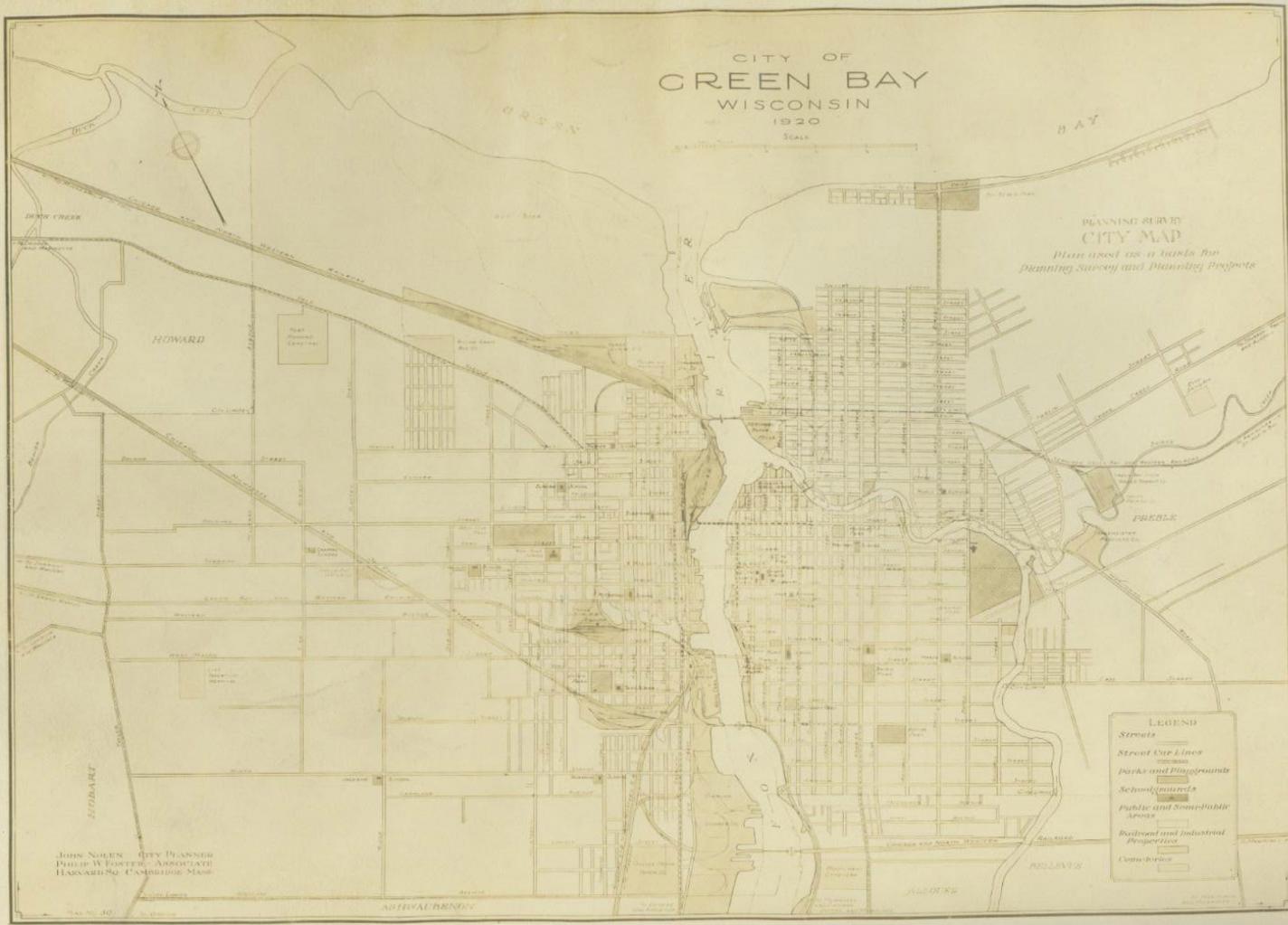




PLANNING SURVEY



Revised Copy
5 Feb 1921

CITY OF GREEN BAY

WISCONSIN

Planning Survey

Prepared as a Basis for the Comprehensive
Planning Projects of Green Bay

John Nolen, City Planner
Harvard Square, Cambridge, Mass.
September 1920

EXHIBITS ACCOMPANYING CIVIC SURVEY

1. City Map
2. Land Values Map
3. Harbor and River Map
4. Improved Streets Map
5. Use of Land Map
6. Public Utilities Map
7. Public Properties Map

CITY OF GREEN BAY

Brown County - Wisconsin

Administration - Commission Government

Mayor - Elmer S. Hall

Commissioners - Elmer S. Hall, Winford Abrams,
Frank Cartier.City Planning Commission - *Elmer S. Hall, Mayor, Frank
Cartier, *Earle Murray, President of Park Board,
*W. W. Reed, City Engineer, F.J.B. Duchateau, Edwin M.
Krippner, Henry A. Foeller (Secretary)
Members * ex-officio.Park Board - Earle Murray (Chairman) Thomas Joannes, Frank
E. Murphy, Mrs. R. C. Buchanan, Mrs. H. W. Fisk.

City Engineer - W. W. Reed

City Clerk - W. L. Kerr

City Attorney - Fred D. Merrill

 City Hall - 122 N. Jefferson Street

PLANNING SURVEY OF GREEN BAY

Synopsis of Survey

1. HISTORICAL. Evolution of Green Bay. List of Historical Places.
2. PHYSICAL. Topographic, Geographic, Climatic Conditions.
3. STATISTICAL. Population - Early Records, U.S. Census, Local School Census. Suffrage Registration. Growth of City Area. Present City Area. Nationalities. Foreign Settlements. Taxation - Assessment of City, Bonded Indebtedness, General Tax 1920, Sewer District Tax, 1920. Land Values.
4. HARBOR OF GREEN BAY TOGETHER WITH FOX AND EAST RIVERS. Harbor of Green Bay, Fox River, U. S. Government and Green Bay, U. S. Government and Fox River. Green Bay Terminal Facilities. Municipal Dock. Draft of Vessels. Opening and Closing of Navigation. Shipping at Green Bay 1919. Tonnage of Vessels arriving at Green Bay. Bridges over the Fox River. Bridges over the East River. Bridge Openings recorded at Walnut Street Bridge.
5. STREETS. Street System. Building Blocks. Street Widths. Street Grades. Street Sections. Street Construction. Street Drainage. Street Names and Numbering. Street

- Lighting. Street Trees. Street Traffic over City
Bridges. Traffic Regulation. State Trunk Highways.
6. TRANSPORTATION. Railroads - Passenger Depots, Freight
Stations, Switching Yards, Round Houses, Machine
and Repair Shops, Freight Warehouses, Elevators,
etc., Grade Crossings, Grade Eliminations, Railroad
Passenger Traffic, Railroad Freight Traffic. Water
Transportation. Street Car and Interurban Systems.
Auto Truck Transportation. Aviation.
7. BUSINESS AND INDUSTRIES. Retail - East Side, West Side.
Wholesale Business. Extent of Industrial Sections.
Factories. Industrial Aesthetics. Trade Nuisances.
Exhibition Hall. Labor Temple. Trade Training School.
8. HOUSING. Existing Houses. Home Ownership. Building
Regulations. Typical Lots. House Shortage. Undesir-
able Houses. Best Residential Areas. Apartment
Houses.
9. PUBLIC UTILITIES. Water. Gas. Electric Power. Sewer-
age. Telephone. Telegraph. Postal Service.
10. PUBLIC HEALTH AND SAFETY. Public Health. Cemeteries.
Fire Protection. Police Protection. Hospitals.
Health Center. Other Health and Social Activities.
Public Comfort Stations.
11. EDUCATION. Public Schools. Parochial Schools. Business

- Colleges. Public Libraries. Museum. Band Concerts.
12. RECREATION. Public Parks. Joannes Park. Bathing Beach. Commercial Amusements.
13. PUBLIC PROPERTIES. Federal, County, City and Semi-public.
14. REGIONAL. Green Bay and Brown County. Brown County. Agricultural Resources around Green Bay. Destination of Products. Public Markets in Green Bay. Marsh Lands.

1. HISTORICAL

Evolution of Green Bay

The history of the Green Bay region commences, as far as white men is concerned, with the arrival of Jean Nicolet at Red Banks near the mouth of the Fox River in 1634. He was the first white man to penetrate this section of America, and came for exploration as well as fur trading purposes. Incidentally he strove to solve the mystery of the Indians - Puans or Winnebagoes - who inhabited this area and were supposed by Champlain Governor of New France to be Mongolians and this to be the famed Cathay. From this time on Green Bay became the gateway for western exploration and was christened "La Baye des Puants." In 1654 came Radisson and Groseillers and in 1664 Nicholas Perrot, and the fur trading which for two hundred years distinguished northern Wisconsin may be said to have begun. It was the commencement of the French regime, and yearly fleets of canoes and French bateaux from Montreal and Mackinac brought arms, cloth and ornaments and departed with furs of Beaver, Otter, Bear, Wolf, Fox, Deer, Lynx, Marten and Badger. Father Claude Allouez arrived in 1669 and established the first Christian mission in the Fox River Valley in 1671-2. Joliet and Marquette^e came in 1673, and in 1685 Green Bay

had assumed sufficient importance to have its first Governor or Commandant - Nicholas Perrot. The first French garrison was established in 1701. Augustin and Charles de Langlade arrived in 1745, and in 1760 Wisconsin was surrendered by France to Great Britain and the first British garrison was established at Green Bay under the title of Fort Edward Augustus. The British occupation only lasted two years - 1761-3 - when the garrison was withdrawn on account of the danger from the Indians because of the Pontiac conspiracy. Twenty years later, 1783, a nominal if not actual beginning of United States sovereignty was made, though the actual cession of Wisconsin to the United States by Great Britain was not concluded until 1800.

