

Willamette Industrial History Museum

Cole

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Cole, Arthur J.

HP 1997

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Historic Preservation - Adaptive Reuse Project
for the Portland Gas & Coke Building

Portland Urban Architecture Program
University of Oregon

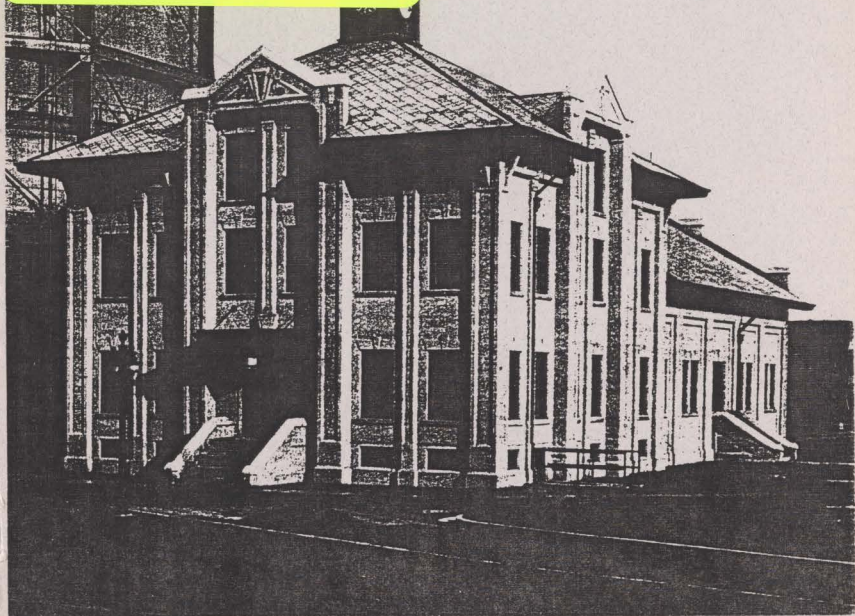
Terminal Research/Design Project
Peter A. Keyes, Faculty Advisor

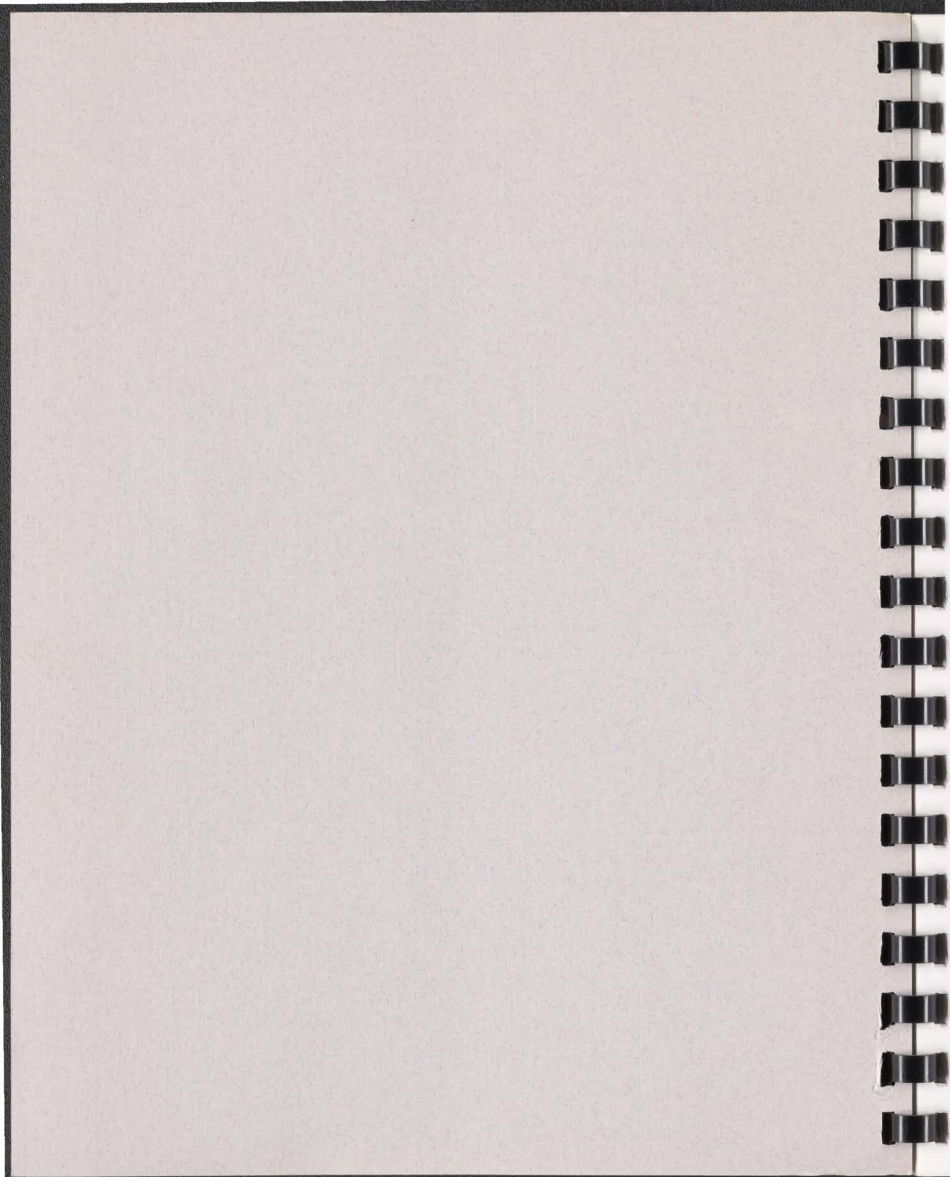
Final Project Summary
Spring Quarter 1997

Arthur J. Cole

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Willamette Industrial History Museum

Reuse Project
for the Portland Gas & Coke Building

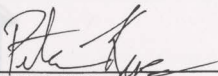
Portland Urban Architecture Program
University of Oregon

Terminal Project Certificate of Completion

STUDENT: Arthur J. Cole

TERMINAL PROJECT TITLE: Willamette Industrial History Museum
Historic Preservation - Adaptive Reuse Project for the Portland Gas & Coke Building

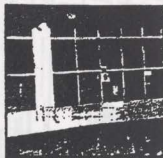
ADVISOR: Peter A. Keyes


ADVISOR'S SIGNATURE
Certificate of Completion

5-30-97
DATE

NOTE: The Terminal Project, required of all Option II students in Architecture, is intended to be an opportunity for Option II students to pursue research/design interests and synthesize such interests in a documented project to be retained by the Department and by the AAA Library. The Advisor's Signature (above) is a statement of the satisfactory completion of the Terminal Project requirement.

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TERMINAL PROJECT CERTIFICATE OF COMPLETION

Project Name _____

Terminal Name _____

Terminal Project Number _____

Project Type _____



Contract Administrator

The Terminal Project Administrator of the Terminal is hereby notified to be responsible for the completion of the Terminal Project. The Terminal Project Administrator is responsible for the completion of the Terminal Project. The Terminal Project Administrator is responsible for the completion of the Terminal Project.

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Willamette Industrial History Museum

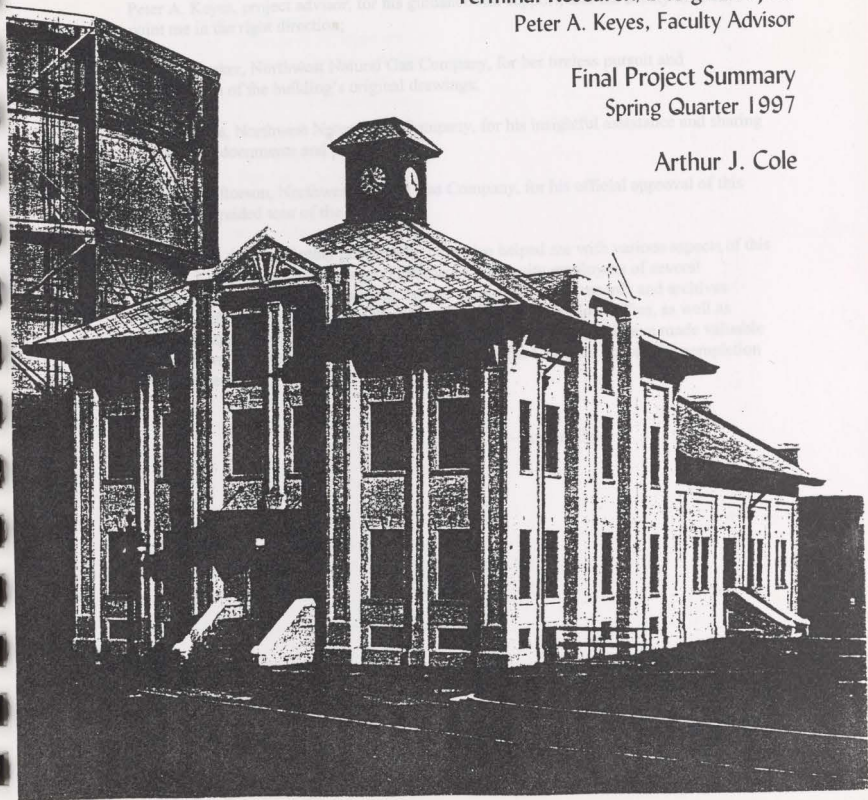
Historic Preservation - Adaptive Reuse Project
for the Portland Gas & Coke Building

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Willamette Industrial History Museum

Historic Preservation - Adaptive Reuse Project
for the Portland Gas & Coke Building

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Willamette Industrial History Museum

Acknowledgments

This project began with the accidental sighting of a beautiful historic building, and now, almost two years later, ends with this summary report. It has been an enjoyable and educational experience. Along the way I've received help and encouragement from many people; I gratefully acknowledge the invaluable contributions of the following:

Peter A. Keyes, project advisor, for his guidance and support, and the ability to always point me in the right direction;

Myra M. Parker, Northwest Natural Gas Company, for her tireless pursuit and apprehension of the building's original drawings;

Ross A. Lisle, Northwest Natural Gas Company, for his insightful assistance and sharing of historical documents and photographs;

Daniel J. Haftorson, Northwest Natural Gas Company, for his official approval of this project and guided tour of the building.

There are dozens of other people who have also helped me with various aspects of this project. Library staff at the Oregon Historical Center, city employees of several departments in the Portland Building, county employees at the records and archives division, preservation officials at the State Historical Preservation Office, as well as architects, engineers, and others with specific areas of expertise; all have made valuable contributions in time and effort. It is to all of them that I owe the successful completion of this project.

--Arthur Cole

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Willamette Industrial History Museum

Introduction

I had been living in Portland only a few weeks and was driving North on Highway 30 to look at the St. Johns Bridge; I was told it was the most beautiful of Portland's bridges. I could see the bridge in the distance but it was something else that suddenly caught my attention. Off to the right of the highway was what looked like an old schoolhouse. It was a two-story concrete building with a clock tower. I quickly pulled off the highway onto a driveway to take a closer look at the building. I wasn't able to get very close to it, but I knew I had found something special.

The building, I later learned, was the old office and laboratory building of the Portland Gas & Coke Company, what it now the Northwest Natural Gas Company. The company still owns the building but has not occupied it for many years. The fifteen-acre plot of land around it is still used by the company and has several large natural gas storage tanks as well as one very large tank which holds liquefied natural gas. Portions of the land are currently leased to other companies. After learning more about the building, I decided to use the building as the topic for a research and design project to satisfy the Option II research requirement in the University of Oregon, Portland Urban Architecture Program.

During Fall Quarter I obtained many of the original architectural drawings from the gas company and researched precedent studies using the highway, river, and industrial history of the Portland Gas & Coke Building as similarities. Many possible programs have been identified for the building and I have also tried to imagine other programs that may be viable alternatives for the building's re-use; unusual, unexpected, or unconventional uses that may successfully occur there in the future.

During Winter Quarter I finalized the choice of program; I chose to combine two of the stated possible programs to proceed with for the remainder of the project. I believe the Portland Gas & Coke Building would have the best chance for a useful and successful future in the role as the Willamette Industrial History Museum. The museum would house exhibits of historical photographs, documents, and artifacts of the area's industrial past. The present river-side industrial fabric of Portland would be included as an exhibit and accessible via tour boats on the Willamette River.

This document is the summary of research, programming, and design completed over the course of the three quarters of the 1996-97 school year.



University of Toronto

Introduction

I had been living in Toronto only a few weeks and was having trouble in finding a house. I was told that the best way to find a house was to go to the real estate office in the downtown area. I went there and was shown several houses. One of them was a two-story concrete building with a glass tower. I really liked it and the highway was a few minutes away. I went to see the building. I was told to go to the office to see the architect.

The building I saw first was the old office and laboratory building of the University of Toronto. The company was the Toronto Industrial Group. The company was a two-story concrete building with a glass tower. I really liked it and the highway was a few minutes away. I went to see the building. I was told to go to the office to see the architect.

During the summer I worked on the original architectural drawings for the building. I was told to go to the office to see the architect. I was told to go to the office to see the architect. I was told to go to the office to see the architect.

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The project is the design of a new building for the University of Toronto. The project is the design of a new building for the University of Toronto. The project is the design of a new building for the University of Toronto.



Willamette Industrial History Museum

Brief History of the Northwest Industrial District

The history of Portland's Northwest Industrial District began with an event that took place during the Summer of 1905. On June 1, 1905, the Lewis and Clark Centennial Exposition opened with 400 acres of fairgrounds planned around the shallow waters of Guild's Lake. The formal layout imitated the White City of Chicago's Columbian Exposition of 1893. The majority of the exposition's buildings overlooked the lake from the bluff on which the Montgomery Ward warehouse was later built. A wide staircase led down the slope to the lake and "The Trail," the amusement arcade where the wonders of the world were available for a dime or a quarter. A "Bridge of Nations" connected the mainland to the United States government buildings which were situated on a peninsula in the middle of the lake. The major exhibition halls followed the Spanish Renaissance style with domes, cupolas, arched doorways, and red roofs. From June 1 through October 15, over one and a half million people paid admission to the fair.

The city's business leadership gave wholehearted support to the planning and promotion of the Lewis and Clark Exposition because its purpose was a bigger and better Portland. It could give Portland an edge in the ongoing competition with Seattle and confirmed the city as a commercial center for the Pacific. The official title of the event was the "Lewis and Clark Centennial Exposition and Oriental Fair." When Oregonians of today speak about the importance of trade with the Pacific Rim, they are reiterating ideas that were common ninety years ago.

At the close of the Exposition, civic boosters had many things to be proud about. The Exposition, in the words of Harper's Weekly, "marked the close of an old epoch and the beginning of a new one for Portland." The Exposition had helped launch a boom in both business and population. The annual value of new construction quintupled between 1905 and 1910 and Portland's population passed 200,000 by 1910. Local manufacturing expanded in the same years, especially in lumber, wood products, and furniture, but the biggest growth was in trade and transportation.

Guild's Lake was gradually filled in after the close of the Exposition and new industry began to be built. The area's prime location on the banks of the Willamette River attracted many businesses that would take advantage of Portland's new-found fame as a trade center of the Pacific. Only the "Forestry Building" from the Exposition remained, but this too eventually succumbed to fire. Today, there is nothing left of the Exposition on its original site. But the effects of the Exposition are still there, the area is Portland's biggest and healthiest industrial zone.



Willamette Industrial History Museum

Brief History of the Portland Gas & Coke Company

Excerpted from *Portland: Gateway to the Northwest*, Carl Abbott, 1985

Two Astoria merchants, H.C. Leonard and Henry D. Green, came to Portland to build a "gas manufactory." The first such plant in the Pacific Northwest, it was located on the west bank of the Willamette River near the foot of Flanders Street. The Portland Gas Light Company was franchised by the Territorial Legislature in January 1859, five weeks before Oregon became a state. Within a year, flickering yellow gas lamps began brightening Portland's dark, rain-slick streets. This early gas was produced by heating coal imported as ballast on windjammers sailing into the river from Australia and Canada. The Portland Gas Light Company was just that; in the earliest days of the firm, lighting was the only use for gas. Then came the preheating of water for fire wagons and other new uses for gas, and when the firm was sold to a group of local businessmen in 1892, its name was shortened to Portland Gas Company.

By this time service had expanded throughout the city and pipes were carrying gas on the east side of the Willamette as well as the west. But the new owners soon experienced a temporary setback--the great flood of 1894, which put the gas works out of commission. The company's only complete service interruption, the flood prompted it to move its plant to the higher and drier ground of Everett Street. In 1906 low-cost surplus California oil encouraged a conversion from coal-gas to oil-gas manufacture. This was also the time gas appliances were developed--gas ranges, water heaters, and home furnaces. The West Coast's first gas furnace was installed in the home of company president C.F. Adams.

A 1910 reorganization of the utility resulted in the familiar label, "GASCO," a contraction for the new Portland Gas and Coke Company. Demand for gas had burgeoned by 1913, and the larger plant was constructed at Linnton along the Willamette about seven miles north of Portland. In 1955 natural gas became available to replace manufactured gas, and the next year Gasco converted its entire system to this new resource, resulting in a 17-percent rate reduction for customers. The name Northwest Natural Gas replaced Portland Gas and Coke in 1958 to reflect the change.

The first of two recent developments for the company was the 1979 discovery of Oregon's first natural gas field at Mist. The second was the 1983 occupation of the firm's new offices in One Pacific Square--only a stone's throw from the original coal burner on the waterfront. Northwest Natural Gas Company is the Pacific Northwest's largest gas distribution utility serving customers in western Oregon and southwestern Washington.



Portland Gas & Coke Company

History of the Portland Gas & Coke Company

Portland Gas & Coke Company, Portland, Oregon, 1900

The Portland Gas & Coke Company, Portland, Oregon, was organized in 1888. The first work done in the Pacific Northwest in this line was done in 1847 by the Astoria Gas & Coke Company. The Portland Gas & Coke Company was organized by the Portland Gas & Coke Company in 1888. The first work done in the Pacific Northwest in this line was done in 1847 by the Astoria Gas & Coke Company. The Portland Gas & Coke Company was organized by the Portland Gas & Coke Company in 1888. The first work done in the Pacific Northwest in this line was done in 1847 by the Astoria Gas & Coke Company.

