administration should produce revenues from sales, concessions and leases equaling revenues from admissions and fares. However, for purposes of this report we will draw upon the experience of Villa Louis, Wade House and Stonefield who report that revenues from admissions equal approximately 70% of their total revenues while revenues from sales and other sources equal 30% of total revenues.

Further, for purposes of this report, we will assume that a visitor is one who visits Fort Winnebago and that one fourth of the visitors will ride the canal boats. Based upon the average admission charges of similar attractions in the country, we will assume minimum admission charges of \$1.50 for adults, with children under 12 free, and boat fares of \$.50 per seat for a one-way ride.

Revenues from Admissions - Experience dictates that approximately two-thirds of the tourists who visit forts are adults. Therefore, the per-visitor revenue from admissions would be \$1.00.

Revenue from Boat Fares - At \$.50 per fare, one-fourth of the visitors would guarantee a per-visitor revenue from boat rides of \$.125.

Revenue from Other Sources - Applying the 70%-30% ratio we derive a per-visitor revenue from sales and other sources of \$.475.

Total Revenue - The sum of the above would equal the assumed per-visitor revenue from the development of \$1.60.

We would further assume that, during the early years of development, revenues may not reach this figure either through the desirability of not charging full fares or through the incom-
pletion of certain revenue producing facilities. We therefore should, when using this figure
in a tabulation of costs versus revenues to determine economic feasibility, demand a statis-
tical surplus of revenues during the initial three or four years which exceeds the point of
economic balance in order to account for the possibility of reduced per-visitor revenues
during those early years.

PROJECTION OF ATTENDANCE

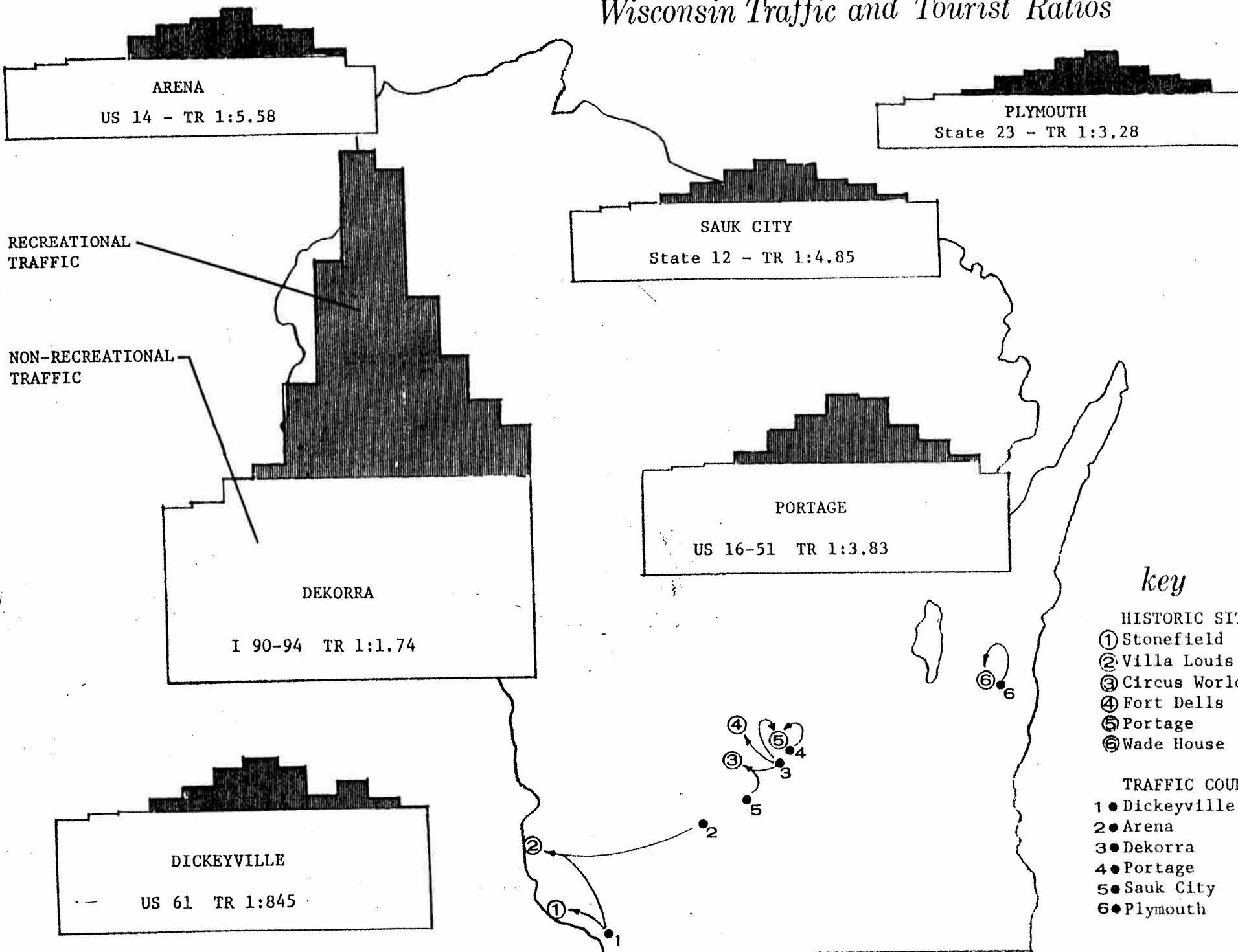
The Interim Report indicates that the Historic Portage Development should, upon completion, attract a minimum of 250,000 visitors per year with attendance of over a million a distinct possibility. These projections were based on the experience of other similar sites in other areas. For the purposes of this report, it is desirable to determine a logical method of estimating the number of potential tourists in a specific area and of comparing the attraction qualities of other dissimilar attractions.