The first American garrison was in 1816, when Fort Howard was established. Following this came the first arrival of settlers from the Eastern States and the decline of the old French life about 1820. From then on the civil life of Green Bay as we know it today began. The first steamboat came in 1821, first post office in 1822, and eastern settlers flocked in from 1835 to 1840 and from 1854 to 1857 a large migration of Hollanders, Belgians and Germans. The first railroad train came in 1862, and industrial life commenced with the erection of saw mills and elevators. Green Bay took its stride as

a modern city, its days of romance associated with explorers, pioneers, adventurers and fur traders were over.

List of Historical Places

1. Old Hospital of Fort Howard, Kellogg Street, north side between Broadway and Chestnut Avenue.
2. Old Fort Building, Chestnut Avenue, east side near corner of Kellogg Street.
3. Site of Fort Howard* C. & N.W.R.R. Depot, Broadway and Main Street. An old elm tree on railroad property is the only relic remaining.
4. Old Barrack Building, Mather Street, south side between Chestnut Avenue and Broadway.
5. Site of De Langlade Home.* Washington Street, west side near Stuart Street. Now occupied by Wisconsin Public Services Company's Car Barns. No relic of any kind remaining.
6. Tank Cottage. Union Park.
7. Original Site of Tank Cottage. On bank of Fox River at end of Eighth Street. Land now occupied by the Ryerson, Conradson Machine Tool Company.
8. Judge John Lawe Home. South Adams Street, east side near Porlier Street.
9. Indian Battle Site.* Main Street, north side between Washington and Adams Streets. Site now covered by the Beaumont Hotel.

For information in regard to the history of Green Bay, and articles illustrative of early times, visit the Green Bay Public Museum and Kellogg Public Library.

* Places now marked by inscription on Tablet.

2. PHYSICAL

Topographic Conditions

The most important topographical features of the Green Bay region are Green Bay itself, the Fox River, East River, Beaver Dam and Duck Creeks on the extreme west of the city and Baird's Creek which runs into the East River on the eastern outskirts of the city.

The country is generally flat being geologically the basin of extinct lakes in remote ages. There have of course been many natural changes since that time but the lake formations have been pretty accurately traced by scientists.

The main road from the east, into Green Bay runs on a broad ridge of sand which loses itself before the city is reached. In the streams on this side of Green Bay are marked terraces at several levels the highest of which is about 30 feet above the present flood plain. Between the numerous sand ridges in the city area and in the outskirts there has been a smooth deposit of silts on what was formerly an old lake floor. Towards the present Green Bay the larger part is so close to the water level that it is too wet to be occupied. In the southeast of the city there are irregular gravel deposits in the Fox River Valley and to the east of this there is a belt of remarkably strong

kettle moraine topography. To the northwest of Green Bay are several stretches of sand ridges and along the shore up to Duck Creek an expanse of unused swamps covered with second growth.

Generally speaking the country is mostly the low swampy lake plain stretching inland for from one to six miles interrupted by the sand ridges.

There is no topographical map of the city.

Geographic Conditions

The City of Green Bay is situated in Brown County, (of which it is the County seat) 198 miles north of Chicago, on the shore of Green Bay which is an arm of Lake Michigan. It lies on both sides of the Fox River, which at the point of its meeting the East River becomes the Harbor of Green Bay. Roughly speaking the center of the city is about $1\frac{1}{2}$ miles from the Bay water front.

Beginning in 1634, it has had a community existence for 250 years. Originally it was a great trading center for fur bearing animals and as that era passed away, the lumber trade from the pine forests was the great source of wealth. Raw lumber, farm produce and wheat raising have successively been the elements of prosperity for Green Bay. The agricultural side represented by the cultivation of

hay, oats and corn is now to the front with the manufactur-
ing industry making itself felt on all sides. The next
decade will probably establish Green Bay pre-eminently as
an industrial center.

Upon the realization of the Great Lakes-St. Lawrence
Deep Waterway bringing ocean shipping to Green Bay docks
much of the city's future depends. Geographically the
city is so situated as to become a premier lake port and
with that a great industrial and distribution center of
the State of Wisconsin.

Month	1900	1901	1902	1903	1904	1905	1906
January	41	42	43	44	45	46	47
February	38	39	40	41	42	43	44
March	35	36	37	38	39	40	41
April	32	33	34	35	36	37	38
May	29	30	31	32	33	34	35
June	26	27	28	29	30	31	32
July	23	24	25	26	27	28	29
August	20	21	22	23	24	25	26
September	17	18	19	20	21	22	23
October	14	15	16	17	18	19	20
November	11	12	13	14	15	16	17
December	8	9	10	11	12	13	14

Figure 2. (Map of Land Map) displays a chart showing
a graphic representation of wind direction based on the
directional values for 1911.

Climatic Conditions

The Local Station, Weather Bureau, U. S. Department of Agriculture Statistics gives the following:-

<u>Year</u>	Mean Temperature in Fahrenheit Degrees			Rainfall in Inches			Direction of Prevailing Winds 1919
	<u>1919</u>	<u>1918</u>	<u>1917</u>	<u>1919</u>	<u>1918</u>	<u>1917</u>	
January	24	6	11	0.67	2.22	1.96	S.W.
February	23	16	8	1.51	1.21	0.50	W.
March	32	35	29	1.26	1.98	2.45	S.
April	44	41	39	3.20	2.44	2.32	N.E.
May	55	58	50	4.53	9.70	1.12	N.E.
June	71	63	61	0.83	2.59	4.92	S.
July	72	68	70	5.39	1.52	1.52	S.
August	68	70	65	1.60	2.05	2.07	S.W.
September	63	54	58	2.97	1.71	1.96	S.
October	48	51	40	2.37	2.18	2.36	S.
November	32	39	36	2.26	2.16	0.70	S.W.
December	12	31	15	0.36	1.81	0.38	S.W.
Highest	72	70	70	5.39	9.70	4.92	
Lowest	12	6	8	0.67	1.21	0.38	

Exhibit No. 5 (Use of Land Map) displays a chart showing a graphic representation of wind direction based on U.S. Government returns for 1919.

3. STATISTICAL

Population

Early Records

The earliest population records are:-

- 1789 - 7 white families
- 1785 - About 50 "
- 1816 - 45 or 50 families
- 1849 - 1922

U. S. Census

The first census of the U.S. Government was taken in 1860 and from then on to present day the exact compilation of the growth of Green Bay has been kept.

1860	-	2275			
1870	-	4666	-	105.1	per cent increase
1880	-	7464	-	60.0	" " "
1890	-	9069	-	21.5	" " "
1900	-	18684	-	106.0	" " "
1910	-	25236	-	35.1	" " "
1920	-	31017	-	22.9	" " "

The population in 1920 divided into city wards as they then existed prior to the alteration to present boundaries was:-

<u>Ward</u>	<u>1920</u>	<u>1910</u>
First	5,547	4,317
Second	2,543	1,137
Third	1,960	1,144
Fourth	4,701	4,163
Fifth	4,028	3,377
Sixth	4,949	3,979
Seventh	3,474	2,607
Eighth	3,315	3,175

Local School Census

In June 1920, the Board of Education of Green Bay made a canvas of the city by school teachers and the number of children between the ages of 4 and 19 were tabulated as follows:-

East side	5,351
West Side	<u>4,118</u>
Total -	9,469

Suffrage Registration

Unofficial figures of the number of voters registering in the city on August 31st 1920 were roughly made by the Green Bay Press Gazette. This was the first instance of women being allowed to exercise the right of registration.

Men	6,533
Women	<u>3,107</u>
Total -	9,640

These figures, in the case of some of the wards, were only estimates.

Growth of City Area

The growth of city area is illustrated by the following facts:-

- 1816 - Fort Howard established.
- 1829 - Navarino (the first village) established.
- 1835 - Astor established.
- 1838 - Astor and Navarino consolidated as "Green Bay."
- 1854 - Green Bay incorporated as a "City of the Second Class."
- 1895 - Annexation of Fort Howard to Green Bay.