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Willamette Industrial History Museum

Brief History of the Portland Gas & Coke Building

By 1912 the gas plant at Front and Everett Streets had become so crowded and the location so unsuited for gas manufacturing that it became necessary to build a new plant further from the center of the city. A 46-acre site was chosen near Linnton, seven miles north of Portland, and construction began in 1913. "Having in mind the great future of the gas industry, a plant was built capable of indefinite expansion without rebuilding and built in such a substantial and impressive manner as to constitute a distinct addition to our civic buildings" (Gasco Bulletin, May 1922). The area quickly became known as Gasco, Oregon.

In designing the plant, two points were kept uppermost in the minds of the designers; firstly, to attain the highest possible efficiency in operation, and secondly, to eliminate what had been the principal complaint against the operation of a gas works in Portland, namely, dirt, soot, grime and ugly buildings.

"Several types of architecture were considered; the type finally selected conveys the impression of solidity, permanence and dignity, impressive both to the investor, ...and to the citizen in the community. The setting for the buildings is picturesque, namely, in the foreground, the wooded heights of spruce, hemlock and fir, and in the background, the glistening waters of the Willamette River."

"The main buildings are of reinforced concrete, containing 1 inch sized crushed rock, which has been bush hammered on the exterior to produce the effect of granite, this process, besides being comparatively as cheap as plastering, is more permanent and produces a greatly superior effect. The roofs are of terra-cotta colored shingles, laid on the French diagonal method. Streets and driveways are provided with curbs, sidewalks, etc., and are illuminated with gas arc lamp posts" (Untitled history and inventory of Gasco Plant).

The office building is a two-story structure 50 feet x 50 feet in plan with attic and full basement. To the rear is a one-story wing 48 feet x 70 feet with exposed metal trusses and a partial basement. This building, as well as the northernmost portion of the 46-acre plot, including access to the Willamette River, constituted the extent of my research project and design proposal.



Portland Gas & Coke Building

Portland Gas & Coke Building

In 1912 the gas plant in Forest and Everett Streets had become outdated and the
company requested the gas manufacturer that it become responsible for building a new
plant on the corner of the site. A 10-story structure was planned, with a
plant of Forest and Everett Streets in 1912. It was to be a modern building and
the gas industry's plant was built capable of producing gas with a high efficiency and
this building was designed and constructed as to contain a plant which would be
this building, Forest Street, 1912. The gas plant's building was
Oregon.

In designing the plant, two points were kept in mind in the minds of the designers:
firstly to attain the highest possible efficiency in operation, and secondly, to attain
what had been the general opinion of the gas works in Portland,
namely, that the new plant was a building.

Several types of construction were considered, the type finally selected was
the application of a solid, permanent and durable, masonry, built to last
and to be able to stand the test of time. The building for the building is
built on the corner of the corner, in the background, the western side of the
building, which is the building, the building which is the building.
and is, and in the background, the building which is the building.

The main building is of masonry construction, masonry, built to last
and to be able to stand the test of time. The building for the building is
built on the corner of the corner, in the background, the western side of the
building, which is the building, the building which is the building.
and is, and in the background, the building which is the building.

The office building is a two-story structure 50 feet in plan with a full
height. To the east is a two-story wing 40 feet in plan with a full
height. The building, as well as the masonry part of the
plant, is built on the corner of the corner, in the background, the western side of the
building, which is the building, the building which is the building.
and is, and in the background, the building which is the building.



Willamette Industrial History Museum

Context of Research

Sources of Information

Acquiring information was, at first, a slow procedure. One problem was that I didn't know whether the property was in the City of Portland or Multnomah County; later I found that it was actually in both, but at different times. When built, it was in the county, but now is part of Portland. I began at the City of Portland Planning Office, moved on to the City Auditor's Office, and Records Management Division. Then I tried the Multnomah County Planning Office, County Assessor's Office, Facility Management Division, and County Record Archives. Along the hunt, I was able to find the parcel numbers of the property, official address, and name of the owner of the property and building. Later, at the Oregon Historical Society Research Library I was able to find several historical photos of both the interior and exterior of the building.

I contacted a public relations officer at Northwest Natural Gas Company in the hopes of gaining additional information about the building. Eventually, I was put in touch with Myra M. Parker in the Engineering Department and she was able to point me in the right direction to other sources of information. A long-time company engineer who had worked in the building in question many years ago, was able to tell me much of the history of the building. Daniel J. Haftorson of the Property Management Division gave me permission to receive copies of many of the building's original architectural drawings and was also kind enough to take me on a tour of the building which gave me an opportunity to take photographs of the building. Ross A. Lisle of the Distribution Department has made a hobby of gas company history and was kind enough to loan me original historical documents and photographs and copies of early gas company bulletins which provided me with a wealth of good information and a very good background of the company's and the building's history.

The building's architect was David C. Lewis with the Portland firm of H. Goodwin Beckwith Associates. Late in this project, I discovered that David C. Lewis is better known as a partner in the architectural firm of Whidden and Lewis. It was this partnership that is responsible for many of Portland's most well known buildings. Among them are the Gilbert Building, the Postal Building, the Railway Exchange Building, and Portland City Hall. The firm also designed five major buildings for the Lewis and Clark Exposition. It has been more difficult to find information about the building's general contractor, Hurley Mason Company of Portland and Tacoma. The building's consulting engineer, C.A.P. Turner of Minneapolis has been the most difficult to find information about. I intend to continue the search for information on these individuals and companies even after the conclusion of this project.



Willamette Industrial History Museum

Context of Research

Historic Architectural Drawings

Northwest Natural Gas Company, Myra Parker and Daniel Haftorson in particular, have been kind enough to provide me with photocopies and microfilm of many of the original architectural drawings of the building as well as several more recent drawings and site plans of the property. These drawings have been, and will continue to be, a great help in this project. A few sheets of the original drawing set of 1912 have been lost over the years, but copies of plans exist for various additions and remodels made to the building after its initial completion, which, when assembled with the remaining original drawings, make a fairly complete set. The following is an inventory of drawings made available to me:

| | | |
|---|-----------------------------|----------|
| First Floor Plan | Gasco Office Building | 10-28-48 |
| Second Floor Plan - Laboratory Installation | Gasco Office Building | 10-28-48 |
| Second Floor Plan | Gasco Office Building | 1-19-38 |
| Product Dev. Laboratory - Third Floor Plan | Gasco Office Building | 5-23-47 |
| Conference Room - First Floor | Gasco Office Building | 9-12-52 |
| Easement from State of Oregon | LNG Plant | 9-30-71 |
| Site Plan | LNG -SNG Plant | 6-25-73 |
| Longitudinal Building Section | Gasco Office Building | 10-28-48 |
| Transverse Building Section | Gasco Office Building | 10-28-48 |
| Foremen's Washroom Plan - Basement | Gasco Office Building | 1-9-53 |
| Conference Room Installation | Gasco Office Building | 1-4-52 |
| Office Revisions - First Floor | Gasco Office Building | 4-18-56 |
| Stairs - First Floor to Basement | Office Building - New Works | 3-15-13 |
| Proposed Shop - Second Floor | Gasco Office Building | 12-22-45 |
| Exhaust Fan, Steam Bath Hood, 2 nd Floor | Portland Gas & Coke Bldg. | 6-22-56 |
| CS-2 Extraction Hood | Works Laboratory | 11-28-51 |
| Hooded Test Bench - Third Floor | Gasco Laboratory | 3-20-52 |
| Footing and Foundation Plan | Portland Gas & Coke Bldg. | 4-5-12 |
| Floor Reinforcing Plans | Portland Gas & Coke Bldg. | 4-5-12 |
| Beam Details | Portland Gas & Coke Bldg. | 4-5-12 |
| Column Details | Portland Gas & Coke Bldg. | 4-1-12 |
| Column Top Details | Portland Gas & Coke Bldg. | 4-5-12 |
| Stair Details | Portland Gas & Coke Bldg. | 4-4-12 |
| Misc. Structural Details (21 Sheets) | Portland Gas & Coke Bldg. | 4----12 |



University of Illinois

Office of Research

Human Resources Division

Human Resources Division (HRD) provides the University with the following services: recruitment, selection, placement, promotion, compensation, benefits, training, and development. HRD also provides the University with the following services: recruitment, selection, placement, promotion, compensation, benefits, training, and development.

| | | |
|----------|----------------------------------|----------------------------------|
| 10-24-88 | Class Office Building | Class Office Building |
| 10-24-88 | Class Office Building | Class Office Building |
| 10-24-88 | Class Office Building | Class Office Building |
| 9-27-87 | Class Office Building | Class Office Building |
| 9-13-87 | Class Office Building | Class Office Building |
| 8-30-87 | Class Office Building | Class Office Building |
| 8-24-87 | Class Office Building | Class Office Building |
| 10-24-88 | Class Office Building | Class Office Building |
| 10-24-88 | Class Office Building | Class Office Building |
| 10-24-88 | Class Office Building | Class Office Building |
| 1-4-87 | Class Office Building | Class Office Building |
| 9-18-86 | Class Office Building | Class Office Building |
| 12-22-87 | Class Office Building - New Work | Class Office Building - New Work |
| 12-22-87 | Class Office Building | Class Office Building |
| 10-24-88 | Class Office Building | Class Office Building |
| 1-28-87 | Class Office Building | Class Office Building |
| 1-20-87 | Class Office Building | Class Office Building |
| 4-4-87 | Class Office Building | Class Office Building |
| 4-4-87 | Class Office Building | Class Office Building |
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| 4-4-87 | Class Office Building | Class Office Building |
| 4-4-87 | Class Office Building | Class Office Building |



Willamette Industrial History Museum

Context of Research

Site Precedent Studies

As part of this project I have been looking at precedent projects with similar characteristics and circumstances. The building that is the topic of this project is situated between Highway 30 and the Willamette River in a historic industrial area. While this area is still zoned exclusively for heavy industry, I have not, up to this point, let this bit of reality cut down the possibilities for reuse and redevelopment of this building. The possibility for re-zoning of portions of this area may not now exist, but will, I believe, become a stronger possibility in the future. I have, instead, concentrated on the highway and the river as keys to my precedent studies. Both contribute significantly to the site and its possibilities for the future.

During my precedent studies I have cast a wide net, then discarded some and kept others. The most interesting and relevant of these precedents are briefly listed here:

Winslow Building, Troy, New York

- Built 1860's as chemical laboratory building, Rensselaer Polytechnic Institute
- Abandoned in early 1950's, plans call for re-use as children's museum

Lake Shore Inn, Glenbrook, Nevada

- Built 1906 on site of old mill town, operated as resort in until 1970's
- Plans call for old inn to be re-used as community meeting house

Plan for Jim Thorpe, Pennsylvania

- Preservation and new development for historic district in old mining town
- Preservation, adaptive re-use, and new commercial development together

Bu Ye Tian Project, Singapore, Malaysia

- Historic boat quay and warehouses on Singapore River
- Conversion of warehouses to cultural, recreational, and commercial complex

Thompson-Pell Library, Fort Ticonderoga, New York

- Fort Ticonderoga historic site, very crowded historic area
- Nearby telephone switching building re-used as library expansion space

The Clock Tower, San Francisco, California

- Built in seven phases since 1907, originally housed a fruit crate label printer
- Adaptive re-use as live/work units with new commercial development



Contract of Purchase

The Purchase Contract

As part of this project I have been looking at government projects with a view to identifying and understanding the building that is the focus of the project in various countries. It was the White House that was the focus of the project. While the main focus was on the White House, I have also looked at other buildings in the area to see how they compare to the White House. The main focus was on the White House, but I have also looked at other buildings in the area to see how they compare to the White House. I have looked at other buildings in the area to see how they compare to the White House. I have looked at other buildings in the area to see how they compare to the White House. I have looked at other buildings in the area to see how they compare to the White House.

During my research I have seen a wide range of different buildings. The most interesting and unusual of these buildings are listed below.

White House, Washington DC, USA

- Built 1792 as the official residence of the President of the United States
- Located in Washington DC, USA

Lincoln Center, New York City, USA

- Built 1962 as the home of the New York Philharmonic and other performing arts organizations
- Located in New York City, USA

The Guggenheim Museum, New York City, USA

- Designed by Frank Lloyd Wright and completed in 1959
- Located in New York City, USA

The Chrysler Building, New York City, USA

- Designed by William Van Alen and completed in 1930
- Located in New York City, USA

The Empire State Building, New York City, USA

- Designed by Heine and Slesinger and completed in 1931
- Located in New York City, USA

The United Nations Secretariat Building, New York City, USA

- Designed by Oscar Niemeyer and completed in 1952
- Located in New York City, USA



Willamette Industrial History Museum

Context of Research

Function Precedent Studies

Now that I have decided on the type of facility to be installed into the building and upon the site, I have continued my precedent studies using the museum and history center as keys to further study. Following are the local facilities I have studied to enhance my understanding of this type of program. The Portland area does not at present have a museum for showcasing its industrial history.

- Oregon History Center
- Oregon Museum of Science and Industry
- Portland Art Museum
- Audubon Society of Portland
- Oregon Maritime Center & Museum
- World Forestry Center
- Gresham Pioneer Museum
- Troutdale Rail Depot & Museum

Several of these museums are very large and inclusive organizations, some are smaller and more specialized, but only one includes its building as a major, and fitting, exhibit. The Troutdale Rail Museum is housed in an old railroad depot. The building and its exhibits are completely intertwined. This is how I envision the Willamette Industrial History Museum. The building will be as much an exhibit as the artifacts it holds. The building is most fitting in this role; it is where a part of Portland's industrial history took place. It is where this history will be seen and even relived to a certain extent. What is to be avoided is a common problem I have seen in most modern museum buildings; the historical artifact rigorously and permanently separated from any hint of its natural life. The exhibits in the Willamette Industrial History Museum should look much more at home in a building that more closely matches their own age and their own time. If this type of museum can entice the visitor, even for the briefest moment, to forget the present and more thoroughly understand the past it will be a success.



A Division of the University of Wisconsin System

Center of Research

Technical Research Center

Now that I have decided on the type of building to be installed in the building and you are also I have contacted my professional friends and the various and various centers in order to further work. Following are the four buildings I have selected to discuss on the basis of the type of program. The building was done and is present here a

- Oregon Health Center
- Oregon Institute of Science and Industry
- Portland Art Museum
- Audubon Society of Portland
- Oregon Maritime Center & Museum
- World Forestry Center
- Oregon Power Museum
- Portland Rail Depot & Museum

Several of these centers are very large and historic organizations, some are modern and more specialized, but only one building is a new building. The building was done in an old building. The building was done in a completely renovated. This is how I envision the Wisconsin Technical Research Center. The building will be as much as the building is built. The building is most likely in the way it is when a part of Portland's industrial history was there. It is where the history will be used and even added to generate energy. What is it to be a research building I have seen in most modern research buildings. The building will be a research building and governmentally supported from any kind of research. The building is the Wisconsin Technical Research Center should look much more as a building that was already completed that was not and that was done. It is a type of museum and even the historic view for the historic museum, to bring the historic and new technology building the past it will be a museum.





Willamette Industrial History Museum

Issues of Concern

Site Relationships

As mentioned earlier, the project site is located between Highway 30 and the Willamette River, just south of the St. Johns Bridge. Highway 30, also known as the Columbia River Highway and St. Helens Road, is one of the oldest highways in Oregon; it was historically Portland's main roadway link to Washington state and the Pacific Coast. The Willamette River is, both figuratively and literally, the heart of Portland. It is what one pictures when thinking of Portland. It is the reason Portland was founded where it was; the furthest upriver that big ships can easily sail. Much of the land between these two transportation routes was, of course, used for heavy industry that relied on transportation of raw materials and produced goods. The gas plant was built here because the early process required coal from which gas was extracted, and this coal came by ship. With the discovery of natural gas, coal is no longer required and nothing is delivered to the property by ship anymore. The gas company-owned land is now used only for the storage and distribution of gas.

Waterways everywhere are being returned to the people and Portland is certainly no exception. Land along the banks of the Willamette River is becoming more and more non-industrial. In downtown Portland, the West side of the river has gone from industry to freeway to park. The East side has gone from industry to freeway, and there is talk of getting rid of the freeway. This trend will undoubtedly continue and this particular site will see this kind of transformation at some time in the future. It is my hope that this project will, in some way, provide a glimpse of this future and lead to the preservation and adaptive re-use of significant architectural and industrial artifacts in this area.



Williams Institute

Journal of Law, Economics, & Organization

Volume 28, Number 1, Winter 2010

The Williams Institute is pleased to announce the publication of the Winter 2010 issue of the Journal of Law, Economics, & Organization. This issue features a special double issue on the topic of "The Economics of the Family." The double issue is edited by Robert L. Willis and includes the following articles:

1. The Economics of the Family: An Introduction, by Robert L. Willis
2. The Economics of the Family: A Review, by Robert L. Willis
3. The Economics of the Family: A Case Study, by Robert L. Willis
4. The Economics of the Family: A Policy Analysis, by Robert L. Willis
5. The Economics of the Family: A Conclusion, by Robert L. Willis

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Willamette Industrial History Museum

Issues of Concern

Structural Integrity

The Portland Gas & Coke building is constructed almost entirely of cast-in-place reinforced concrete - floors, walls, columns, beams, and roofs. Architectural details show a large amount of rebar in floors and walls. The concrete in the building has an overall good appearance and there are no visible structural problems on the interior. The building does show a few signs of deteriorating concrete where rebar is visible on the exterior surface of a few of the columns, and as in any old concrete structure, seismic stability is always a real concern.

My visit to the site was on a day with heavy rain and there were no signs of water leaking through the roofs or basement walls. There are many broken windows and this does let a little water into the building, along with many pigeons, but I saw no signs of structural deterioration on the interior of the building. The original roof shingles are deteriorated in many areas and will most likely need to be replaced.