Method of Determining the Number of Potential Tourists in an Area

It has long been recognized that, in northern areas, recreational traffic is largely concentrated during the warmer months of the year. It is also recognized that the normal non-tourist traffic continues throughout the year but is slightly reduced during January and February. Permanent traffic recorders are located throughout the state. By analysis of the data from the various counters, it is possible to derive ratios of recreational/ non-recreational traffic activity in any area with some degree of accuracy.

Traffic activity of six permanent stations located on main highways in the vicinity of historic sites are graphed on the next page. It is obvious that the traffic increase during the summer is due to recreational traffic. In most areas, non-recreational autos and trucks form the bulk of the traffic. For purposes of consistency we have selected the average traffic in March as the non-recreational traffic. All traffic in excess of that base is assumed to be recreational in nature. The ratio of the number of recreational autos to the non-recreational traffic is termed the Tourist Ratio.

Wisconsin Traffic and Tourist Ratios



key

HISTORIC SITES

- ① Stonefield
- ② Villa Louis
- ③ Circus World
- ④ Fort Dells
- ⑤ Portage
- ⑥ Wade House

TRAFFIC COUNTERS

- 1 ● Dickeyville
- 2 ● Arena
- 3 ● Dekorra
- 4 ● Portage
- 5 ● Sauk City
- 6 ● Plymouth

Although the number of permanent recorders are limited, statistical methods and random counts of the State Highway Department supply average daily traffic activity for all roads in the state. It is possible to add the average daily traffic figures for all main roads leading into an area to determine the average daily traffic activity for any region or city.

If we take a hypothetical city as an example:

The average daily traffic counts of all roads entering the city are added together (counts, except for bridge counts, are taken from outside the city limits).

We will assume that the total traffic activity of our hypothetical city is:

3,000 cars per day

This figures, multiplied by 365, results in total traffic activity per year:

$3,000 \text{ c.p.d.} \times 365 = \underline{1,095,000}$ cars per year.

This figures, divided by 2, results in the number of cars entering the city per year:

$1,095,000 \div 2 = \underline{547,500}$ cars entering per year.