The acreage of the various communities now grouped as the City of Green Bay is as below:-

Fort Howard	(Approximately)	6410.00 acres
Navarino		284.28 "
Astor		1474.97 "
Water -		<u>223.67</u> "
Total -		8392.92 "

Present City Area

The present area of the city divided between the east and west sides and again dividing the water and land

is:-

Land	(West side - 6410.00 acres or 10 sq. miles
	(East side - <u>1759.25</u> " " 3 " "
Total -	8169.25 " " 13 " "
Water - - - - -	<u>223.67</u>
Total -	8392.92 acres - entire city area

The city area divided into various developed and undeveloped sections is as follows:-

Industrial and Railroads	486 acres (approximately)		
Residential and Business Areas available	6517	"	"
Public Park areas	86	"	"
Marsh Land	1080	"	"
Water Area	<u>223</u>	"	"
Total -	8392	"	"

Nationalities

The U. S. Census of 1910 computed 4,057 foreign born in Green Bay and these were divided as follows:-

Holland and Belgium	1,199
Germany	1,125
Norway, Sweden & Denmark	529
Russia & Finland	272
Canada (other than French)	210
Ireland	186
Austria	165
Canada (French)	155
Great Britain	109
France	29
Turkey	27
Italy	14
Hungary	2
All other countries	35

Foreign Settlements

The prevailing nationalities in fairly well defined settlements are:-

- Belgium (Flemish) - west side.
- Belgium (Walloon) - east side, north of East River.
- Danish - West side.
- Polish - East side.

The tributary nationalities scattering are -
Moravians, Germans and French.

Taxation

Assessment of City

1920 - \$43,915,311
 1919 - 33,789,705

Assessed on a 100% valuation.

Bonded Indebtedness

1920 - \$829,225
 Bonding Limit (January 1920) \$1,600,000

General Tax 1920

County and State Tax	5.56	per	\$1,000
City Schools	6.74	"	"
Loans, Bonds and Interest	3.03	"	"
General City Tax	<u>5.67</u>	"	"

Total, General Tax 21.00 mills
 (covering entire city)

Sewer District Tax 1920

This is additional to General Tax and is levied
 in the following sewer districts to the following amounts:-

Sewer Dist. 1 - \$2.50	Sewer Dist. 10 - \$2.50
" " 2 - 2.00	" " 11 -
" " 3 - 2.00	" " 12 -
" " 4 - 2.00	" " 13 -
" " 5 - 2.00	" " 14 - 1.00
" " 6 -	" " 15 - .50
" " 7 -	" " 16 - 1.50
" " 8 - 1.00	" " 17 - 3.00
" " 9 - 2.00	" " 18 - 3.00

Land Values

Exhibit No. 2 (Land Values Map) shows typical front foot values based on the assessed values as given by the City Assessor. These values represent a supposedly 100 per cent actual valuation.

On the east side, the highest values are reached at the corner of Walnut and Washington Streets, the value being \$484, and the corner of Main and Washington Streets \$242. These are both in the Central Business district. The highest values in the residential area are \$42 in the Monroe Avenue neighborhood.

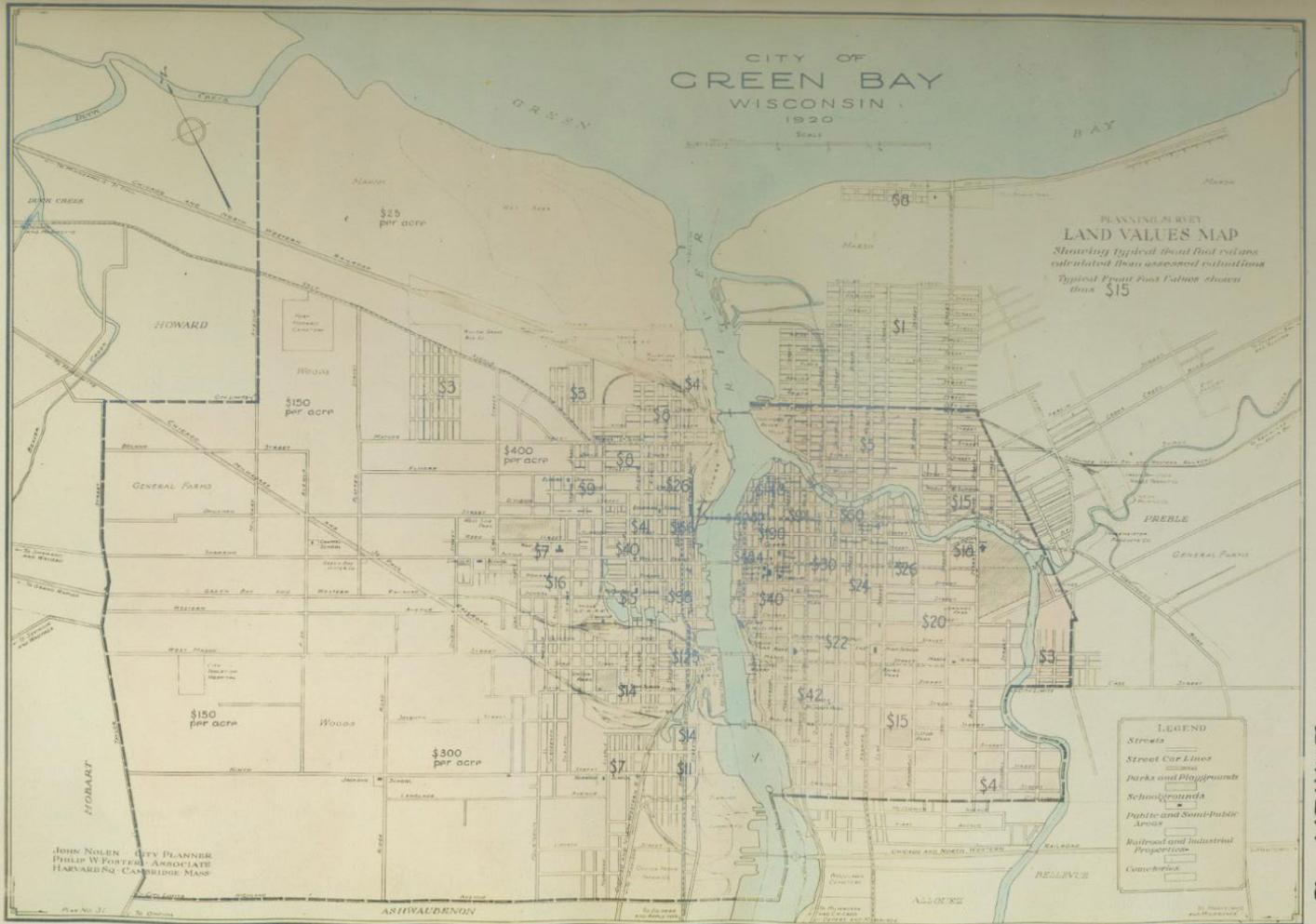
On the west side, the values in the district of Broadway and Dousman Street are something over \$70. These are in the retail shopping district. In the residential section around Hubbard Street, Ashland Avenue and Oakland Avenue the values are about \$40.

The outlying land on the east side is mostly subdivided and ranges from \$15 to \$5 per front foot. The outlying land on the west side used for farming or truck gardening is valued at \$150 to \$300 per acre. The large area of marsh land is valued at \$25 per acre.

CITY OF
GREEN BAY
WISCONSIN
1920

PLANNING SURVEY
LAND VALUES MAP

Showing typical front foot values
calculated from assessed valuations
Typical Front Foot Value shown
thus \$15



4. HARBOR OF GREEN BAY TOGETHER WITH FOX AND EAST RIVERS

Harbor of Green Bay*

The Harbor of Green Bay is located at the mouth of the Fox River, at the head of Green Bay about 175 miles from Milwaukee via Sturgeon Bay Canal and about 48 miles S.E. from Menominee Harbor. There is an average width of 800 feet with a natural channel depth of 22 to 38 feet from north to south through the city.

The inner or commercial harbor occupies that portion of the Fox River between its mouth and the City of Depere, a distance of six miles.

The improvements maintained by the U. S. Government consist of two channels. The outer channel extending from the mouth of the Fox River into Green Bay as far as Outer Gas and Bell Buoy No. 2, a distance of about four miles with a minimum depth of 17 feet below datum (datum 581.63 feet above mean tide at New York City). The inner channel extending from the southerly limits of the City of Green Bay to the City of Depere, a distance of five miles with a depth of 17 feet below said datum.

The outer channel varies in width from 200 feet at the southerly end to 500 feet at the outer end. The

*See Exhibit No. 3, Harbor and River Map.

inner channel has a width of 150 feet terminating at the southerly end in a dredged turning basin at Depere and of an area sufficient (about 16 acres) to permit of winding boats not exceeding 350 feet in length.

Fox River

Fox River rises in Columbia County, Wisconsin and flows in a northerly direction into Green Bay. It has a drainage area of about 6,300 square miles during its 176 mile course. The maximum discharge is 14,800 cubic feet per second, a minimum discharge of 0 and a mean discharge of 4,265 cubic feet per second. The lower Fox River between Lake Winnebago and Green Bay is about 39 miles in length and varies from 300 to 3,000 feet in width.