Concerns about the seismic stability of the structure led me to contact a structural engineer who teaches engineering courses in the Civil Engineering Department at Portland State University. After a brief look through the architectural drawings provided by Northwest Natural Gas, he stated his belief that the building seemed to be somewhat over-designed and that it would most likely stand up to the forces of an earthquake quite well. The second floor and attic of the building were originally used as laboratory space and the building may have been designed to withstand a gas explosion.

Because of this, and my own visual inspection, it is my conclusion that the building is in fairly good structural condition for a building of its age and that it would not need significant seismic upgrade work. Building modifications and additions will, of course, have to be made to provide for emergency egress and handicapped access as well as any specialized needs of the program chosen for its adaptive re-use.



UNIVERSITY OF CAMBRIDGE

Faculty of Divinity

Department of Divinity

The Faculty of Divinity is pleased to announce the appointment of a new Lecturer in Divinity. The successful candidate will be responsible for the teaching and supervision of students in the Faculty of Divinity. The successful candidate will also be responsible for the teaching and supervision of students in the Faculty of Divinity. The successful candidate will also be responsible for the teaching and supervision of students in the Faculty of Divinity.

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Willamette Industrial History Museum

Issues of Concern

Environmental Factors

The 46-acre plot of gas company land has been used for the manufacture and storage of gas and various by-products for over 80 years. During this time, with several conversions in equipment, process, and materials there has undoubtedly been periodic releases of hazardous or toxic materials into the soil. The extent, content, and levels of these releases is unknown at present and no clean-up plans yet exist to my knowledge. Whether this site has a serious contamination problem or just a minor one I do not know. The northernmost portion of the plot will most likely turn out to be the least affected because most chemical processing facilities have historically been in the central and southern portions of the lot.

For purposes of this project, I will not restrict my design for the adaptive re-use of the Portland Gas & Coke Building and additional site development because of this potential issue.

The program precedent studies showed me some things that seem to work very well and many more things that do not. At the larger facilities it is too easy to include too much, to which the people will become bored. The new Oregon Museum of Science and Industry is like this. There is a little bit of everything: theater, laser shows, interactive exhibits with a lot of flash. It is most of an amusement park than a museum. On the other hand, the Oregon Maritime Center and Museum keeps a tighter focus but, for me at least, the contrast between the facility and its exhibits is just too great. If the exhibits look second-rate, so are you. The Oregon History Center, and many other of the facilities in the area, places too many of its exhibits behind plexiglass panels that effectively separate the viewer and the artifact and its history. Plexiglass plexiglass is a hard, sterile material and stops much more than children's sticky fingers. I know it must be used at times to protect especially valuable artifacts, but its use should be the exception rather than the rule.

The best facility I looked at is the Troutdale Rail Depot and Museum. It is small, focused, and comfortable to be in. Its greatest attraction is its building, a former railroad depot. The exhibits seem perfectly at home in their surroundings. This is much how I see the Willamette Industrial History Museum, a building that is as much an exhibit as its exhibits. This would be a place where many of its artifacts are large and sturdy, things that can be touched, moved, or turned, a place where, even on a slow day, visitors would outnumber the plexiglass display cases.



University of California

Faculty of California

Department of Education

The following list of the courses has been sent to the registrars and the
of the and various for students for over 50 years. During this time, with
institutions in equipment, and materials from the university have provided
of instruction in each course in the U. S. The course content and levels of
have always remained the same and no change has been made in the
of the department. The department has been a leader in the field of
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Willamette Industrial History Museum

Research Conclusions

Precedent Study Conclusions

During the course of this project I have looked at many precedent studies. At first I wanted to explore the possibilities of the site. The site precedent studies are all situated between a major highway and a body of water, and have been adapted to new uses. Later I concentrated on the museum and history center to see what has been done, what works, and what does not work. The program precedent studies, all located in the Portland area, cover a wide range of building types, sizes, and ages. Some were built as museums and others have been adapted for use as a museum.

The site precedent studies showed me the importance of using both approaches to the site, not ignoring the highway or the river, but using both to their greatest advantage. In this project, the main approach will be from the highway but the river will be used to gain access to a new pier and tour boats to include the present industrial fabric of the area as an exhibit. The pier could also be used as a station for a river boat taxi service if Portland begins such a venture in future.

The program precedent studies showed me some things that seem to work very well and many more things that do not. At the larger facilities it is too easy to include too much, to widen the scope and loose focus. The new Oregon Museum of Science and Industry is like this. There is a little bit of everything; theater, laser show, submarine, interactive exhibits with a lot of flash; it is more of an amusement park than a museum. On the other hand, the Oregon Maritime Center and Museum keeps a tighter focus but, for me at least, the contrast between the facility and its exhibits is just too great. If the exhibits look uncomfortable, so am I. The Oregon History Center, and many other of the facilities in the area, places too many of its exhibits behind plexiglas panels that effectively separate the viewer and the artifact and its history. Crystal clear plexiglas is a hard, sterile material and stops much more than children's sticky fingers. I know it must be used at times to protect especially valuable articles, but its use should be the exception rather than the rule.

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University of the Pacific

University of the Pacific

University of the Pacific

During the course of the program, I have had the opportunity to work with many people in various capacities. As I look back on the experience, I realize that the most valuable part of the program was the opportunity to work with people from different backgrounds and cultures. This was a great learning experience for me, and I am grateful for the opportunity to have had this experience. The program provided me with the opportunity to work with people from different backgrounds and cultures, and I am grateful for the opportunity to have had this experience. The program provided me with the opportunity to work with people from different backgrounds and cultures, and I am grateful for the opportunity to have had this experience.

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Willamette Industrial History Museum

Research Conclusions

Program Possibilities

During the course of this project I have researched many precedent studies using the highway, river, and industrial history of the Portland Gas & Coke Building as similarities. I have also tried to think of other programs that may be viable alternatives for the building's re-use. I have tried to imagine the unusual, unexpected, or unconventional use that may successfully occur there in the future. The following is a simple listing of all the possibilities that were considered for this project.

- Industrial History Museum
- Linnton Community Meeting House
- Children's Museum with Industrial/Waterfront Themes
- Retail Shops with Local/ Waterfront Goods
- Branch County Library Location
- Artists/Craftsman Studio Workshops
- Gallery for Industrial Related Art
- Waterfront/Willamette History Museum
- Local Worker Training Center
- Northwest Natural Gas Company Workshops
- Recording Studio and Sound Mixing Facility
- Tourist Information Center / Visitor Center
- Neighborhood Arts & Crafts Center
- Bank Branch Office
- Water Taxi Station / Main Terminal
- Portland Bridge Museum



National Endowment for the Humanities

Statement of Work

Program Description

The purpose of this project is to provide a comprehensive overview of the history of the National Endowment for the Humanities. This history includes the organization's mission, its role in the development of the humanities, and its impact on the public. The following is a list of the activities that will be undertaken for this project:

- Conduct a comprehensive review of the organization's history.
- Develop a series of educational materials for the public.
- Organize a series of public programs and events.
- Establish a permanent endowment fund.
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- Create a series of educational materials for the public.
- Organize a series of public programs and events.
- Establish a permanent endowment fund.



Willamette Industrial History Museum

Research Conclusions

Research Summary

This document is a summary of this year's research on the Portland Gas & Coke Building. The purpose of Fall Quarter's research was to gather information, identify issues of concern, search out precedent studies, and come to preliminary conclusions to provide guidance and direction for the remainder of the project. Winter quarter's project tasks began with finalizing the program and the initial design phase for adaptive re-use of the building and site, and building a scale model of the site. Spring quarter was spent on final design for the building, site, and additional development that will be part of this project, design of the outdoor exhibition spaces and tourboat pier, and preparing a detailed cost estimate and drawings of the proposed design.

I began the project knowing almost nothing about the building or its site and ended with a substantial amount of historical data about the building, site, structural and environmental elements of the project, and a proposal and design for a possible adaptive use of this important building. I have had the opportunity to talk to several individuals involved with or interested in the building. Northwest Natural Gas Company officers, City of Portland officials, and others with specific areas of knowledge; all have greatly helped me with this project. It has been an easy task to get people to talk about this building, their views are strong ones, although many times contradictory. Some want it preserved and see successful possibilities for its future, some see nothing but a problem, and others just wonder why I'm interested in this sort of thing. They all have been happy to voice an opinion and I have been happy to receive a good variety of viewpoints.

Program possibilities have covered a wide spectrum, from artist's workshops to library and bank branches and many others detailed in a previous section of this document. I believe that the chosen program, the Willamette Industrial History Museum, could be a successful use of the building and site, and certainly a better alternative than allowing it to further deteriorate from disuse or abuse. Its ultimate success would, of course, depend in a large part on other developments, what happens to adjoining properties, future zoning in the area, and even as yet unidentified concerns.



UNIVERSITY OF WISCONSIN-MADISON

Research Conclusions

Research Summary

The following is a summary of the research conducted on the project during the last year. The purpose of this research was to determine the extent to which the project had been completed and to identify the areas in which further research was needed. The research was conducted in a systematic and organized manner, and the results are presented in the following sections. The first section discusses the overall progress of the project, and the second section discusses the specific research findings. The third section discusses the implications of the findings and the need for further research.

The first section of the report discusses the overall progress of the project. It is noted that the project has been completed to a significant extent, and that the majority of the research objectives have been met. However, there are still several areas in which further research is needed. The second section of the report discusses the specific research findings. It is noted that the research has shown that the project has been completed to a significant extent, and that the majority of the research objectives have been met. However, there are still several areas in which further research is needed. The third section of the report discusses the implications of the findings and the need for further research.

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Willamette Industrial History Museum

Proposed Project

Proposal Statement

The Portland Gas & Coke Building has played an important role in Portland's industrial past. It was built because of rapid population growth and increased demand on the city's gas supply. It was built as a statement in support of corporate and civic architecture and a declaration that Portland's future growth and prosperity would be assured. Now, eighty-five years later, the building has played out its original role and is today the last remaining building of Portland's only gas manufacturing plant.

It is the proposal of this research and design project to adapt the building to be used as the Willamette Industrial History Museum. The building, its site, and surroundings would all be parts of the exhibits on display. The site includes access to the Willamette River and would be used to accommodate access to a new pier and boats offering tours of Portland's present river-side industrial sites.

Parking areas would be built between the building and the Columbia River Highway to accommodate visitors to the museum as well as tourboat patrons. Because of the nature of the site, access will be primarily by car or bus so little attention will be paid to pedestrian access to the site from the highway. Many large artifacts that could not fit inside the building could be displayed in various areas around the site. The area between the museum building and boat pier will be a pedestrian friendly environment. There is a gentle slope down toward the river, but the bank remains high enough for direct access to the boat pier.

Upon entering the museum, the visitor will encounter a reception area to one side and the museum gift and book shop to the other. Small scale exhibits ahead will guide them to the rear wing which is a dramatic 3200 square foot, column-free space. This is by far the largest space in the building and will hold the centerpiece exhibit, a large scale model of Portland's 1905 Lewis and Clark Exposition. It was this exposition that brought Portland to the attention of the rest of the country and spurred the growth of industry in the region. The original site of the exposition was only a couple miles to the south and was the real beginning of the Northwest Portland industrial expansion that began at the close of the fair.

The second and third floors of the building will be primarily exhibit space. The existing stairs and a new elevator will provide access to these floors as well as the basement. The basement will become mostly staff related spaces; offices, workrooms, storage, kitchen and lounge. The building's main mechanical equipment will also be in the basement. The basement has two existing direct entrances which will accommodate most staff and maintenance needs.



Wisconsin Industrial History Museum

Proposed Project

Proposed Statement

The Portland One & Two building has played an important role in Portland's industrial past. It was built because of rapid population growth and increased demand on the city's gas supply. It was built as a statement in support of expansion and civic improvement and a demonstration that Portland's future growth and prosperity would be achieved through the building of new structures and not by neglecting the old. The building has played an important role in Portland's history and is a valuable part of the city's industrial heritage.

It is the purpose of this statement and design project to adapt the building to be used as the Wisconsin Industrial History Museum. The building is in good condition and would be an excellent addition to the museum's collection. The site is located in an area of the city that is undergoing a revitalization and is a prime location for a new museum. The building's location is ideal for a museum that would be a major attraction for the city.

Portland is a city with a rich history and a vibrant future. The building and the site are a valuable part of the city's heritage and are well suited for a museum that would be a major attraction for the city. The building's location is ideal for a museum that would be a major attraction for the city. The building's location is ideal for a museum that would be a major attraction for the city.

It is the purpose of this statement and design project to adapt the building to be used as the Wisconsin Industrial History Museum. The building is in good condition and would be an excellent addition to the museum's collection. The site is located in an area of the city that is undergoing a revitalization and is a prime location for a new museum. The building's location is ideal for a museum that would be a major attraction for the city.

The project and this form of the building will be primarily historic preservation. The building will be restored to its original condition and will be used as a museum. The project will be a major attraction for the city and will be a valuable part of the city's heritage.



Willamette Industrial History Museum

Proposed Project

Program and Site Data

Site Data: (all square footages are approximately)

| | |
|---------------------------------------|------------|
| • total site (see site plan, page 33) | 232,000 SF |
| • square footage in river | 26,000 SF |
| • river frontage | 240 feet |
| • highway frontage | 440 feet |

Building Data:

| | |
|---|----------|
| First Floor (see first floor plan, page 34) | |
| • Main Building: | 2500 SF |
| • Rear Wing: | 3200 SF |
| Second Floor (see second floor plan, page 35) | |
| • Main Building: | 2500 SF |
| Third Floor (see third floor plan, page 36) | |
| • Main Building: | 2500 SF |
| Basement (see basement plan, page 37) | |
| • Main Building: | 2500 SF |
| • Rear Wing: | 700 SF |
| Total building square footage: | 13900 SF |

Proposed Program:

| | | |
|---------------|--------------------------|-----------|
| First Floor: | Reception Area | 250 SF |
| | Book & Gift Shop | 500 SF |
| | Restrooms | 400 SF |
| | Exhibit and Display Area | 4000 SF |
| Second Floor: | Exhibit and Display Area | 2500 SF |
| Third Floor: | Exhibit and Display Area | 2500 SF |
| Basement: | Staff Offices | 500 SF |
| | Kitchen & Lounge | 300 SF |
| | Workroom & Storage | 700 SF |
| | Restrooms | 200 SF |
| | Mechanical Area | 1600 SF |
| Site: | Parking (50 spaces) | 15,000 SF |
| | Outdoor Exhibit Area | 15,000 SF |
| | Pier & Support Buildings | 15,000 SF |



Williams Institute Policy Manual

Proposed Project

Program and Site Data

| | |
|------------|---|
| 122,000 SF | Site Data (all square footages are approximate) |
| 20,000 SF | * total site (see site plan, page 22) |
| 242,000 SF | * square footage to cover |
| 480,000 SF | * total footage |
| | * proposed coverage |

Building Notes

| | |
|--------------|---|
| 122,000 SF | First floor (see first floor plan, page 24) |
| 122,000 SF | * Main Building |
| | * West Wing |
| 120,000 SF | Second floor (see second floor plan, page 25) |
| | * Main Building |
| 120,000 SF | Third floor (see third floor plan, page 26) |
| | * Main Building |
| 120,000 SF | Basement (see basement plan, page 27) |
| | * Main Building |
| 100,000 SF | * West Wing |
| 1,000,000 SF | Total building square footage |

Proposed Program

| | |
|------------|-----------------------------|
| 120,000 SF | First floor |
| 120,000 SF | Classrooms |
| 120,000 SF | Office & Staff Work |
| 120,000 SF | Restrooms |
| 120,000 SF | Library and Computer Area |
| 120,000 SF | Administrative Offices Area |
| 120,000 SF | Student and Faculty Area |
| 120,000 SF | Staff Offices |
| 120,000 SF | Student & Faculty |
| 120,000 SF | Workshop & Storage |
| 120,000 SF | Restrooms |
| 120,000 SF | Administrative Area |
| 120,000 SF | Storage (20 spaces) |
| 120,000 SF | Outdoor Faculty Area |
| 120,000 SF | Site & Student Landscaping |





Willamette Industrial History Museum

Proposed Project

Project Cost Estimate

(See Appendix H for a detailed project costs spreadsheet)

| Means No. | System Description | Cost |
|--|-----------------------------------|-----------|
| 0010 | Demolition (Existing Interior) | 27,800 |
| 0100 | Foundations (Stair Addition) | 336 |
| 0200 | Substructure (Stairs and Ramps) | 2,484 |
| 0300 | Superstructure (Stair Addition) | 23,240 |
| 0400 | Exterior Closure (Existing Bldg.) | 295,200 |
| 0500 | Roofing (Existing Building) | 200,120 |
| 0600 | Interior Construction | 141,850 |
| 0700 | Transportation | 48,000 |
| 0800 | Mechanical | 162,750 |
| 0900 | Electrical | 132,050 |
| 1000 | General Conditions | 56,000 |
| 1100 | Equipment | 62,550 |
| 1200 | Sitework | 133,100 |
| 3000 | Contractor Fee, Bonds, Insurance | 115,693 |
| 4000 | Escalation Contingency | 89,983 |
| 5000 | Design & Estimating Contingency | 192,822 |
| Total Estimated Construction Cost | | 1,285,480 |
| Total Estimated Cost Plus Fees And Contingencies | | 1,683,978 |



University of California, Berkeley

Project Budget

Project Description

(See Appendix B for a detailed project cost breakdown)

| Account No. | Project Description | Cost |
|-------------|---|------------------|
| 0010 | Construction (Building Materials) | 27,800 |
| 0100 | Construction (Site Addition) | 300 |
| 0200 | Construction (Site and Road) | 2,884 |
| 0300 | Construction (Site Addition) | 22,340 |
| 0400 | Construction (Building High) | 192,200 |
| 0500 | Construction (Building Medium) | 200,120 |
| 0600 | Construction | 141,830 |
| 0700 | Transportation | 42,000 |
| 0800 | Information | 182,730 |
| 0900 | Research | 132,520 |
| 1000 | General Services | 50,000 |
| 1100 | Equipment | 62,250 |
| 1200 | Stipends | 132,100 |
| 1300 | Contractor Fee, Bond, Insurance | 112,602 |
| 1400 | Construction Contingency | 80,982 |
| 1500 | Design & Planning Contingency | 192,822 |
| | Total Estimated Construction Cost | 1,282,980 |
| | Total Estimated Construction and Contingency | 1,882,928 |





Willamette Industrial History Museum

Conclusion

The Portland Gas & Coke Building was an important building of its time and remains a visible reminder of Portland's industrial history. The Willamette Industrial History Museum will preserve, protect, and adapt this building into a new and useful purpose. Portland's founding, its location, and continued existence is wholly based on its early years and the industries that located here. There are few remaining signs of those early industries; most have been removed to make way for new buildings, roads, or simply removed because they were no longer needed in their original purposes. The preservation of this building is important, and its transformation into an industrial museum is especially fitting. It is a matching of building and use seldom seen in preservation.