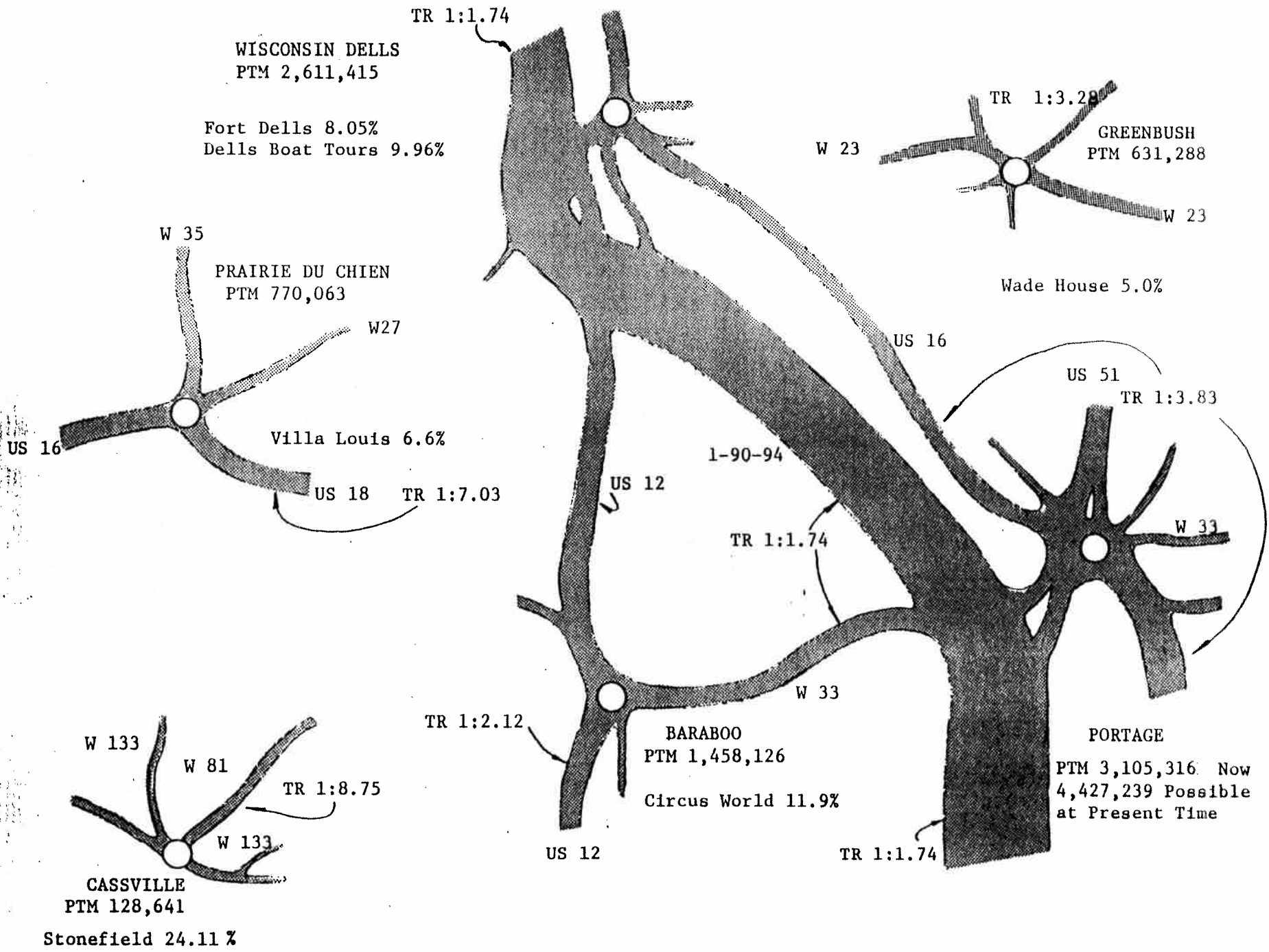
Application of the recreational/non-recreational ratio derived from nearby permanent traffic counters results in the number of recreational autos entering the city each year (in this case, we will assume a ratio of 1:3):

Tourist Ratio 1:3 = 410,625 non-recreational autos
136,875 recreational autos entering per year

Finally, multiplying by 3.5 (the average number of people per recreational vehicle, derived from State Park averages), results in the Potential Tourist Market for the community:

$136,875 \times 3.5 = 479,052.5$ potential visitors per year

The PTM thus derived, is obviously not an accurate count of the number of visitors in an area, but application of the same logic to various cities results in a consistent figure which reflects the tourist activity in the area



PTM - Potential Tourist Market
 TR - Tourist Ratio

POTENTIAL TOURIST MARKET OF WISCONSIN COMMUNITIES
 AND ATTRACTION INDICES OF THE ATTRACTIONS

Method of Determining the Attraction Index of a Site

Given a consistent base, it is possible to determine an index of attractiveness for any restaurant, theater, boat ride or other tourist facility within the area from which the PTM is figured. A recent seasonal attendance figure, computed as a percentage of the PTM, results in an Attraction Index which permits comparisons of attractions which are difficult to compare by any other means.