U. S. Government and Green Bay

- 1866 Appropriation of \$30,500 for improvement of outer channel making it 200 ft. wide, 13 ft. deep and 8,800 ft. long.
- 1872 Modification of project by increase of depth to 14 ft.
- 1874 Depth further increased to 15 ft. and length to 11,600 ft.
- 1892 Depth again increased to 17 ft. and length to 16,500 ft.
- 1896 Further modifications making present provision for inner channel.
- 1899 Inner channel completed.
- 1902 Further modifications making present provisions for outer channel.
- 1903 Outer channel completed.
- 1910 Turning basin at Depere completed.
- 1917 Provision for maintenance of basin at Depere.

U. S. Government and Fox River

1872 United States assumed control of the improvement of the waterway between the Great Lakes and the Mississippi River by way of the Fox and Wisconsin Rivers.

1873 River and Harbor Act modified.

1886 Existing Fox River improvements authorized.

1887 Improvement of the Wisconsin River abandoned.

Green Bay Terminal Facilities (Wharves not open to general public)

<u>Number of Wharves</u>	<u>Produce</u>	<u>River Frontage</u>
7	Coal Wharves	3,500 ft. (length)
3	Lumber & Log Wharves and Slips	5,600 " "
3	Pulpwood Wharves	2,570 " "
3	Grain Wharves	975 " "
4	Package Freight Wharves	820 " "
6	Fish Wharves	785 " "
1	Gasoline & Kerosene Wharves	300 " "

Green Bay Terminal Facilities (Wharf open for general public use)

<u>Number of Wharves</u>	<u>Produce</u>	<u>River Frontage</u>
1	Small Wharf & Warehouse	120 ft. (length)

The available dock frontage within the city amounts to $6\frac{1}{2}$ miles of which only about 25 per cent is being used.

CITY OF GREEN BAY WISCONSIN 1920

PLANNING SURVEY
HARBOR AND RIVER MAP

Showing depth of channel, marsh areas and improvement of waterfront.
Marsh Area
Improvement of waterfront
Depth in feet

- LEGEND
- Streets
 - Street Car Lines
 - Parks and Playgrounds
 - Schools
 - Public and Semi-public Areas
 - Railroad and Industrial Properties
 - Conservation

JOHN NOLEN - CITY PLANNER
PHILIP W. PORTER, ASSOCIATE
HARVARD Sq. CAMBRIDGE, MASS.

EXHIBIT 3



Municipal Dock

In 1919, the city undertook the construction of a municipal dock on the east bank of the Fox River near Mason Street Bridge, at a cost of about \$45,000.. The wharf to be used as a boat landing and freight house and a storage place for municipal street and bridge material. The proposition to land crushed stone and coal here for city use has been figured out as a more economical one than rail transit. The entire frontage on the Fox River is 485 feet of which about 120 feet lies opposite the warehouse. The depth of the property varies from about 190 feet to over 200 feet.

Draft of Vessels

Coal tonnage at Green Bay - 18 feet
 Coal tonnage consigned to Depere - 15 feet
 Coal transshipment up Fox River - $5\frac{1}{2}$ feet (Barges)
 Remaining miscellaneous traffic - 15 feet

Opening and Closing of Navigation

<u>Location</u>	<u>Opening</u>	<u>Closing</u>	<u>Years used as averages</u>	<u>Average Number of days closed</u>
Green Bay	Apr. 15	Dec. 6	22	130

Shipping at Green Bay - 1919

<u>Arrivals</u>	<u>Tonnage etc.</u>
865 Steamers and Gas Screw	424,220 tons
488 Barges and Sail	87,951 "
Soft Coal	564,107 "
Hard Coal	96,163 "
Limestone	40,548 "
Gravel	1,540 "
Crushed Stone	8,125 "
Sand	1,400 "
Pulp Wood	15,000 Cords
Wood Pulp	8,841 Bales
Fire Wood	130 Cords
Lumber	355,000 feet
Salt	476 tons
Fish	497 "
Hay	107 "
Potatoes	110 "
Gasoline	174,000 Bbls.
Kerosene	96,000 "

<u>Departure</u>	<u>Tonnage etc.</u>
872 Steamers and Gas Screw	424,247 tons
487 Barges and Sail	87,501 "
Soft Coal	42,809 "
Hard Coal	8,934 "
Lumber	8,000 feet
Salt	35 tons
Hay	35 tons
Gasoline	26 Bbls.
Flour	1½ tons
Mill Stuffs	34 "
Oil	222 Bbls.
Miscellaneous freight	2,142 tons

Summary for 1919

Total - Steamers and Barges	
making port	2,712
Gross tonnage	1,062,018 tons

Tonnage of Vessels Arriving at Green Bay

	<u>Years</u>	<u>Tonnage</u>
	1880	100,000 tons
	1887	132,000 "
	1902	200,000 "
	1908	415,000 "
	1913	464,000 "
	1919	512,000 "

Bridges over the Fox River

Owned by the City of Green Bay

Main Street Bridge erected 1900 - only bridge carrying street cars.

Walnut Street Bridge erected 1910 - Single leaf Bascule span.

Mason Street Bridge erected 1915 - Single leaf Bascule span.

Owned by Kewaunee, Green Bay & Western R.R.

Eastman Avenue

Owned by Chicago, Milwaukee & St. Paul R.R.

Porlier Street

Owned by Chicago & North Western R.R.

At Southern City Limits

Bridges over the East River

Owned by the City of Green Bay

Monroe Avenue

Webster Avenue

Main Street

Baird Street

Mason Street

Owned by Chicago, Milwaukee & St. Paul R.R.

Monroe Avenue

Cedar Street

Bridge Openings Recorded at Walnut Street Bridge

From the openings of navigation in the spring of 1920 to the end of August there had been about 1,200 bridge openings and on September 1st the openings for that day were 22.

Street Grades

The variation in street grades throughout the city is almost negligible. In the neighborhood of Chicago and Van Buren Street there is however a grade of

5. STREETS

Street System

The street system of Green Bay is uniformly of a rectangular design and nearly oriented. There are no variations whatever from this method.

Building Blocks

On the east side the building blocks are generally either 480 ft. by 330 ft. or 742 ft. by 480 ft. On the west side, the blocks vary so much in size that no standard can be quoted.

Street Widths

Nearly all the east and west streets in the plats of Astor and Navarino are 60 ft. in width and the north and south streets 80 ft. wide.

In the Fort Howard plat, street widths vary from 40 to 80 feet.

Throughout the city there is no established system of fixing the width of streets.

Street Grades

The variation in street grades throughout the city is almost negligible. In the neighborhood of Chicago Street and Van Buren Street there is however a grade of

about 7 per cent. In the Sewer District No. 18 there are also some changes in elevation as well as generally towards the extreme western city limits. In the vicinity of Porlier Street and Adams Street there is a fall towards the Fox River. The absence of a topographical survey of the city has made it impossible to make more than a casual observation of street grades generally.

Street Sections

There is an ordinance in force (enacted 1875) defining (Sec. a Chap. 2) sidewalk widths and common highway widths as follows:-

80 ft. streets, sidewalks 12 ft. each,

highway 56 ft.

60 ft. streets, sidewalks 10 ft. each,

highway 40 ft.

It is also fixed that there shall be a space between lot line and sidewalks thus:-

On 80 ft. streets, 18"

on 60 ft. streets, 8"

Street Construction

The various types of street construction throughout Green Bay are:-

1. Sheet Asphalt (usual construction 1920)
2. Bituminous
3. Cement Concrete
4. Sandstone Block
5. Cresote Wood Block
6. Macadam
7. Brick Block
8. Gravel (Temporary improvement only)

See Exhibit No. 4, Improved Streets Map.

Street Drainage

Combined concrete curb and gutter laid to fall with iron catch basins are used for street drainage with road crowned.

Street Names and Numbering

On the east side of the Fox River, the north and south streets are continued in name across the East River and are designated "North" above (or North of) Walnut Street and "South" below (or South of) Walnut Street.

On the west side of the Fox River there is no continuity of street names from the east side, except in the case of Walnut & Mason Streets, which are designated "West Walnut" and "West Mason Streets" respectively.

The streets on the east side are numbered from Fox River eastwards.