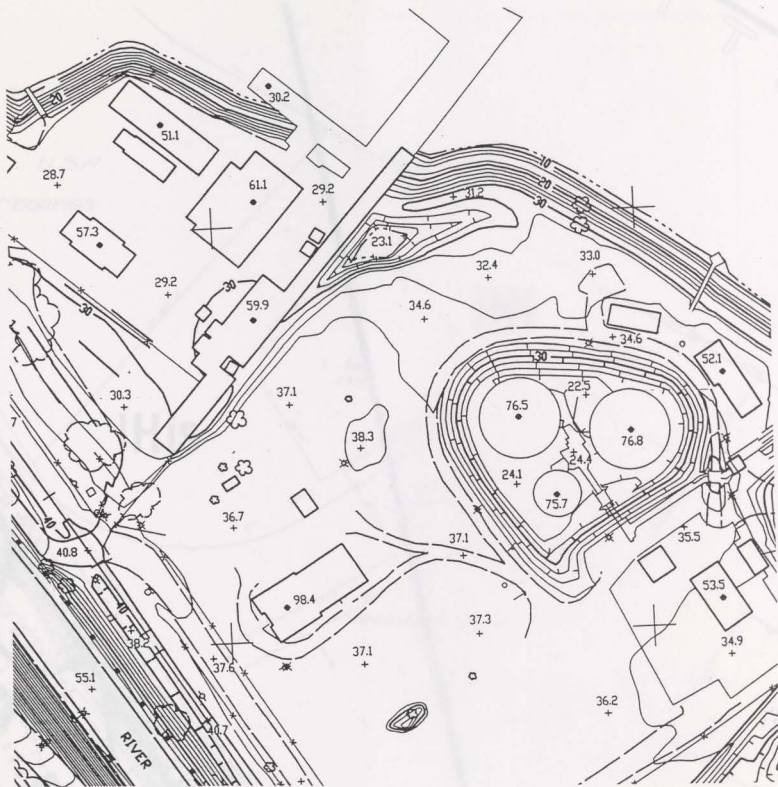
The inclusion of Portland's 1905 Lewis and Clark Exposition as the museum's centerpiece exhibit is also appropriate. Nothing remains of the original exposition site with the exception of a small historical marker. This exposition was a milestone in Portland's history, yet little has been done to commemorate it. It was the city's invitation to the rest of the country, and the world, to come see what Portland had to offer. It worked even better than anyone had hoped; investment and growth soared after the exposition. With the one hundredth anniversary of the Exposition approaching, it is even more appropriate to commemorate it with a special place in the program of this new museum.