ATTRACTION INDEX OF VARIOUS WISCONSIN ATTRACTIONS

Attraction	Tourist Ratio	Potential Market	Recent Attendance	Attraction Index
Stonefield	1:8.45	128,641	31,000	24.1%
Wade House	1:3.28	631,288	32,000	5.07%
Villa Louis	1:7.03%	770,063	51,000	6.6%
Circus World	1:3.29	1,458,126	174,000	11.9%
Fort Dells	1:1.74	2,611,415	210,000	8.05%
Dells Boat Trips	1:1.74	2,611,415	260,000	9.96%

Applying the Attraction Indices of these attractions to the proposed Historic Portage Complex, in ascending order, results in projected attendances for the proposed project if the Attraction Indices of the other sites were equalled:

PROJECTED ATTENDANCE FOR PORTAGE COMPLEX

Attraction	Tourist Ratio	Potential Market	Assumed Attraction Index	Projected Attendance
Historic Portage Complex	12,215 cars per day at	*3,105,000	5.07%	157,000
	1:3.83	3,105,000	6.6%	205,000
	4,410 cars per day at	3,105,000	8.05%	250,000
	1:1.74	3,105,000	9.96%	309,000
		3,105,000	11.9%	369,000
		3,105,000	24.1%	748,000

*Note: 1,321,900 potential visitors now by-pass Portage, if these could be included, the market would be 4,427,000

Experience in assessing the attractive qualities of various developments would indicate that the proposed Historic Portage would attract a minimum of 10% of the potential yearly market. Frank and Stein Associates Incorporated therefore would project a minimum attendance of 310,000 visitors upon completion of the project, providing that the project is operated with economy and there is aggressive promotion of the attraction. It should be noted that, given the proper circumstances, attendance at the Portage Complex could exceed 1,000,000 per year within a decade.

POTENTIAL MARKET OF REGION

By computing the PTM for a larger area, in this case the area bounded by Portage, Wisconsin, Dells and Baraboo, it is possible to compare the attractiveness of a site in relation to other sites.

Total Area Potential Tourist Market

5,010 cars per day @ 1:5.8	
4,500 cars per day @ 1:3.83	
19,330 cars per day @ 1:1.74	PTM 5,077,000
4,470 cars per day @ 1:4.85	

A comparison of the adjusted Attraction Indices for the Local and Area Traffic reveals the importance of proximity of routes of high recreational traffic.

Site	Area Attraction Index	Adjusted Area Attraction Index	Local Attraction Index	Adjusted Local Attraction Index
Circus World Museum	2.86	1.0	11.9	1.0
Fort Dells	3.46	1.201	8.05	.676
Dells Boat Tours	4.28	1.496	9.96	.83

It can be seen that, although Circus World ranks higher in attracting local traffic than the other attractions, it draws fewer people from the area than it could if it were located in an area of higher tourist activity.

From an area viewpoint, Portage, if no more attractive than Circus World should exceed the attendance rates of Circus World by a factor of 1.2 to 1.5, resulting in an attendance of between 208,000 and 261,000.

GROWTH IN ATTENDANCE

The attendance projected by Frank and Stein Associates Incorporated used data for 1966. Numerous factors combine to indicate an almost certain growth. Increased leisure time, increasing prosperity, increasing ease of travel, when combined with a growing interest in authentically restored, educational attractions are contributing to spectacular attendance increases all over the country. This growth is perhaps reflected in the increasing recreational traffic activity in the country. Traffic growth has been increasing at a rate of about 4% per year. Authentically restored sites, generally are increasing their attendance at about 10% per year.