CITY OF
GREEN BAY
WISCONSIN
1920

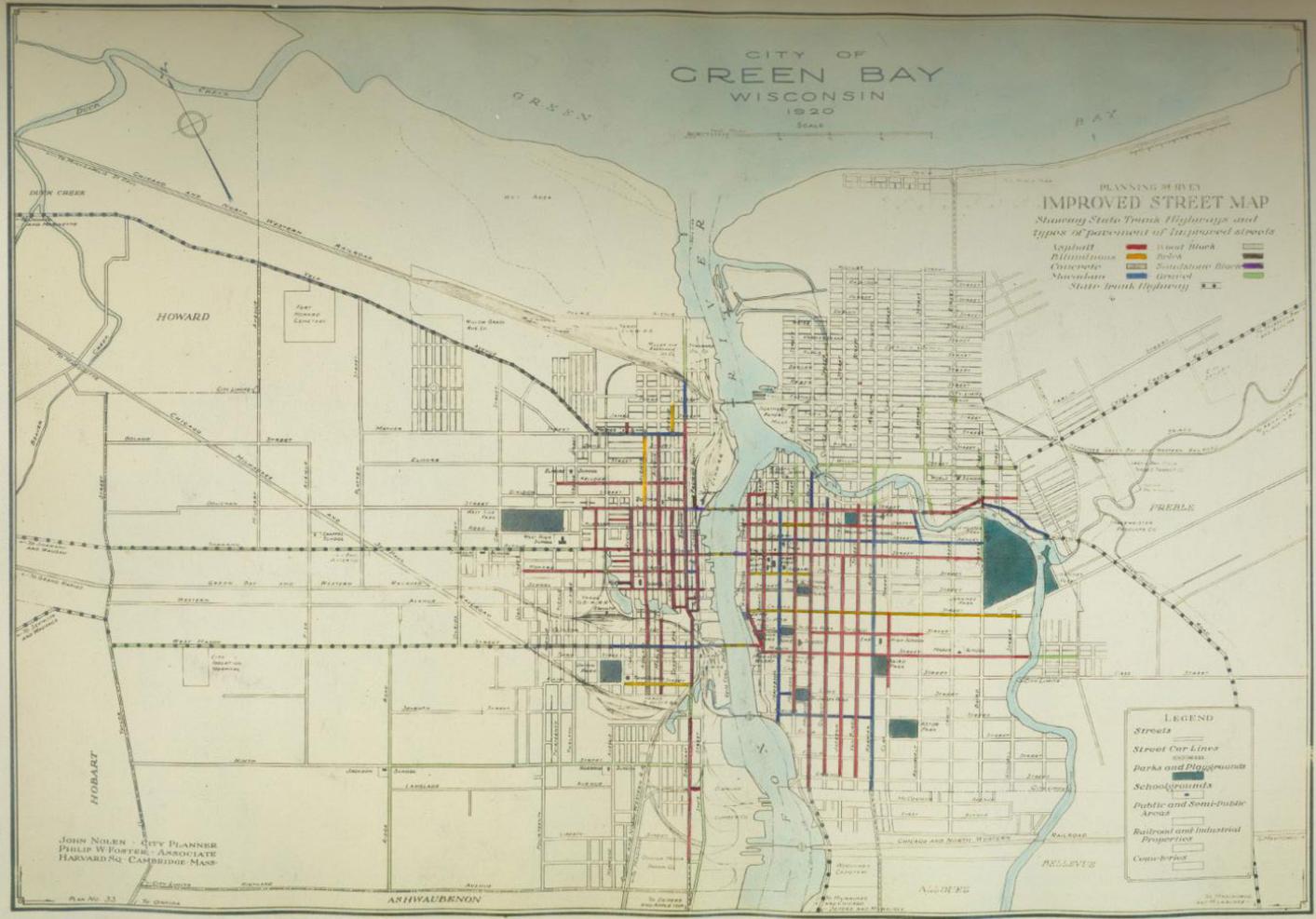
PLANNING BUREAU
IMPROVED STREET MAP
Showing State Trunk Highways and
types of pavement of improved streets

- Asphalt
- Bituminous
- Concrete
- Macadam
- State Trunk Highway
- Wood Block
- Brick
- Stone Block
- Gravel

LEGEND
Streets
Street Car Lines
Parks and Playgrounds
School Grounds
Public and Semi-Public
Buildings
Railroad and Industrial
Property
Cemeteries

JOHN NOLEN - CITY PLANNER
PHILIP W. FOSTER - ASSOCIATE
HARVARD SQ. CAMBRIDGE MASS.

EXHIBIT 4



The streets on the west side of the Fox River are numbered from the river westwards.

Street Lighting

The ordinary street lighting is by electricity supplied from the Wisconsin Public Service Co. and numbers 574 lights.

An ornamental street lighting system is to be shortly installed on the following streets:-

Washington Street, from Crooks St. to Cedar St.
 Main Street, from Fox River Bridge to Monroe Ave.
 Adams Street, from Main Street to Walnut St.
 Pine Street, from Washington St. to Adams St.
 Cherry Street, from Washington St. to Adams St.
 Walnut Street, from Fox River Bridge to Adams St.

Street Trees

Green Bay, like some of the New England towns, has been spoken of as a "City of Elms", as this is the variety of tree that most of the early residents planted around their homes. There have been many changes in these early homes, but the stately elms still stand, some of them having grown to wonderful size and beauty, and their graceful overhanging branches which extend across some of the streets from either side, form Gothic arches, giving pleasant vistas, and adding much to the beauty of the city. There are also many beautiful maples, both hard and soft, as well as other varieties of trees, such as:- Poplar, Balm of Gilead, Spruce, Balsam, Pine, Tamarack, Cedar, Ash, Box Elder, Bass-wood, Willow, Cottonwood, Birch, Butternut, Oak and Hickory.

Street Traffic over City Bridges

A traffic count for 12 hours from 6:30 A.M. to 6:30 P.M. was taken on Wednesday August 19, 1920 by the City Engineer.

<u>Class of Vehicles</u>	* <u>Main St. Bridge</u>	<u>Walnut St. Bridge</u>	<u>Mason St. Bridge</u>
Horse drawn vehicles	318	247	453
Trucks	769	687	508
Automobiles	<u>1,663</u>	<u>1,563</u>	<u>791</u>
Total -	2,750	2,498	1,752
Average number per hour	229	208	146

Traffic Regulation

A City Ordinance was approved July 17, 1920 which defines the rules of the road and regulates traffic in Green Bay. The speed limit is fixed at 15 miles per hour. Parking or standing at street intersections is prohibited as well as near fire hydrants. Safety zones, painted on the pavement, have been created at certain corners and intersections, and pedestrians are not allowed to "jay walk" across the streets. From 9 A.M. to 9:30 P.M. no parking is allowed in the down town district at Walnut Street, Washington Street and Main Street. Safety Zones within this same area have been created in the center of the streets (painted on the pavement) to allow of safety for pedestrians leaving and entering street cars.

*Street cars over this bridge not included in count.

State Trunk Highways

There are six established State Trunk Highways entering Green Bay and in the order of their importance are:-

<u>State Highway Number</u>	<u>Name of Highway</u>	<u>Entering Green Bay at</u>
57	Depere Road	South Monroe Ave. & city limits
16	Old Green Bay Rd.	Main St. & city limits
54	Sturgeon Bay Rd.	Cedar Creek Rd. & city limits
15	*Oconto Road	Velp Avenue & city limits
16	Shawano Road	Shawano Avenue & city limits
54	Seymour Road	West Mason St. & city limits

In addition to the above there is a secondary road to Depere which is considerably used although not a State Highway. It runs from Dousman Street along South Broadway to 7th Street and then along State Street southwards.

*As an example of the traffic carried over the State Highways at Green Bay the following are the figures of a count made by the Brown County Highway Commission on Sunday August 23, 1920 for 24 hours:- 2012 automobiles, 39 commercial trucks, 34 motor cycles and 92 other vehicles - total of 2,177 vehicles.

6. TRANSPORTATION

Railroads*

There are four main railroads entering the city.

Chicago and North Western
 Chicago, Milwaukee and St. Paul
 Green Bay and Western
 Kewaunee, Green Bay and Western

The Ahnapee and Western Railroad has running powers over the Kewaunee, Green Bay and Western Railroad from Green Bay.

Passenger Depots

Chicago & North Western R.R. Depot - Dousman St.
 Chicago, Milwaukee & St. Paul R.R. Depot -
 Washington St.
 Green Bay & Western R.R., Kewaunee, Green Bay &
 Western R.R., Ahnapee, Green Bay & Western
 R.R. Depot - Mason St.

Freight Stations

Chicago & North Western R.R. - Dousman St.
 Chicago, Milwaukee & St. Paul R.R. -
 Washington St.
 Green Bay & Western R.R., Kewaunee, Green Bay
 & Western R.R., Ahnapee, Green Bay & Western
 R.R. - Mason St.

Switching Yards, Round Houses, Machine & Repair Shops, Freight Warehouses, Elevators etc.

Chicago & North Western R.R. - West side of
 Broadway at Prairie Avenue.
 Chicago, Milwaukee & St. Paul R.R. - West side
 of Broadway at Sixth Street.
 Green Bay & Western R.R. - West side of
 Oakland Avenue at School Place.

*See Exhibit No. 5, Use of Land Map

Grade Crossings

The following are important railroad grade crossings within the central city district which have been characterized as "dangerous."

At Washington & Mason Streets
 At Dousman & Pearl Streets
 At Walnut and Pearl Streets
 At Clinton St. and Broadway
 At Fifth St. and Broadway

Grade Eliminations

Within the city there are only two railroad grade eliminations as follows:-

Chicago & North Western R.R. at Woodlawn Cemetery -
~~Monroe~~ Mason Avenue - Street (Subway) under railroad.

Chicago & North Western R.R. at Woodlawn Cemetery -
 Webster Avenue - Street (Bridge) over railroad.

Railroad Passenger Traffic

There is a total of 32 trains daily, entering and departing from the three railroad depots.

Chicago & North Western R.R. -	Northbound	10	
	Southbound	<u>12</u>	22
Chicago, Milwaukee & St. Paul R.R. -	Northbound	3	
	Southbound	<u>3</u>	6
Kewaunee, Green Bay & Western)	Westbound	2	
Green Bay & Western)	Eastbound	<u>2</u>	4
	Total -		32

Railroad Freight Traffic

48,000 cars are shipped annually in and out of Green Bay and the incoming freight amounts to 780,000 tons and the outgoing freight amounts to 960,000 tons annually.