Willamette Industrial History Museum

Appendix A

Site Topographic Map

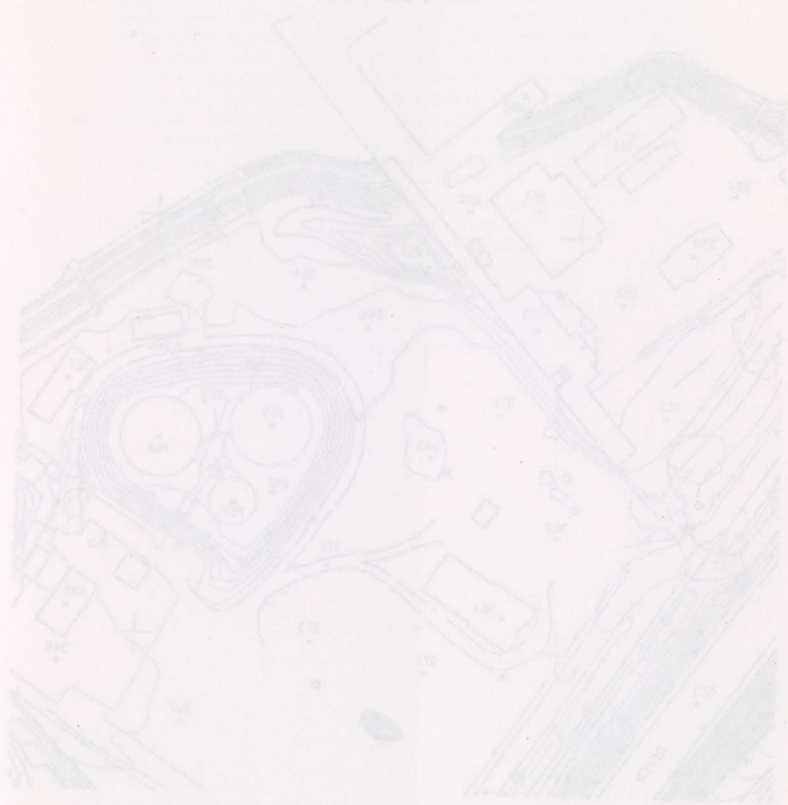




NATIONAL GEOGRAPHIC SOCIETY

A NATIONAL GEOGRAPHIC MAGAZINE

1908



Architectural Drawing

Architectural Drawing





University of Toronto

Appendix B

Site Plan of the University of Toronto



Site Plan of the University of Toronto

Site Plan of the University of Toronto

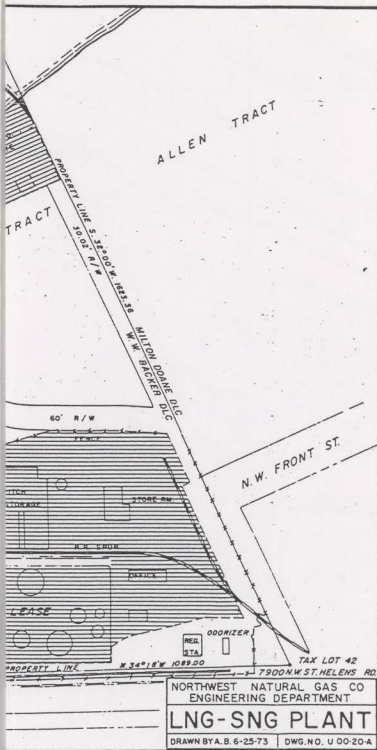




Industrial History Museum

Appendix C

Site Plan





Willamette Industrial History Museum

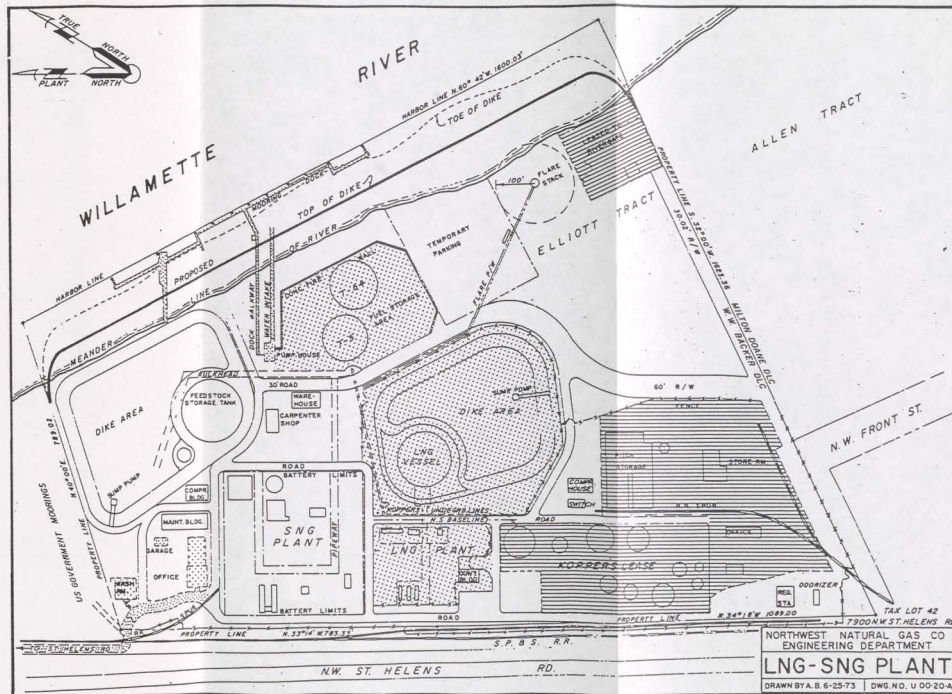
Appendix C



Willamette Industrial History Museum

Appendix C

Site Plan



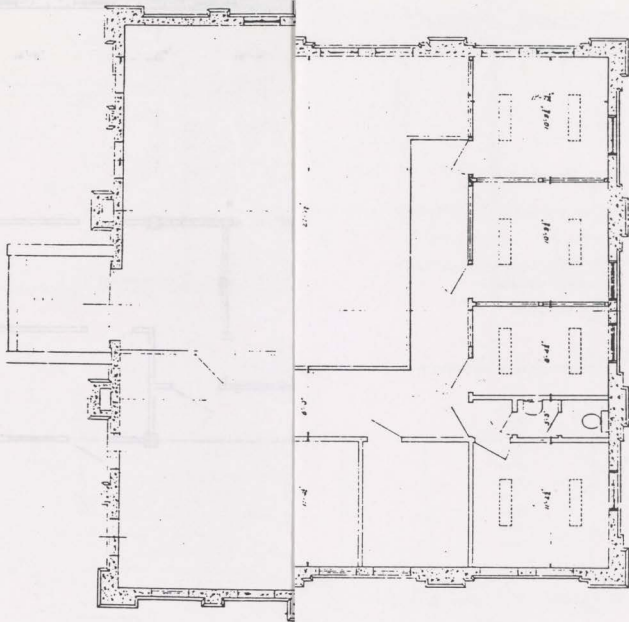






Industrial History Museum

Floor Plan





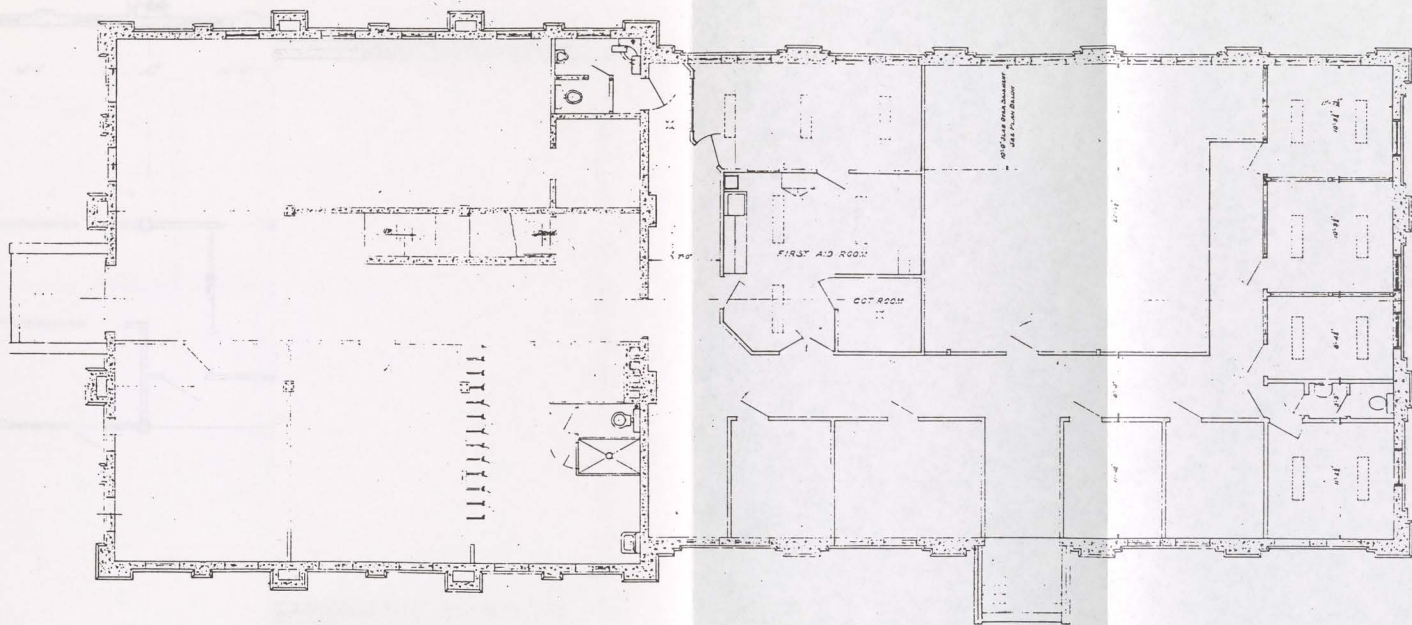
Willamette Industrial History Museum

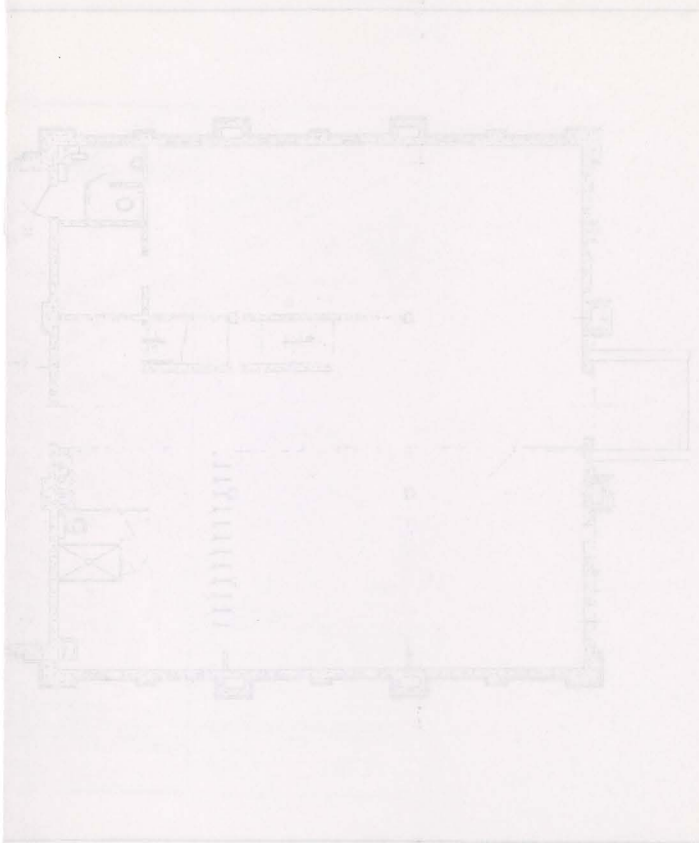
First Floor Plan

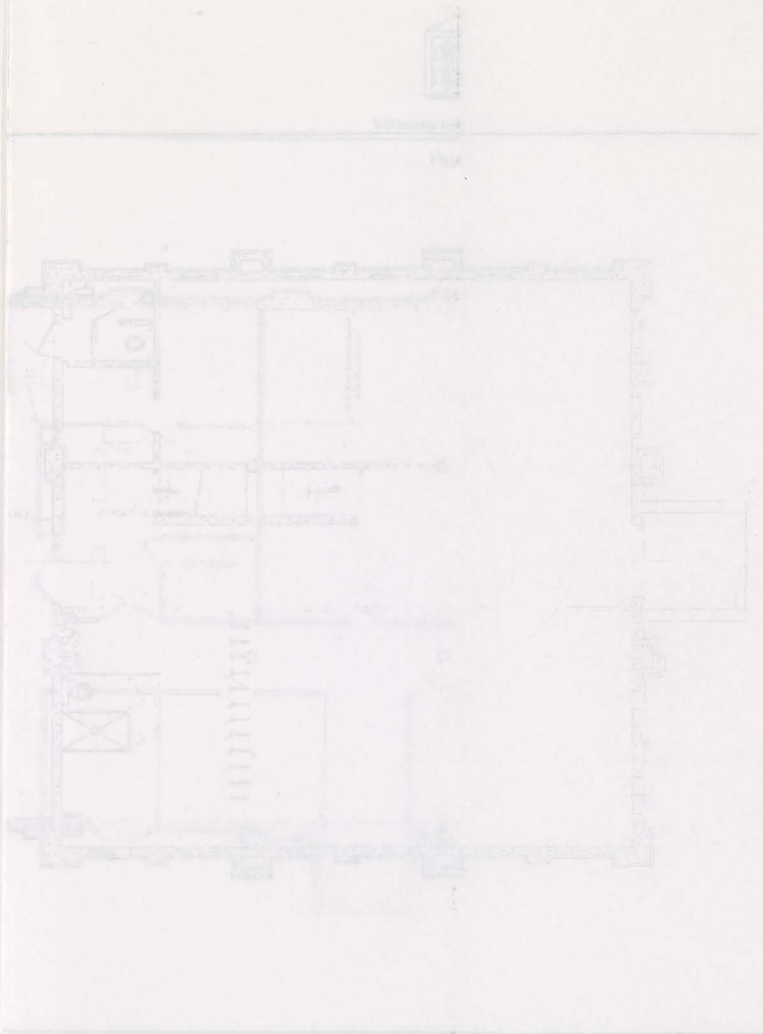


Willamette Industrial History Museum

First Floor Plan



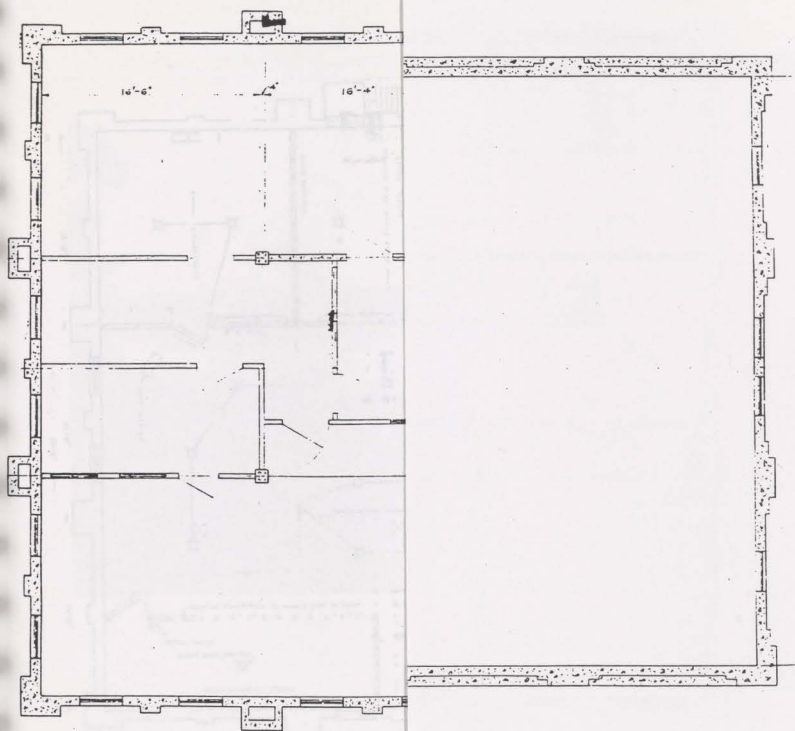






Industrial History Museum

1st Floor Plan



Final Summary, Page 24

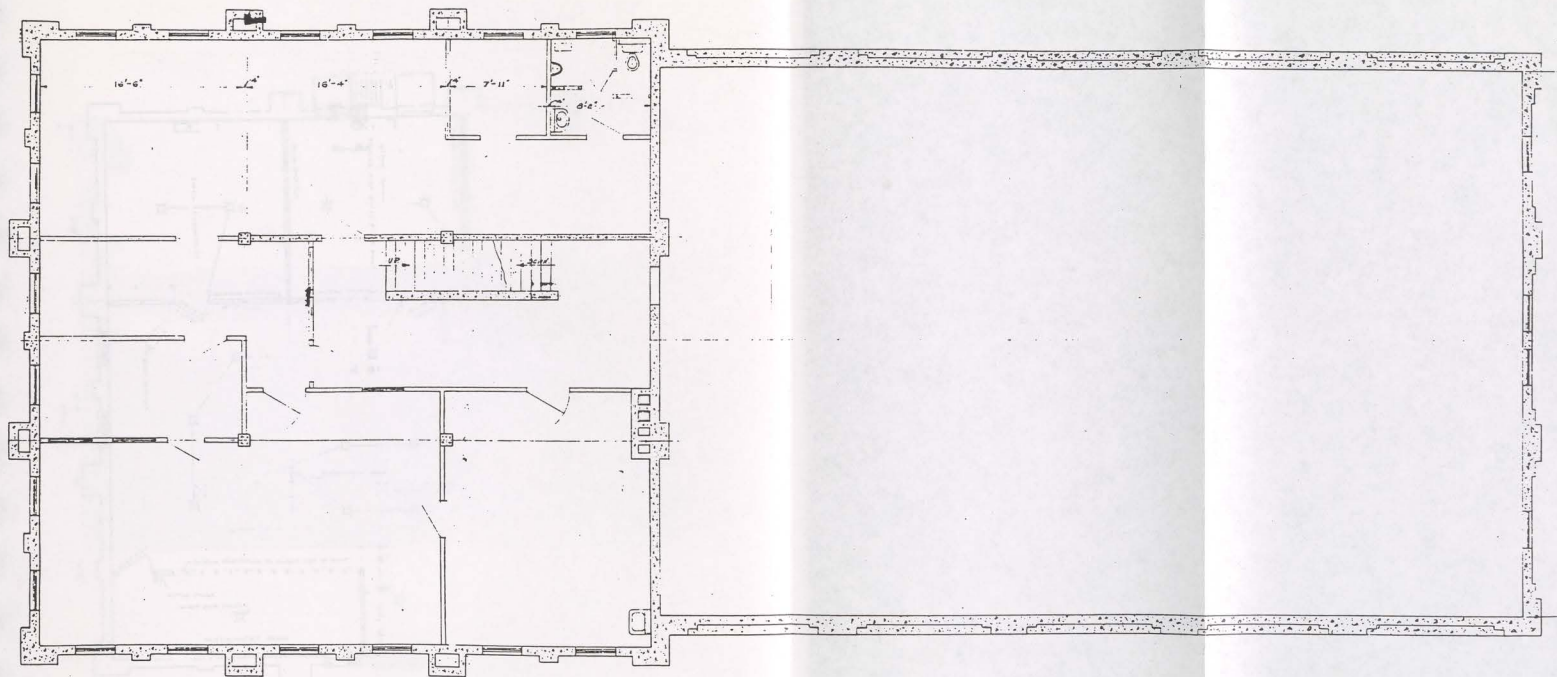


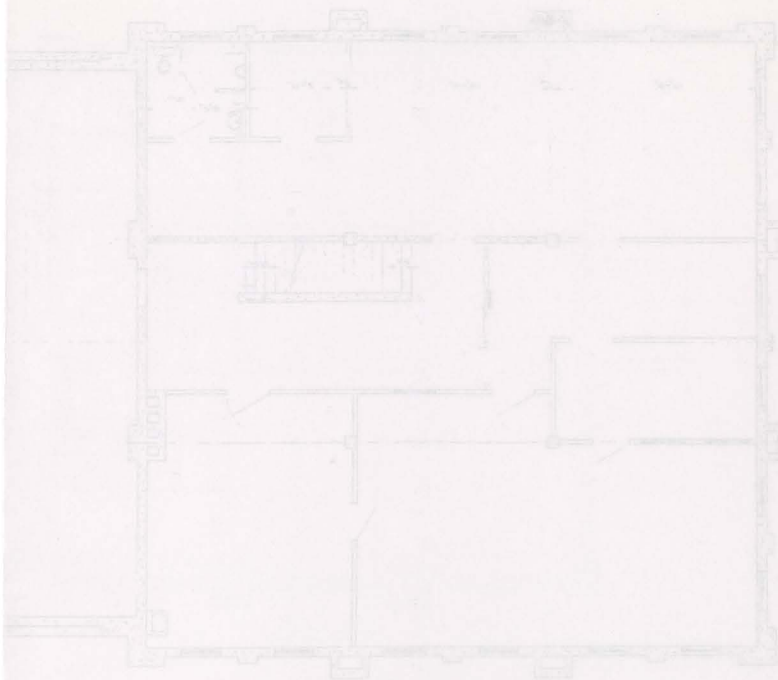
1913 Floor Plan



Willamette Industrial History Museum

Second Floor Plan

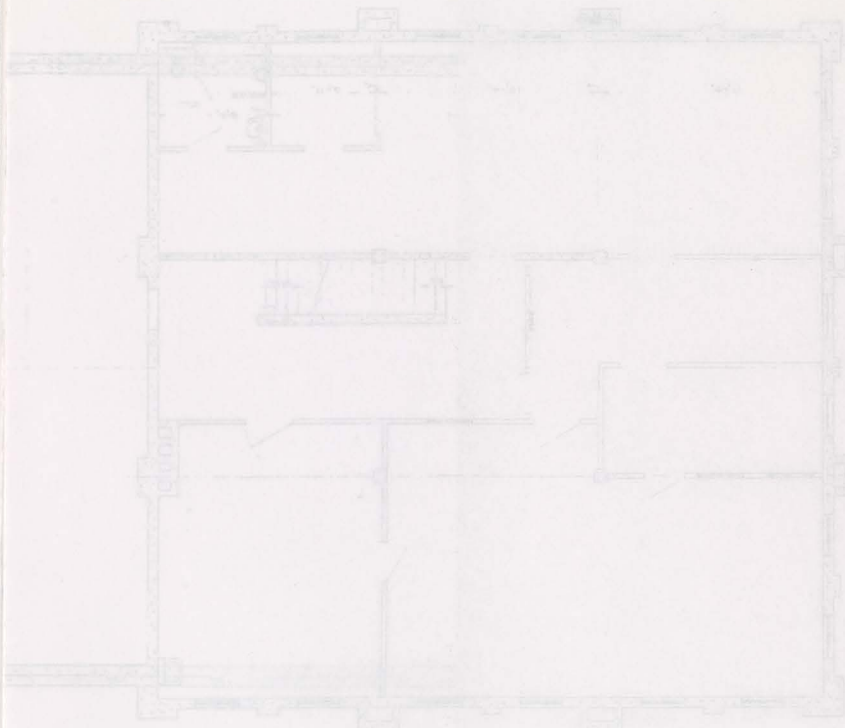






WINDING UP

Sketch



Architectural Drawing

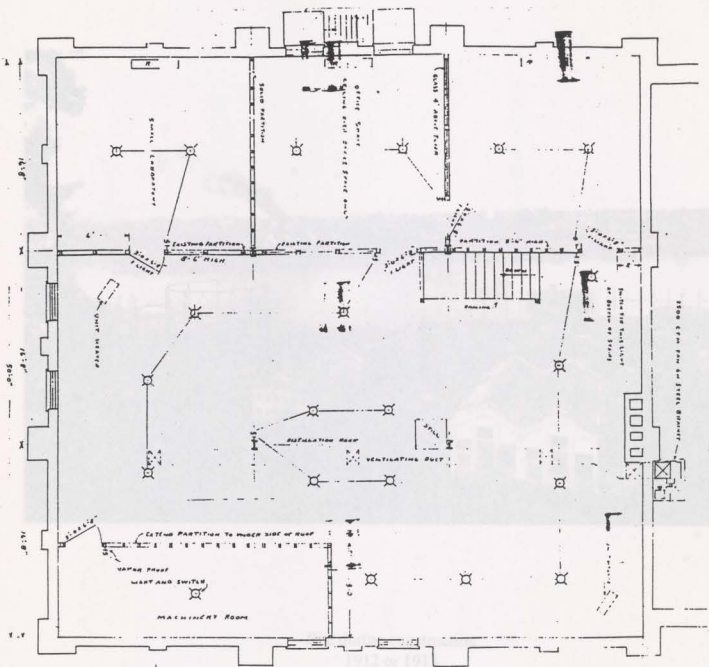




Willamette Industrial History Museum

Third Floor Plan

Historic Building Photographs





WISCONSIN TECHNICAL LIBRARY BUILDING

Third Floor Plan



Third Floor Plan, 1938

Architect: Raymond M. Johnson





Willamette Industrial History Museum

Appendix D

Historic Building Photographs



Site during construction
1912 or 1913



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Willamette Industrial History Museum

Historic Building Photographs



Site after completion of construction
1913 or 1914



UNIVERSITY OF TORONTO LIBRARY

130 St. George Street, Toronto, Ontario M5S 1A5

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Willamette Industrial History Museum

Historic Building Photographs



Front of building during construction
1912 or 1913



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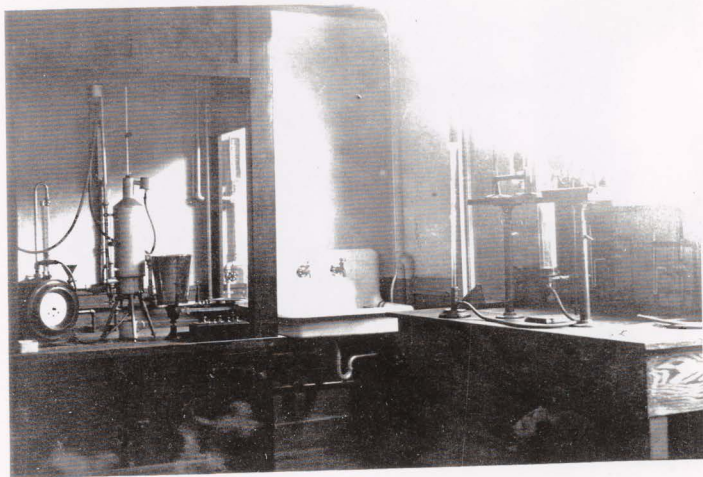
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Willamette Industrial History Museum

Historic Building Photographs



Interior - Laboratory
Second Floor



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Willamette Industrial History Museum

Historic Building Photographs



Interior - Laboratory



UNIVERSITY OF CALIFORNIA

LIBRARY



UNIVERSITY OF CALIFORNIA

UNIVERSITY OF CALIFORNIA

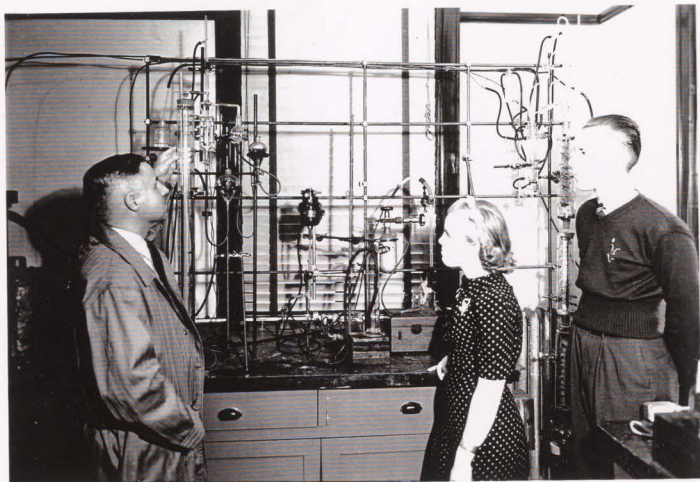
UNIVERSITY OF CALIFORNIA





Willamette Industrial History Museum

Historic Building Photographs



Interior - Laboratory



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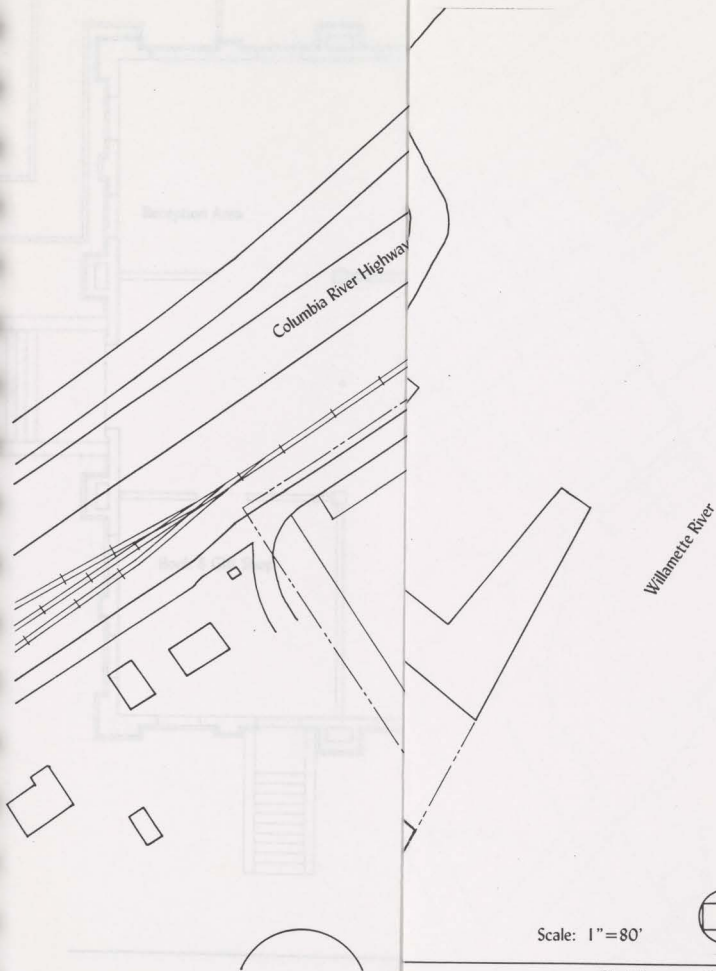
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pendix E