Attendance figures from 1960 through 1966 and for 1962 through 1966 (to disallow 60-62 drop in attendance which may have been due to establishment of State Park fees) indicate the following annual attendance increases for the following attractions:

	Period 1960-1966		Period 1960-1966
Stonefield	43%	Stonefield	50%
Villa Louis	4%	Villa Louis	4%
Circus World	4%	Circus World	15%
Wade House	0%	Wade House	4%
State Parks	11%	State Parks	22%

Even taking into account the poor 1967 tourist season, it is apparent that, over the lease payment period of the Historic Portage Complex, the average annual increase in attendance should exceed 4% per year.

IS THE PORTAGE DEVELOPMENT FEASIBLE?

We have now assembled estimates of all of the basic costs and revenues which determine the economic feasibility of the project. We shall calculate the costs and revenues for the Historic Portage Development, using the Frank and Stein Associates Incorporated projection of a minimum attendance of 310,000. We are certain that attendance at a minimum will equal the attendance of Circus World Museum. Therefore, we present a table using 175,000 visitors as a base figure. Finally we will tabulate the minimum attendance needed to meet the estimated costs.

The following tables include:

- Development Costs (see page 28) assumed: minimum development time.
- Operational Costs (see page 30) assumed: 5% annual increase in costs after year 6
- Attendance (see page 32) assumed: 4% annual increase in attendance.
- Revenues (see page 31) assumed: \$1.60 per-visitor revenues.

The tables are carried forward only 12 years, when the critical point will have been passed.

BALANCE SHEET BASED ON FRANK AND STEIN ESTIMATED BASE ATTENDANCE OF 310,000 IN THOUSANDS

YEAR	COSTS			ATTENDANCE	REVENUES	BALANCE
	DEVELOPMENT	OPERATION	TOTAL			
1						
2						
3	38.3	84.3	122.6	310	496.0	383.4
4	113.9	94.1	208.0	322.4	515.8	307.8
5	137.5	124.6	262.1	335.3	536.5	274.4
6	153.6	135.2	288.8	348.3	558.3	269.5
7	166.8	141.9	308.7	361.8	518.9	270.2
8	171.5	156.5	328.0	376.3	602.1	274.1
9	173.3	164.3	337.8	391.4	626.2	288.4
10	173.5	172.5	345.0	407.0	651.2	306.2
11	165.3	181.2	346.5	423.3	677.3	330.8
12	149.1	190.3	339.4	440.2	704.3	364.9

BALANCE SHEET BASED ON ASSUMED BASE ATTENDANCE OF 175,000 IN THOUSANDS

YEAR	COSTS			ATTENDANCE	REVENUES	BALANCE
	DEVELOPMENT	OPERATION	TOTAL			
1						
2						
3	38.3	84.3	122.6	175	280	157.4
4	113.9	94.1	208.0	182	291	83.0
5	137.5	124.6	262.1	189	302.4	40.3
6	153.6	135.2	288.8	196.5	314.4	25.6
7	166.8	141.9	308.7	204.5	327.2	18.5
8	171.5	156.5	328.0	212.5	340	12.0
9	173.5	164.3	337.8	221.5	354.4	16.6
10	173.5	172.5	345.0	230	368	23.0
11	165.3	181.2	346.5	239.5	383.2	36.7
12	149.1	190.3	339.4	249.1	398.5	59.1

MINIMUM ATTENDANCE REQUIRED TO MEET PROJECTED COSTS

In Thousands

YEAR	TOTAL COSTS	ATTENDANCE REQUIRED
3	\$122.6	77.3
4	208.0	140.0
5	262.1	170.1
6	288.8	185.0
7	308.7	194.0
8	328.0	205.0
9	337.8	211.1
10	345.0	215.7
11	346.5	217.0
12	339.4	212.1

Conclusion...

IT IS THE OPINION OF FRANK AND STEIN ASSOCIATES INCORPORATED OF LANSING, MICHIGAN THAT THE HISTORIC PORTAGE DEVELOPMENT IS, IF PROPERLY ADMINISTERED, ASSURED OF ATTRACTING ENOUGH VISITORS TO MEET ITS OWN EXPENSES, PAY THE LEASE PAYMENTS FOR BORROWED FUNDS AND RESULT IN A SURPLUS OF FUNDS WHICH MAY BE DIVERTED TO FINANCE PRESERVATION PROGRAMS IN AREAS NOT SO FORTUNATELY SITUATED IN A PRIMARY TOURIST AREA.