There is a reciprocal switching arrangement between the railroads whereby the burden of switching charges does not fall on the shipper.

The acreage of the three railroad yards showing their accommodation for freight traffic is as follows:-

Chicago & North Western R.R.	84.41	acres
Chicago, Milwaukee & St. Paul R.R.	31.93	"
Green Bay & Western R.R.	<u>24.22</u>	"
Total -	140.56	"

Water Transportation

There are no regular lines of steamboats now running on the Fox River at Green Bay and the passenger and freight boats of the Goodrich Line from Chicago no longer touch Green Bay. Excursion steamers however carry parties up and down the river from time to time and there are many small pleasure boats, motor boats, etc.

The larger boats of the Reiss Coal Co. (10,000 tons) of which some 200 annually unload at their coal docks on the west bank of the Fox River, do a considerable amount

of transshipment. This transshipment in coal is accompanied with the water carriage of crushed stone, building materials, salt etc., which is taken up the Fox River in barges of 500 tons capacity and having a 5 ft. draw. The returning barges bring down to Green Bay, cargoes of grain etc.

Street Car and Interurban Systems

The Wisconsin Public Service Co. operate six main routes of electric street cars through Green Bay together with a branch line (owned by the Bay Shore Railway) to Bay View Beach. These total in all to 15 miles of city street car trackage.

Routes

Walnut, Porlier and South Webster to Depere.

Main, Broadway, Mather, Velp to Duck Creek.

Main, South Broadway to Kaukauna.

Main, eastwards to Bairds Creek.

(with branch line from Main Street along
Irwin Avenue to Bay View Beach)

Walnut Street to Hagemeister Park.

Washington, Mason to South Irwin Avenue.

There is a six cent fare within the city.

Auto Truck Transportation

There is an increasing attention being given to the movement of "Ship by Truck" and there are two principal companies engaged in this method of transportation over the city streets and on to the State Trunk Highways.

The American Railway Express Co. has an equipment of fourteen wagons.

The Northern Transportation Co. has an equipment of nine auto trucks.

The Northern Transportation Co. has a program of establishing ten road routes to Fond du Lac, Sturgeon Bay, Wausau, Manitowoc, Appleton, Oshkosh, Milwaukee, Marinette etc. Two of these are now in operation viz. Fond du Lac and Manitowoc.

Aviation

The Green Bay Aero Club looks after aviation interests. Their aviation field is situated on Highland Ave. just outside the city limits on the west side. Its area is 100 acres and is said to be the largest landing field in the middle west.

There is a hangar on the field.

7. BUSINESS AND INDUSTRIES*

Retail Business

East Side - The principal retail shopping area is along Main Street almost its entire length, Washington Street from Main Street to Walnut Street, Adams Street from Main Street to Walnut Street and the following short streets - Pine, Cherry and Walnut Streets - from Washington to Adams Street.

There are no other shopping areas on the east side; only scattered stores.

West Side - There are at least four shopping areas along Broadway, at Dousman Street, Walnut Street, Mason Street and Ninth Street. Outside these there are no definite lines of stores, being merely scattered throughout the residential areas. The number of stores dispersed along Shawano Avenue shows the tendency of this street to become a retail shopping street.

Wholesale Business

The main wholesale district is centered between Washington Street and the Fox River, only a few wholesale houses being located on the west side.

*See Exhibit No. 5, Use of Land Map

CITY OF
GREEN BAY
WISCONSIN
1920

PLANNING SURVEY
USE OF LAND MAP
Showing built-up area, wholesale and retail business districts, industrial and railroad properties, and residential areas

- Wholesale Business District
- Retail Business District
- Railroad, Industrial Properties
- Trunks of Building Lots
- Best Residential Areas

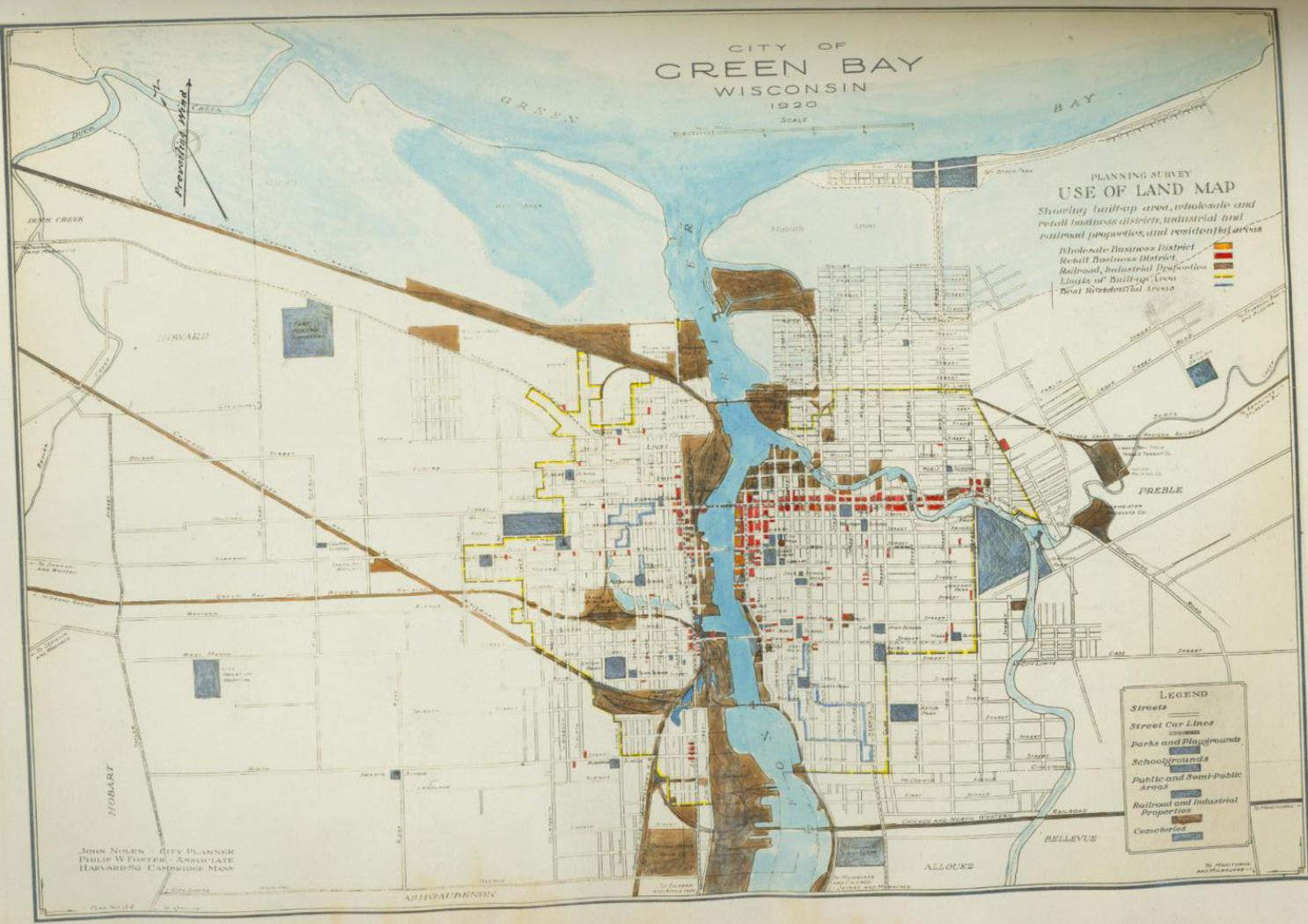
LEGEND

- Streets
- Street Car Lines
- Parks and Playgrounds
- School Grounds
- Public and Semi-Public Areas
- Railroad and Industrial Properties
- Cemeteries

JOHN NOLEN, CITY PLANNER
PHILIP W. FORSTER, ARCHITECT
HARVARD SQ. CAMBRIDGE MASS.

ARTHUR DENON

EXHIBIT 5



The following statement of approximate quantity and value of industrial products shows the extent of commerce done in Green Bay for the period February 1918 to February 1919.