Site Plan

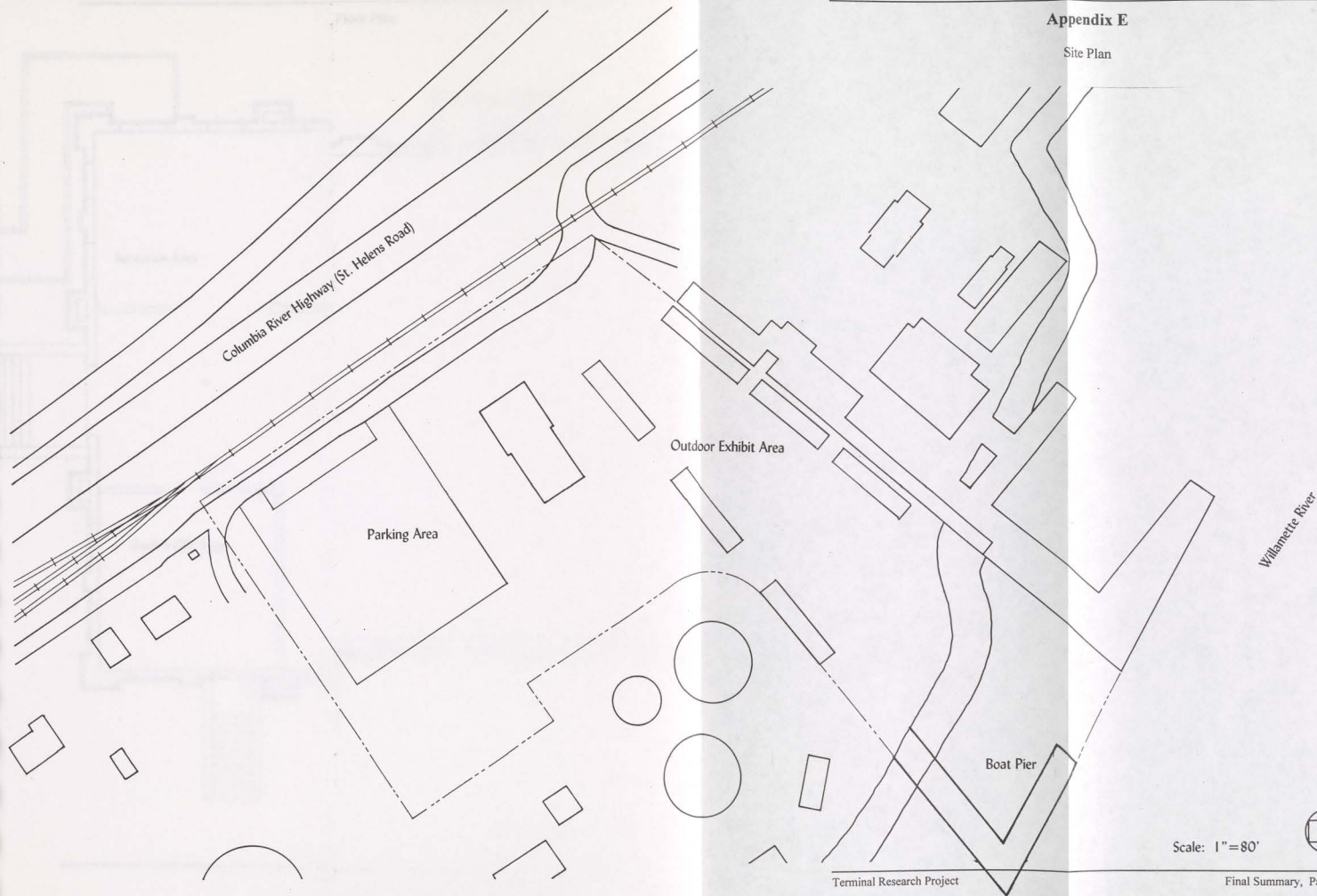


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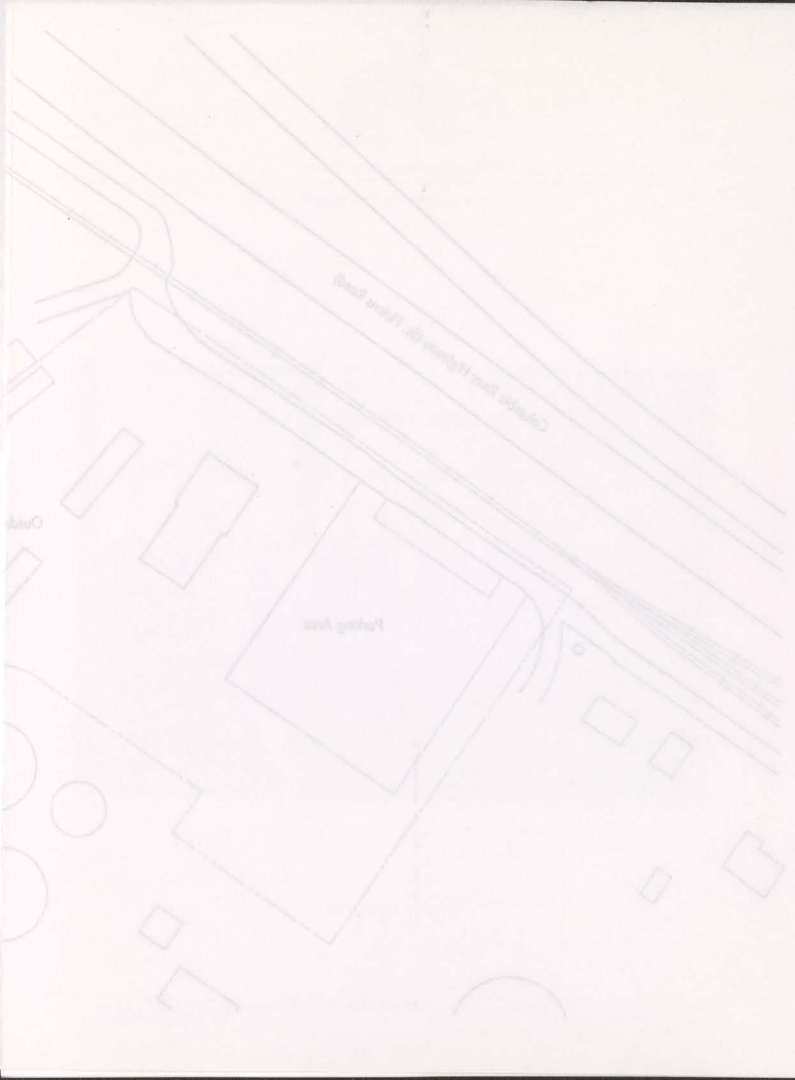
Appendix E

Site Plan



Scale: 1"=80'





W. 1000 ft

Ap

1

2

County State Highway (Main Road)

1000 ft

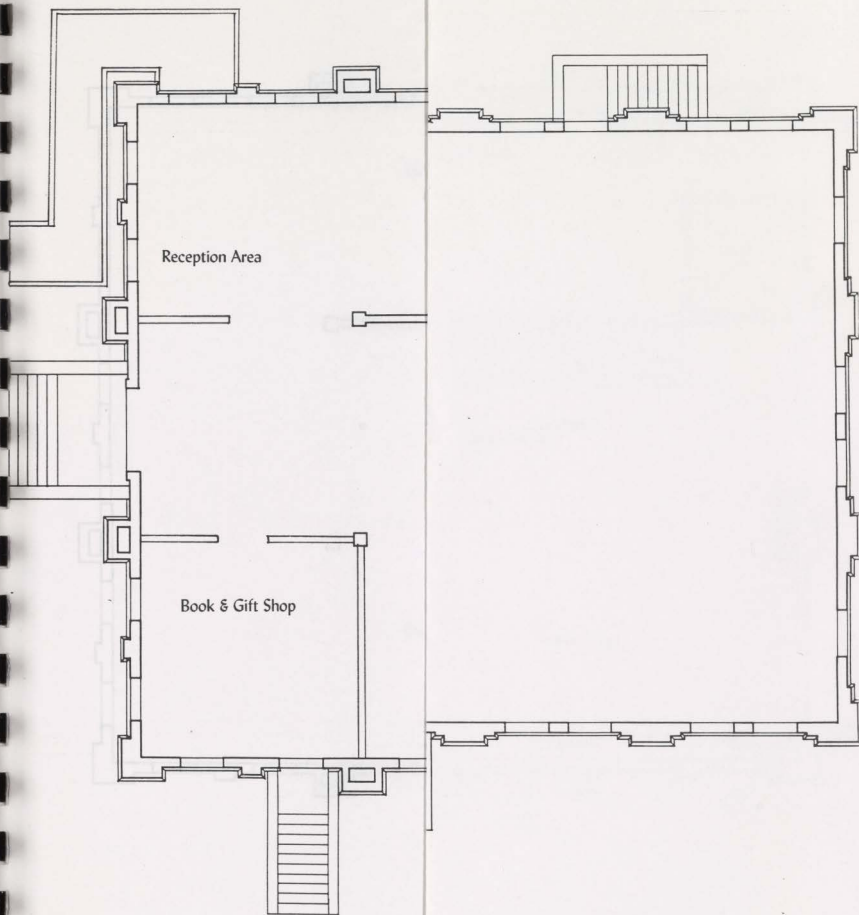
1000 ft

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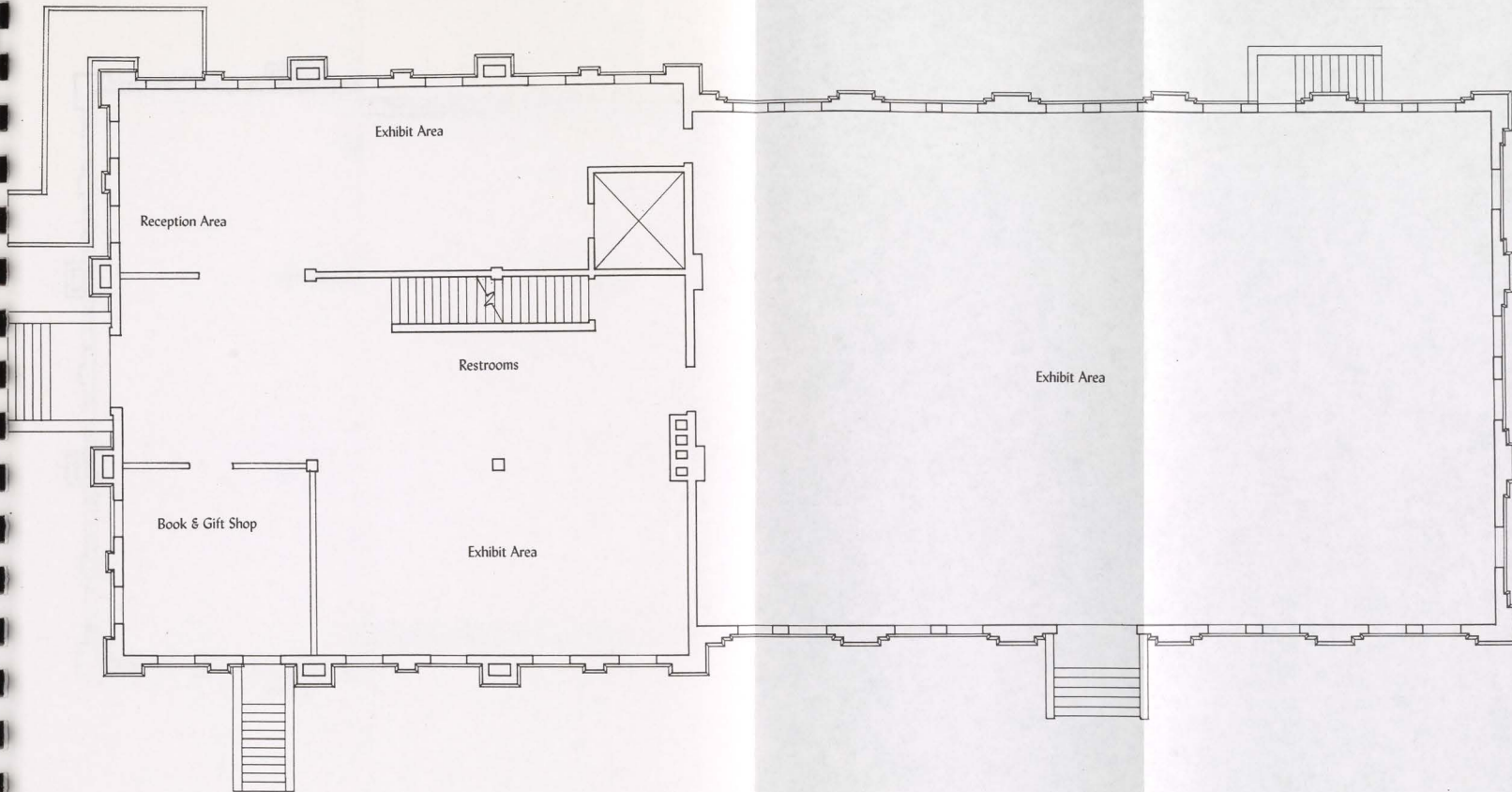


Floor Plan



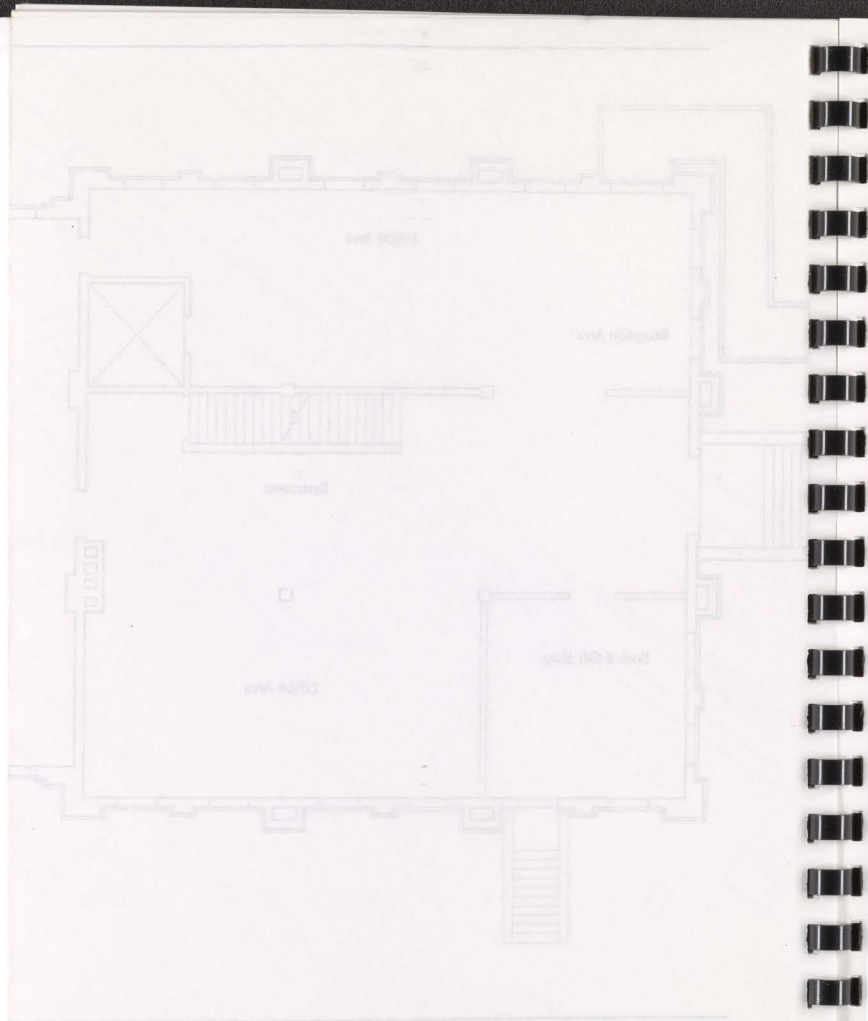
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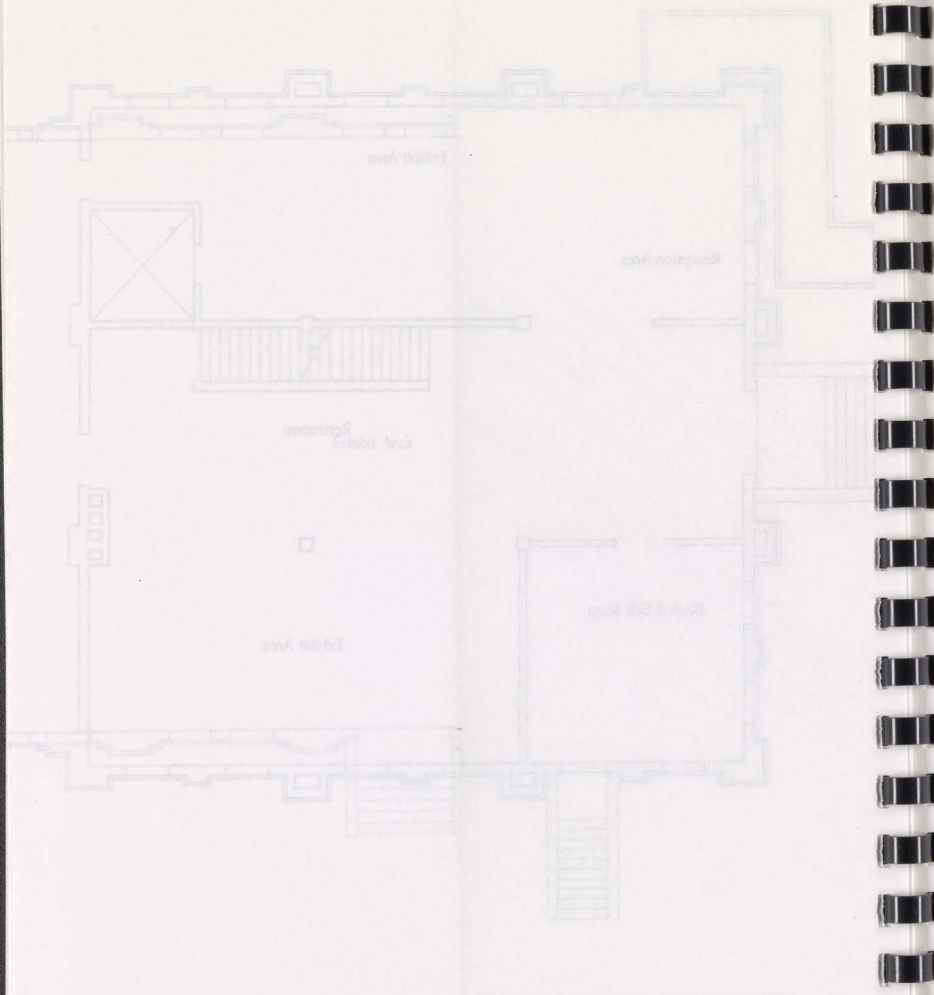
First Floor Plan



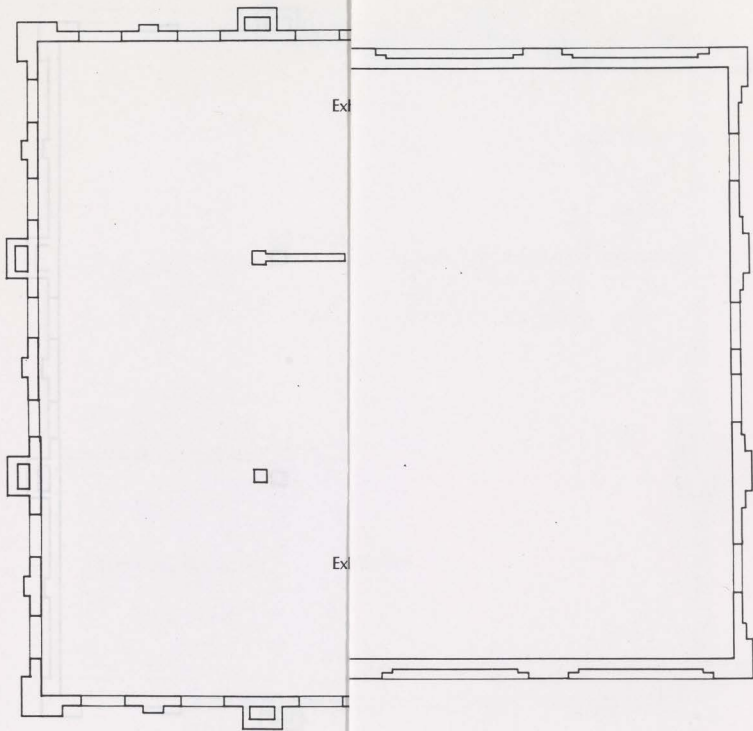
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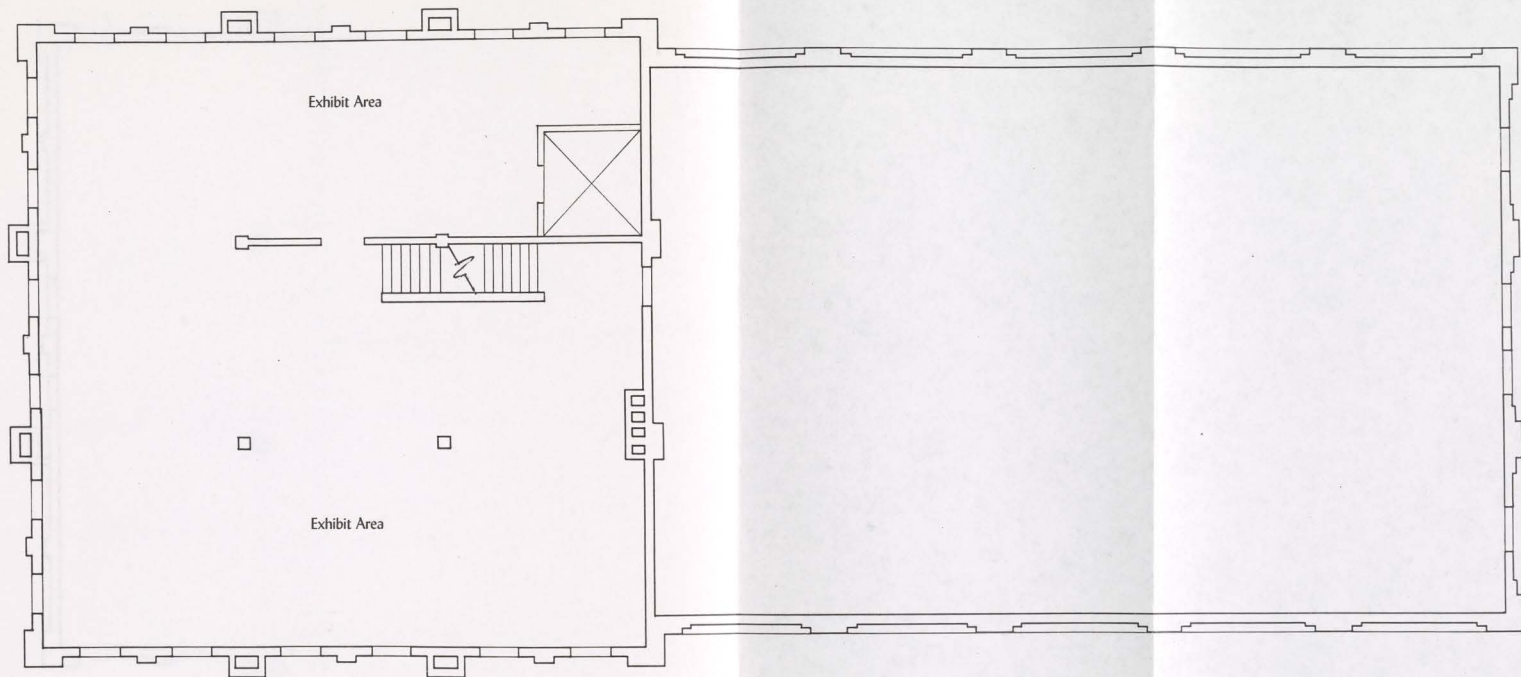
1st Floor Plan



Ex

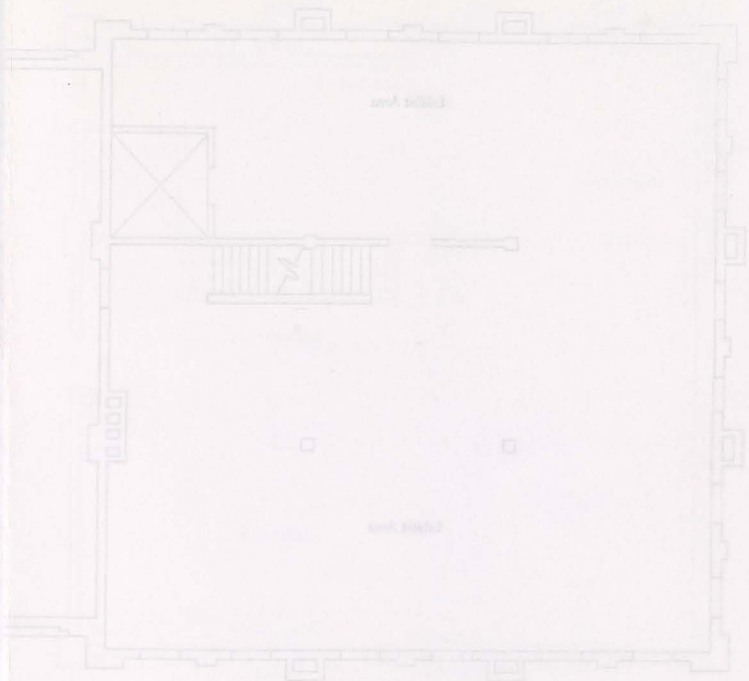
Ex

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Williamson Hall

Second



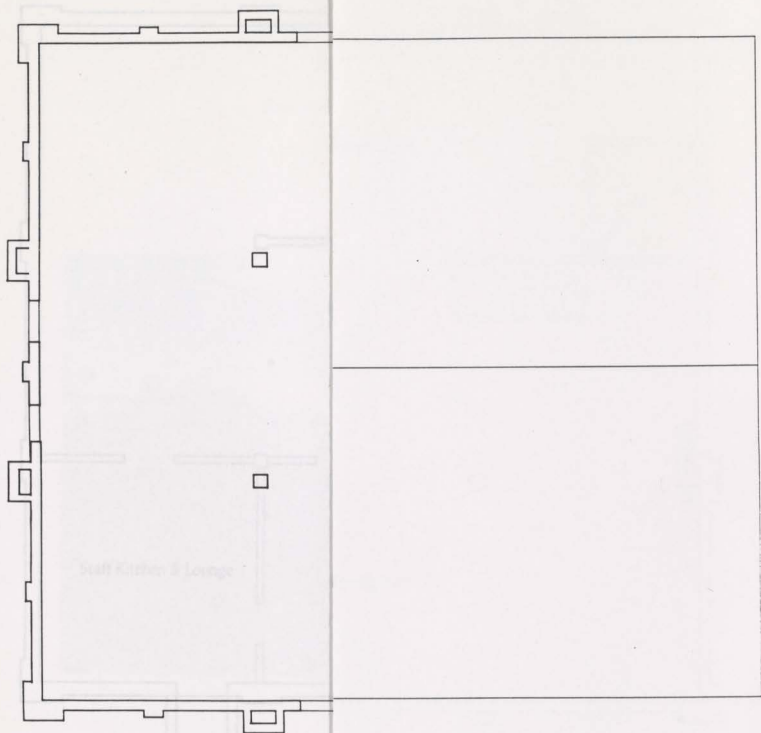
Room 201

Room 202

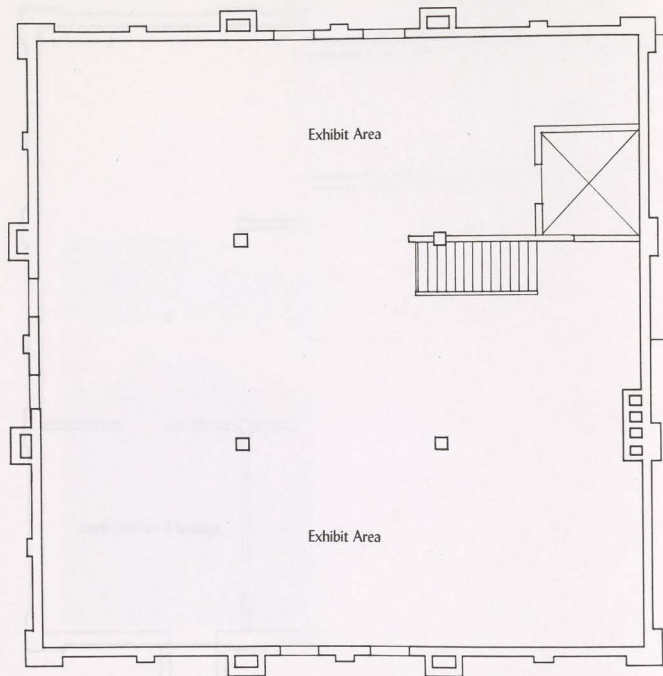
Architectural Record



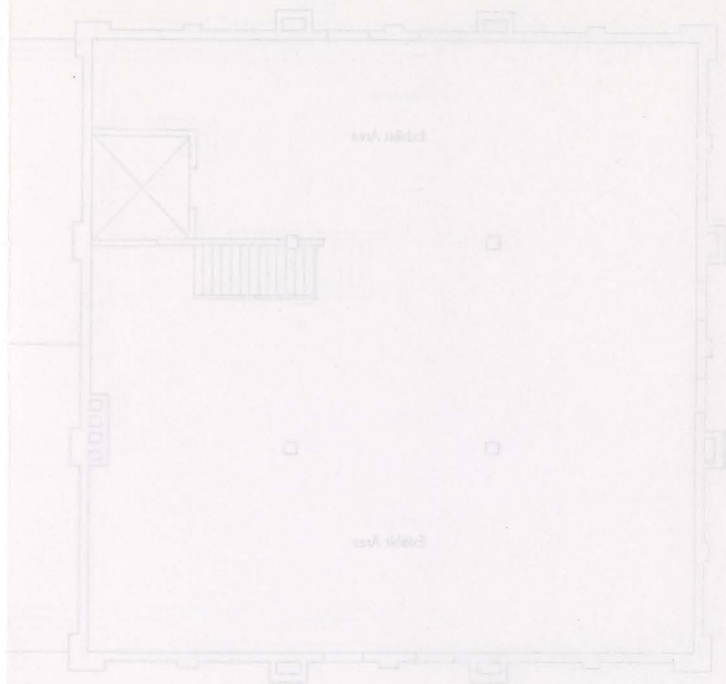
1 Floor Plan

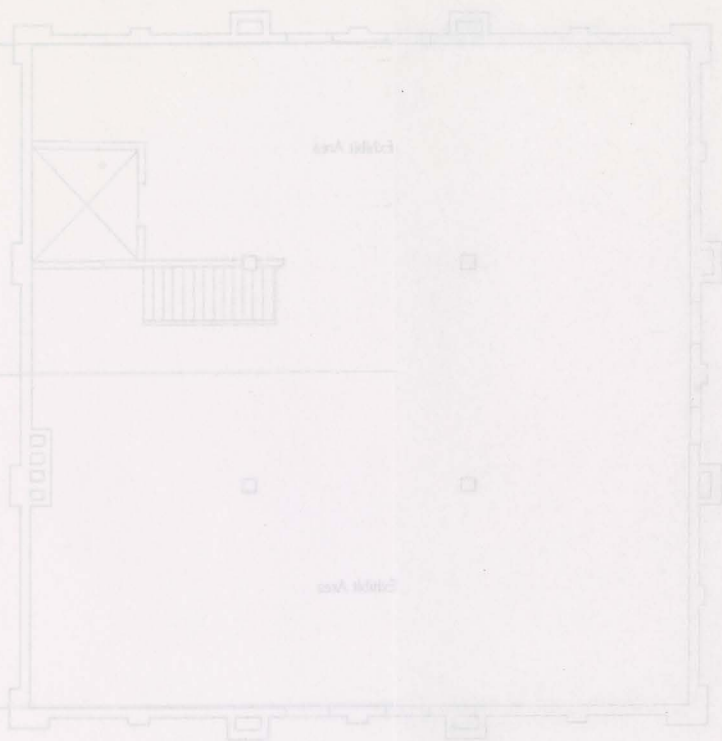


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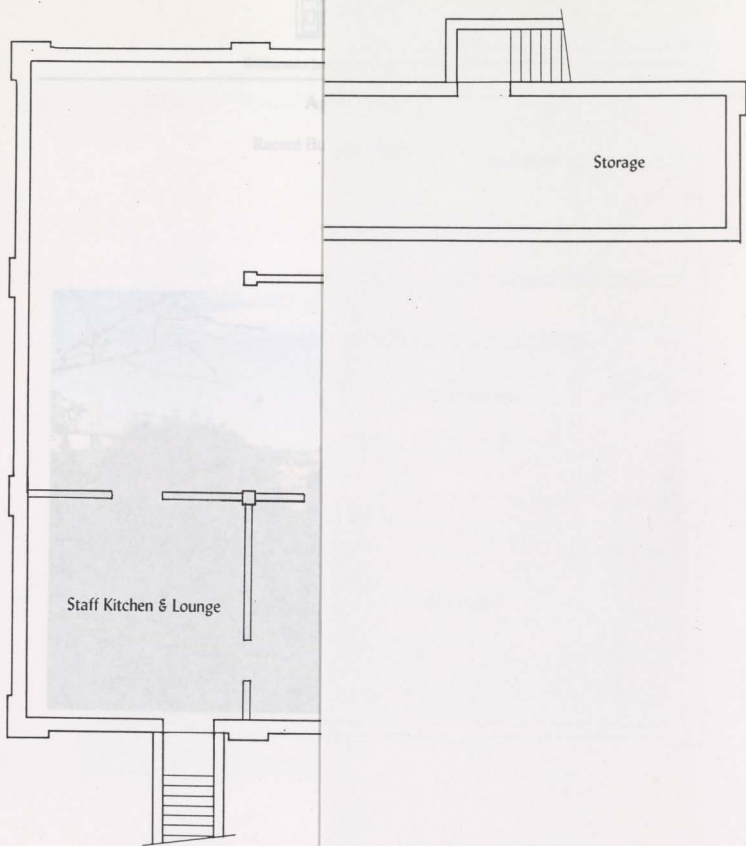


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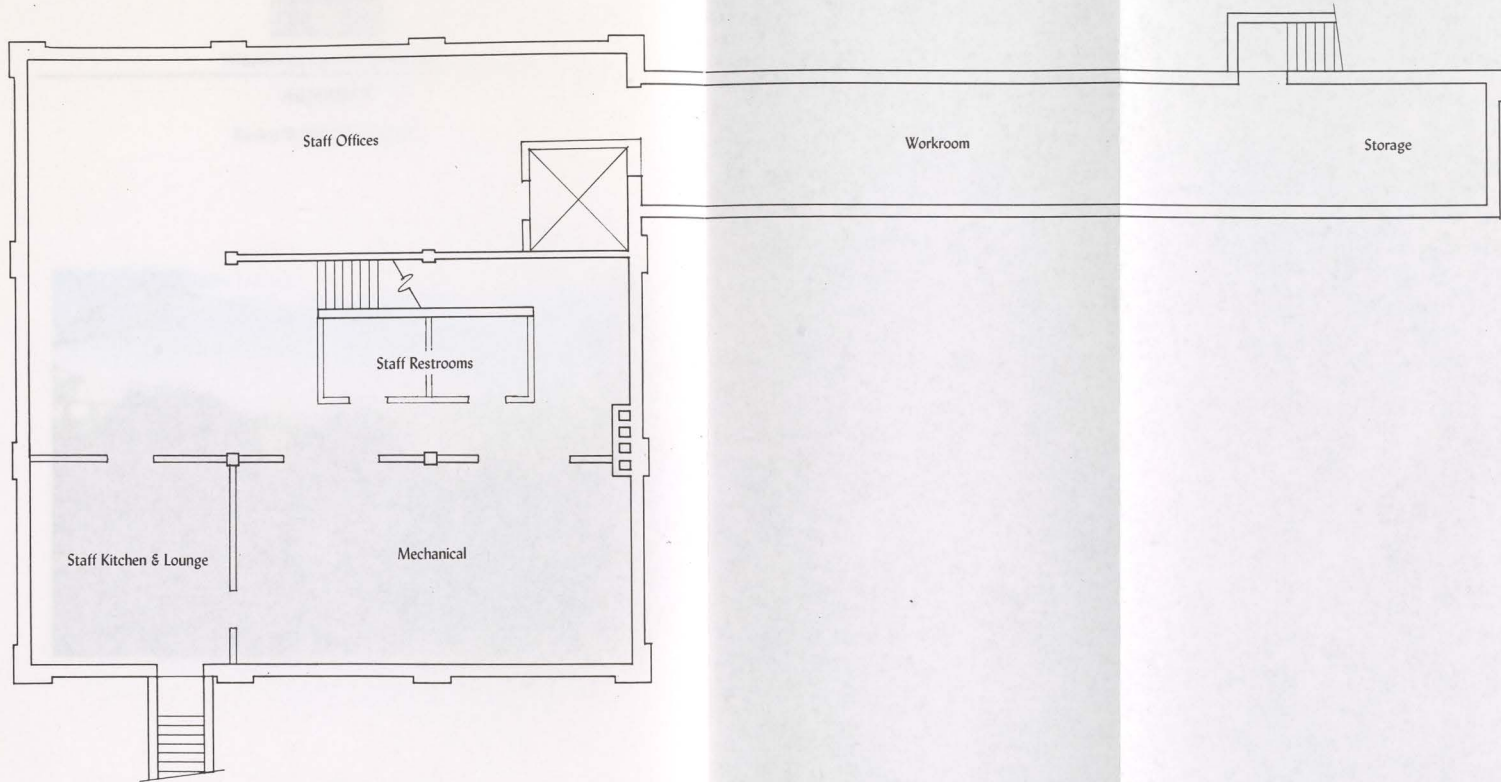