<u>Industry</u>	<u>Approximate Quantity and Value</u>	
Paper	66,000 tons	\$6,500,000
Canned Goods	600,000 cases	2,000,000
Trucks	1,000	250,000
Harness		1,000,000
Ships	34	7,500,000
Gas Engines	35	17,500
Cooperage		350,000
Flour	68,000 bbls.	1,250,000
Hay		800,000
Grain	300,000 bu.	450,000
Potatoes	100 cars	100,000
Fruit	400 cars	900,000
Dairy Products	21,577,057 lbs.	5,000,000
Coal	1,000,000 tons	6,500,000
Wholesale groceries		4,700,000
Wholesale hardware		2,500,000
Motor vehicles	500	500,000
Farm implements		1,340,000
Meat packing	50,000,000 lbs.	12,000,000
Fish	3,000 tons	800,000
Grass textiles	303 tons	1,000,000
Lumber	13,000,000 ft.	2,600,000
Candy & Candy Products		600,000
	Total -	\$58,657,500

Extent of Industrial Sections

The industrial and railroad properties amount in all to 486 acres. This is divided as follows:-

East Side Industrial & R. R. properties	85.87 acres
West " " " " " "	<u>400.03 "</u>
Total -	485.90 "

Factories

The following industrial establishments are listed as members of the Manufacturers Division, Association of Commerce:

Alart-McGuire Company,	School Place & 12th St.
Allen A. Company,	Cedar & Washington St.
Allouez Mineral Springs Company,	Jackson & Chicago St.
American Tablet Company,	Willow & Webster Sts.
American Writing Paper Company,	De Pere, Wisconsin
Automatic File & Index Company,	143 North Pearl St.
Badger Show Case Company,	133 North Pearl St.
Brenner Candy Company,	129 South Washington St.
Brice, William J.	North Washington St.
Britton, D. W. Cooperage	517 North Monroe St.
Clark, Everett B. Clark Seed Co.,	McDonald & James St.
Colburn Lumber & Fuel Company,	Colburn, Wisconsin
Conradson Machine Tool Company,	State & Ninth Sts.
Diamond Lumber Company,	Tenth & State Sts.
Diekmann Mfg. Company,	South Pearl St.
East River Lumber & Fuel Co.,	1260 Main St.
Ebeling, John Milling Company,	136 South Washington St.
Fort Howard Paper Company,	South State St.
Gazette Candy Company,	622 Main St.
Green Bay Auto Top Shop,	522 Main St.
Green Bay Awning & Tent Company,	524 Main St.
Green Bay Barker Company,	Willow Street
Green Bay Drive Calk Company,	State & Ninth Sts.
Green Bay Foundry & Machine Works,	Arndt & Broadway Sts.
Green Bay Knitting Company,	1642 Morrow St.
Green Bay Paper Box Company,	Madison & Day Sts.
Green Bay Planing Mill,	Cedar & Adams Sts.
Green Bay Sausage Provision Co.,	Main Street,
Green Bay Specialty Company,	115 South Washington St.
Green Bay Sugar Company,	116 North Washington St.
Green Bay Wire Works,	Cedar Creek Road
Hagemeister Products Company,	Manitowoc Road
Hartmann-Bodilly-Suess Company,	120 North Pearl St.
Helgerson Foundry Company,	318 North Roosevelt St.
Hoberg, John Paper Company,	Elm Street,
Hudson & Sharp Machine Company,	1207 Main Street,
Indian Packing Company,	Morrow Street,
Joannes Brothers Company,	118 South Washington St.
Jobbers' Garment Manufacturing Co.	
Kant-Mis Spark Plug Company,	409 South Washington St.
Kress Colliar Factory	517 North Roosevelt St.
Larsen, Wm. Canning Company,	North Broadway

List of Manufacturers contined.

Libert, A. Machine Company,	324 North Roosevelt St.
Manger, E.C. & Sons Co.,	Harvey & Jackson Sts.
Manthey, Carl & Sons,	Chicago & Washington Sts.
Marinette-Green Bay Mfg. Co.,	South End State St.
McIntyre-Burrall Company,	Jefferson & Walnut Sts.
Nelson, H.J. Machinery Exchange,	131 North Pearl St.
Northern Corrugating Company,	Bridge & Arndt Sts.
Northern Optical Company,	210 Main St.
Northern Paper Mills,	Madison & Day Sts.
Northern Products Company,	106 North Van Buren St.
Northwest Engineering Works,	North Pearl St.
Oneida Motor Truck Company,	1800 South Broadway,
Paper Novelty Company,	112 South Pearl St.
Rothe, Joseph F. Foundry Co.	Willow & Quincy Sts.
Straubel Machine Company,	625 Willow St.
Willow Grass Rug Company,	1297 Velp Avenue,
Wis. Public Service Co.,	Bellin Building,

Industrial Aesthetics

There are several industrial establishments which stand out for the attention given to orderly layout, architectural decoration, and landscape development. One of these is the Northern Paper Mills. On West Mason Street near the bridge, an office (C. Reiss Coal Co.) is set on a narrow strip of land which is pleasingly laid out with flowers.

The Passenger Depot of the Chicago, Milwaukee and St. Paul Railroad is very attractive in its frontage on Washington Street, there being a lawn in front of the building and some effective shrub planting. Also the C.N.W.R.R. has done some landscape work in connection with their depot.

Trade Nuisances

A city ordinance approved in 1920 prohibits the emission of dense smoke within the city. Not all the

furnaces are equipped with smoke consumers and there is consequently considerable smoke emitted at times from the chimneys of many of the industrial plants. It should not be felt that the addition of a smoke consumer, even at a cost of three or four thousand dollars to an old building, is a hardship compared with the great benefits gained.

The other nuisances which arise from excessive noise, odor, dust, river pollution etc. would come more properly under an industrial survey.

Exhibition Hall

The Brown County Fair Grounds are situated outside the city limits, on the road leading to Depere on the west bank of the Fox River. These are accessible by street car from Green Bay.

Within Green Bay, the Armory at Hagemeister Park offers the greatest indoor space for public gatherings. This is accessible by street car along Walnut Street.

Meeting Halls

There are several halls in the city which are used by labor and fraternal organizations but no centralized meeting place or office building. There are:-

Building Trades Hall, 216 Pine Street
 I.O.O.F. Hall, 224-226 N. Adams Street
 Knights of Pythias Hall, 121-129 Main Street
 Moose Hall, 110 N. Washington Street
 Plumbers Union Hall, 226 Pine Street

Trade Training School

The Vocational School at 100-102 N. Adams Street is the only educational institution in the city which touches the subject of technical training in a wide sense. This school is maintained by the City of Green Bay but is state aided. It is open largely for part time (day) work and evening work.

Home Ownership

A large percentage of the houses are reported to be owned by their occupants, and the general regard shown to property would seem to bear this out. Generally speaking, the houses are well cared for, clean and painted, and the adjoining gardens and lawns show signs of considerable personal attention as well as the care of land cultivation. In 1916 the U. S. Census revealed only 2,206 tenements of houses out of 5,344; the remainder being owned by occupants.

Building Regulations

Architects come under the State law and are held to license to qualifications and registered. The Building Code used is the Wisconsin State Building Code. Plumbing and electrical work are controlled by City ordinances.

See Exhibit No. 1, Map of Land Map

8. HOUSING*

Existing Houses

The residences are largely of frame construction, the small house of five or six rooms being in the majority, although there are many larger houses of brick and stone. There are 6800 homes in the city.

Home Ownership

A large percentage of the houses are reported to be owned by their occupants, and the general regard given to property would seem to bear this out. Generally speaking, the houses are well cared for, clean and painted, and the adjoining gardens and lawn show signs of considerable personal attention as well as use made of land cultivation. In 1910 the U. S. Census revealed only 2,506 tenants of houses out of 5,448, the remainder being owned by occupants.

Building Regulations

Architects come under the State law and are examined as to qualifications and registered. The Building Code used is the Wisconsin State Building Code. Plumbing and electrical work are controlled by City ordinances.

*See Exhibit No. 5, Use of Land Map

Typical Lots

There is no uniform system of land division, but the following are fairly typical lot sizes:

Central Green Bay	53 ft. by 165 ft.
	60 " " 180 "
West Side	53 " " 150 "

Alleys and absence of alleys are fairly even all over the city.

Housing Shortage

There has been very little building during the last few years, and there are no developing residential areas, although several subdivisions have been laid out and are on the market.

The housing shortage is reported to be 200 (estimate of the Green Bay Press Gazette), and considerably less than a quarter of that number are being built. On the other hand, realtors have placed the shortage as high as 1,500. It is impossible to say how many prospective residents have been turned away from Green Bay owing to this, but there is the Health Department's record of marriages, which gives the number as 284 in 1919. Excluding nonresidents from this figure, the shortage in houses within the city might fairly be established as 200 or thereabouts. It has been said that 80% of the workers in industrial plants in the neighborhood

of Green Bay reside outside the city limits.

Undesirable Houses

The number of undesirable houses in the city - undesirable from the point of view of sanitation, etc. - is remarkably small. Only two or three instances were observed, and these were mainly old wooden shacks. The amount of overcrowding was negligible, and the city authorities are endeavoring to handle the few properties where this is now existing. In 1910 the city had a very good record in this particular, as evidenced in the U. S. Census Statistics.

Best Residential Areas

The best residential area on the east side is located in the neighborhood of South Monroe Avenue and Eliza Street. On the west side it is mainly centered along North Oakland Avenue and Dousman Street. In these two sections the highest residential land and property values are found.