ement Plan

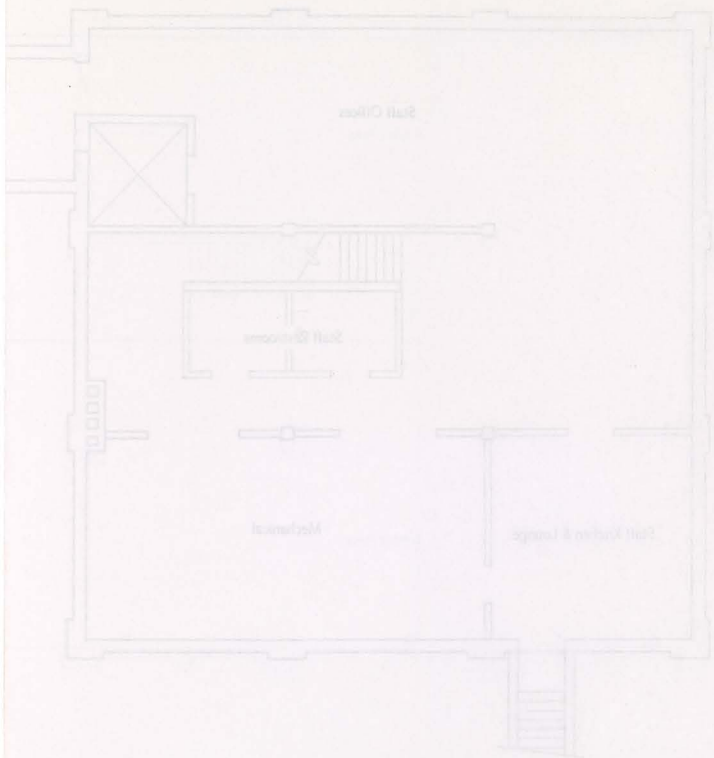


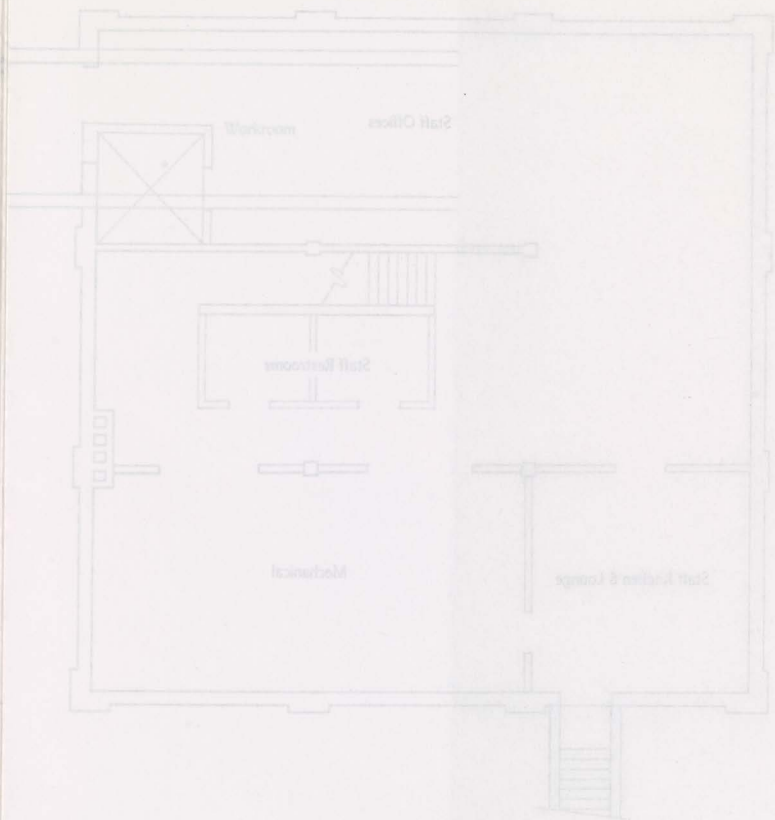
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Willamette Industrial History Museum

Appendix F

Recent Building Photographs



View from across highway



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Willamette Industrial History Museum

Recent Building Photographs



Front of building



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Willamette Industrial History Museum

Recent Building Photographs



North side of building



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Willamette Industrial History Museum

Recent Building Photographs



Entry Hallway - First Floor



Detail at Interior of Front Door

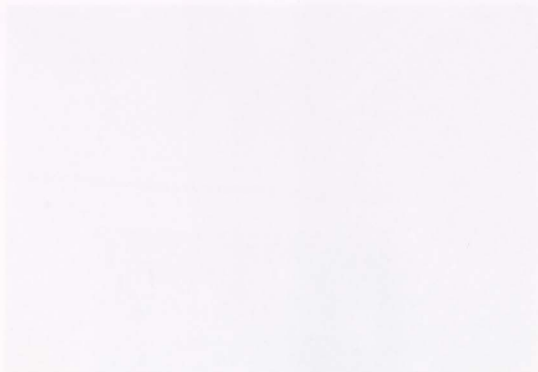


UNIVERSITY OF CALIFORNIA

LIBRARY



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UNIVERSITY OF CALIFORNIA

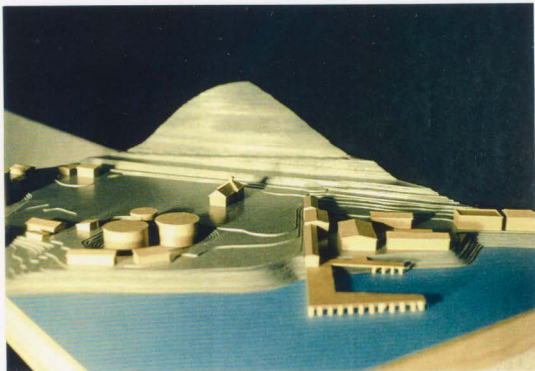
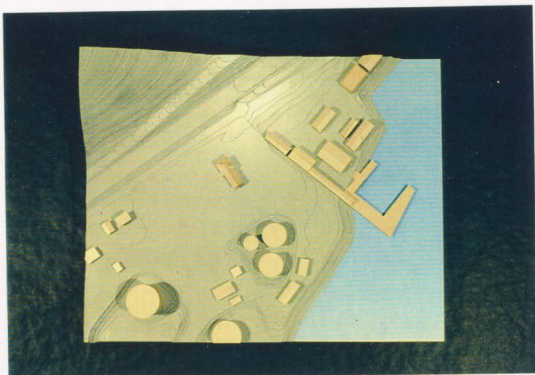




Willamette Industrial History Museum

Appendix G

Site Model Photos





UNIVERSITY OF TORONTO LIBRARY

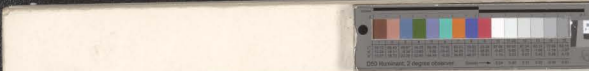
130 St. George Street

Toronto, Ontario M5S 1A5



UNIVERSITY OF TORONTO LIBRARY

130 St. George Street



Project Costs Estimate

Willamette Industrial History Museum

Arthur J. Cole

| CODE NUMBER | SYSTEM DESCRIPTION | MEASURE | UNIT | UNIT COST | COST | TOTAL COST | % TOTAL | \$ / GSF |
|-------------|--|---------|--------------|-----------|------------|------------|---------|----------|
| 0010 | DEMOLITION (Existing Interior) | | | | | 27,800.00 | 1.7% | 2.00 |
| 0011 | Selective Demolition | 13,900 | GSF Building | 2.00 | 27,800.00 | | | |
| 0100 | FOUNDATIONS (Stair Addition) | | | | | 336.00 | 0.0% | 0.02 |
| 0111 | Wall Foundations | 48 | LF Fnd. | 7.00 | 336.00 | | | |
| 0200 | SUBSTRUCTURE | | | | | 2,484.00 | 0.1% | 0.18 |
| 0210 | Slab on Grade (Stair Addition) | 216 | SF Slab | 1.50 | 324.00 | | | |
| 0215 | Entry Ramps | 360 | SF Ramp | 6.00 | 2,160.00 | | | |
| 0300 | SUPERSTRUCTURE (Stair Addition) | | | | | 23,240.00 | 1.4% | 1.67 |
| 0311 | Floor Construction | 144 | SF Floor | 4.50 | 648.00 | | | |
| 0321 | Roof Construction | 216 | SF Roof | 12.00 | 2,592.00 | | | |
| 0331 | Stair Construction | 4 | per Flight | 5,000.00 | 20,000.00 | | | |
| 0400 | EXTERIOR CLOSURE (Existing Bldg.) | | | | | 295,200.00 | 17.5% | 21.24 |
| 0411 | Exterior Wall Restoration & Insulation | 12,000 | SF Wall | 18.00 | 216,000.00 | | | |
| 0421 | Exterior Window Restoration | 1,200 | SF Glazing | 34.00 | 40,800.00 | | | |
| 0423 | Exterior Door Restoration | 800 | SF Door | 48.00 | 38,400.00 | | | |
| 0500 | ROOFING (Existing Building) | | | | | 200,120.00 | 11.9% | 14.40 |
| 0501 | Roof Coverings - Slate tile | 6,200 | SF Roof | 28.00 | 173,600.00 | | | |
| 0503 | Roof Insulation | 6,200 | SF Roof | 2.60 | 16,120.00 | | | |
| 0504 | Flashings and Trim | 520 | LF Roof Edge | 20.00 | 10,400.00 | | | |
| 0600 | INTERIOR CONSTRUCTION | | | | | 141,850.00 | 8.4% | 10.21 |
| 0611 | Fixed Partitions | 8,000 | SF Partition | 4.00 | 32,000.00 | | | |
| 0616 | Interior Doors and Frames | 600 | SF Door | 48.00 | 28,800.00 | | | |
| 0621 | Wall Finishes | 24,000 | SF Wall | 1.35 | 32,400.00 | | | |
| 0622 | Floor Finishes | 13,900 | SF Floor | 1.50 | 20,850.00 | | | |
| 0623 | Ceiling Finishes | 13,900 | SF Ceiling | 2.00 | 27,800.00 | | | |

Project Costs Estimate

Willamette Industrial History Museum

Arthur J. Cole

| CODE NUMBER | SYSTEM DESCRIPTION | MEASURE | UNIT | UNIT COST | COST | TOTAL COST | % TOTAL | \$ / GSF |
|-------------|--|---------|-----------------|-----------|------------|--------------|---------|----------|
| 0700 | TRANSPORTATION | | | | | 48,000.00 | 2.9% | 3.45 |
| 0710 | Elevator System | 4 | floor stops | 12,000.00 | 48,000.00 | | | |
| 0800 | MECHANICAL | | | | | 162,750.00 | 9.7% | 11.71 |
| 0810 | Plumbing | 18 | per fixture | 2,000.00 | 36,000.00 | | | |
| 0820 | HVAC | 40 | per ton cooling | 2,300.00 | 92,000.00 | | | |
| 0830 | Fire Protection | 13,900 | GSF Building | 2.50 | 34,750.00 | | | |
| 0900 | ELECTRICAL | | | | | 132,050.00 | 7.8% | 9.50 |
| 0910 | Service and Distribution | 13,900 | GSF Building | 4.50 | 62,550.00 | | | |
| 0920 | Lighting and Power | 13,900 | GSF Building | 5.00 | 69,500.00 | | | |
| 1000 | GENERAL CONDITIONS | | | | | 56,000.00 | 3.3% | 4.03 |
| 1010 | Field Overheads | 8 | Months | 7,000.00 | 56,000.00 | | | |
| 1100 | EQUIPMENT | | | | | 62,550.00 | 3.7% | 4.50 |
| 1120 | Furnishings / Display Cabinets | 13,900 | GSF Building | 4.50 | 62,550.00 | | | |
| 1200 | SITWORK | | | | | 133,100.00 | 7.9% | 9.58 |
| 1210 | Site Preparation | 232,000 | GSF Site | 0.20 | 46,400.00 | | | |
| 1220 | Site Improvements / Parking | 15,000 | SF Parking | 3.00 | 45,000.00 | | | |
| 1230 | On-Site Utilities | 13,900 | GSF Building | 3.00 | 41,700.00 | | | |
| 3000 | CONTRACTOR FEE, BONDS, INSURANCE | | 9% Total | | 115,693.20 | | 6.9% | 8.32 |
| 4000 | ESCALATION CONTINGENCY | | 7% Total | | 89,983.60 | | 5.3% | 6.47 |
| 5000 | DESIGN & ESTIMATING CONTINGENCY | | 15% Total | | 192,822.00 | | 11.5% | 13.87 |
| | TOTAL ESTIMATED CONSTRUCTION COST | | | | | 1,285,480.00 | 76.3% | 92.48 |
| | TOTAL ESTIMATED COST PLUS FEES AND CONTINGENCIES | | | | | 1,683,978.80 | 100% | 121.15 |

| Code | Description | Account | Balance | Debit | Credit | Total |
|------|---------------------|---------|------------|-------|--------|------------|
| 1000 | ASSETS | | | | | |
| 1010 | Fixed Assets | | | | | |
| 1011 | Land and Buildings | 1011 | 100,000.00 | | | 100,000.00 |
| 1012 | Plant and Equipment | 1012 | 50,000.00 | | | 50,000.00 |
| 1013 | Intangible Assets | 1013 | | | | |
| 1020 | Current Assets | | | | | |
| 1021 | Stocks | 1021 | | | | |
| 1022 | Debtors | 1022 | 20,000.00 | | | 20,000.00 |
| 1023 | Prepayments | 1023 | 5,000.00 | | | 5,000.00 |
| 1024 | Cash | 1024 | 75,000.00 | | | 75,000.00 |
| 1030 | Liabilities | | | | | |
| 1031 | Long Term | | | | | |
| 1032 | Short Term | | | | | |
| 1040 | Equity | | | | | |
| 1041 | Share Capital | 1041 | 100,000.00 | | | 100,000.00 |
| 1042 | Reserves | 1042 | | | | |
| 1043 | Profit and Loss | 1043 | | | | |
| 1044 | Retained Earnings | 1044 | | | | |
| 1045 | Dividends | 1045 | | | | |
| 1046 | Other Reserves | 1046 | | | | |
| 1047 | Minority Interests | 1047 | | | | |
| 1048 | Other Equity | 1048 | | | | |
| 1049 | Other Equity | 1049 | | | | |
| 1050 | Other Equity | 1050 | | | | |
| 1051 | Other Equity | 1051 | | | | |
| 1052 | Other Equity | 1052 | | | | |
| 1053 | Other Equity | 1053 | | | | |
| 1054 | Other Equity | 1054 | | | | |
| 1055 | Other Equity | 1055 | | | | |
| 1056 | Other Equity | 1056 | | | | |
| 1057 | Other Equity | 1057 | | | | |
| 1058 | Other Equity | 1058 | | | | |
| 1059 | Other Equity | 1059 | | | | |
| 1060 | Other Equity | 1060 | | | | |
| 1061 | Other Equity | 1061 | | | | |
| 1062 | Other Equity | 1062 | | | | |
| 1063 | Other Equity | 1063 | | | | |
| 1064 | Other Equity | 1064 | | | | |
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| 1075 | Other Equity | 1075 | | | | |
| 1076 | Other Equity | 1076 | | | | |
| 1077 | Other Equity | 1077 | | | | |
| 1078 | Other Equity | 1078 | | | | |
| 1079 | Other Equity | 1079 | | | | |
| 1080 | Other Equity | 1080 | | | | |
| 1081 | Other Equity | 1081 | | | | |
| 1082 | Other Equity | 1082 | | | | |
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| 1087 | Other Equity | 1087 | | | | |
| 1088 | Other Equity | 1088 | | | | |
| 1089 | Other Equity | 1089 | | | | |
| 1090 | Other Equity | 1090 | | | | |
| 1091 | Other Equity | 1091 | | | | |
| 1092 | Other Equity | 1092 | | | | |
| 1093 | Other Equity | 1093 | | | | |
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Willamette Industrial History Museum

Project Bibliography

- Abbott, Carl. *Portland: Gateway to the Northwest*, Portland State University Fnd., 1985.
- Abbott, Carl. *Portland and the Lewis and Clark Exposition: The Great Extravaganza*, Oregon Historical Society, 1996.
- Architectural Design, *New Museums*, Academy Group Ltd., 1991.
- Architectural Record, *Focus on the 3 R's: Rehabilitation, Renovation, Reuse*, Jan. 1993, v. 181, n. 1, p. 112-117.
- The Blue Flame*, Newsletter of Northwest Natural Gas Company, 100 Years of Gas Service, January 1959, v. 16, n. 1.
- Bledsoe, John D., *From Concept to Bid: Successful Estimating Methods*, R.S. Means Co., 1992.
- Bloom, Joel N. et al, *Museums for a New Century*, American Assoc. of Museums, 1986.
- Gasco Bulletin*, Newsletter of the Portland Gas & Coke Company, May 1922, v. 1, n. 1.
- Historic Preservation News*, February-March 1995, v. 35, n. 1.
- Historic Resource Inventory, Identified Properties*. City of Portland, 1984.
- Historic Resource Protection Amendments to Portland's Zoning Code*. Bureau of Planning, City of Portland, 1996.
- Mimar: Architecture in Development, *Adaptive Reuse: Singapore River*, Apr. Jun. 1984, n. 12, p. 32-39.
- Northwest District Policy Plan*, Bureau of Planning, City of Portland, 1996.
- PCA Progress*, Newsletter of the Portland Cement Association, 75th Anniversary Issue, March/April 1991.
- Planning Perspectives, *Historic Preservation in the US*, Jan. 1992, v. 7, n. 1, p. 65-79.
- Progressive Architecture, *Historic Preservation and Commercial Revitalization*, Jan. 1981, v. 62, n. 1, p. 98-99.
- Stephans, Suzanne. *Building the New Museum*, Princeton Architectural Press, 1986.
- Untitled Manuscript, History and Inventory of Gasco Plant, 1930.
- Urban Land, *Historic Preservation with new Development*, Oct. 1981, v. 40, n. 9, p. 3-11.



Willamette Industrial History Museum

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