Apartment Houses

There are thirteen buildings in the city accommodating more than two families each, according to City Directory information:

<u>Name</u>	<u>Location</u>	<u>Accommodation</u> <u>(Families)</u>
Argle Apartments	628 South Monroe Ave.	6
Astor "	132 South Madison Ave.	4
Bungener Flats	123-125 North Monroe Ave.	6
Diamond "	1500 State Street	7
Garot "	209-211 S. Washington St.	8
La Zarre Apartments	503-507 Walnut Street	4
Madison Flats	501 Cherry Street	17
Navarino "	N. Madison St. (S.W. Cor. of Pine Street.)	4
Van Dycke	934 Elm Street	4
	206 Adams Street, N.	4
	407 Dousman Street	6
	314 Main Street	11
	230 Pine Street	14
	Total -	95

9. PUBLIC UTILITIES*

Water

The water used in Green Bay is supplied by the City of Green Bay and is by a direct pressure and gravity system from 12 artesian wells. These wells have an average depth of 700 feet and are situated at:-

Adams & Mason Streets (Main pumping station).

" " " " " "

Adams Street, between Mason & Cass Streets.

" " " Cass & Lawe Streets.

Shawano Avenue & Platten Street (west side pumping station).

Whitney Park

Jackson Park

Astor Place

St. John's Park

Doty Street between Jackson & Van Buren Streets

Van Buren and Cedar Streets

Gray Street

The first five wells are now being operated and the others are held in reserve.

The main pumping station is at Mason & Adams Streets and is now being used while the west side pumping station at Shawano Avenue and Platten Street is used on emergency. At the west side station which is 2 miles west of the Court House is the water tower elevated 115 feet above the pump house and drawing from a well 20 inches in diameter and 900 feet deep.

*See Exhibit No. 6, Public Utilities Map

CITY OF
GREEN BAY
WISCONSIN
1920

PLANNING SURVEY
PUBLIC UTILITIES MAP
Showing water and sewer systems,
street car lines and areas supplied
with gas.

Water
Sewer
Car Lines
Area supplied with gas
Transmission Line

LEGEND
Streets
Street Car Lines
Parks and Playgrounds
Schools
Public and Semi-Public
Buildings
Business and Industrial
Properties
Churches

JOHN NOLEN - CITY PLANNER
PHILIP WORTER, ASSOCIATE
HARVARD Sq. CAMBRIDGE MASS.

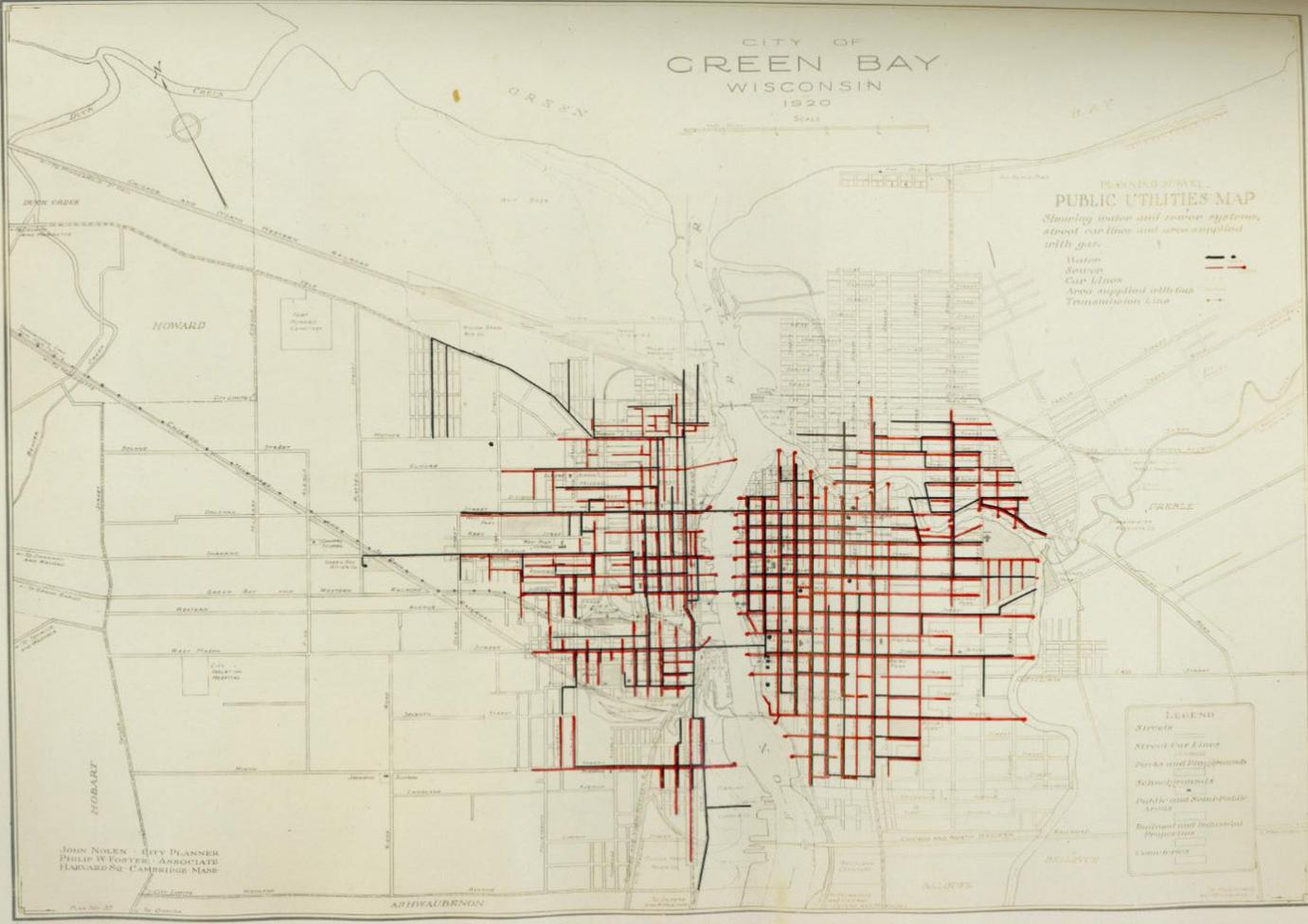


EXHIBIT 6

There are about 41 miles of iron water mains (6" to 18" diameter) and about 8 miles of concrete water mains (4" to 6" diameter). The domestic water pressure is 40 lbs. and the average daily consumption about 1,000,000 gallons.

The minimum rate per 500 cubic feet per quarter is 24 cents per cubic foot and the service charge per quarter for minimum 5/8 inch meter is \$1.25.

The water is pure according to the reports of the State Health Department Laboratories at Madison and because of the great depth of the wells is unlikely to be affected by any sewage contamination. No chemical purification is employed.

Objection has been raised by the City Health Department to the wooden reservoir and this is to be replaced by one of concrete, as required by state regulation.

There are 815 private wells in the city.

Gas

The gas is supplied by the Gas Department of the Wisconsin Public Service Company and the works are situated at Elm and Jefferson Streets.

At the present time the Wisconsin Railway Commission rules that gas supplied must give a monthly average of not less than 600 British thermal units total

heating value per 1000 cubic feet as referred to standing conditions of temperature and pressure and shall not fall below 500 as a minimum. A change in this regulation is now under consideration owing to the coal shortage.

The gas mains in service in January 1920 total a length of 53.592 miles and range from 3/4" to 16" in diameter.

The minimum rate per 1000 cubic feet per month is \$1.35 net and about 80,000,000 cubic feet of gas is used annually.

The increase gas consumption is evidenced by the fact that 72,741,000 cubic feet were sold in 1915 while the amount sold during the eleven months ending May 1, 1920 was 111,605,000 cubic feet.

Electric Power

The Wisconsin Public Service Co. supply the general electric power of Green Bay and have a generating plant at Washington and Crookes Streets and a Hydro-Electric Generating plant at High Falls at the Peshtigo River west of Marinette which power is conveyed to Green Bay by high tension transmission cables. This high tension line follows the line of the Green Bay and Western Railroad from the west and crosses the Fox River near

Bridge Street on a high steel structure.

The minimum rates are, for commercial lighting. First 24 K.W.H. per month at 12 cents per K.W.H., power rates at 11.5 cents per K.W.H. Changes have since been made.

Sewerage

The city sewerage system is fairly complete within the built-up area. There is difficulty in draining the 18th sewer district, located north of Mather Street and east of Platten Street, owing to topography and this has probably prevented the development of this area.

The sewage runs into the Fox and East Rivers. There are 23 outfalls into the Fox River and 22 into the East River. There is no filtration, purification etc. done to the sewage.

The city is divided into 18 sewer districts and a district tax is levied in 13 of these.

Commissioner Abrams has recently (April 22, 1920) made a communication to the City Council respecting flooding on the west side due it is said to water coming from south and west water sheds and finding its way along old water courses.

Telephone

The telephone service of Green Bay is in the hands of the Wisconsin Telephone Company. There are about 7,000

telephones in the city. The average number of local calls per day is 47,000 and the long distance calls 650. There are 150 telephone operators and assistants at the Green Bay exchange.

Telegraph

The city has granted franchises for the operation of telegraph service to:-

Postal Telegraph Cable Co.

Western Union Telegraph Co.

Both these companies have stations in the city.

Postal Service

The central Post Office is located on South Adams Street at the S.E. corner of Walnut Street. There are three branch stations and nine rural free delivery routes.

There are 6,433 hydrants and 27 fire alarm boxes, and the fire pressure of the water supply obtained is 30 to 100 lbs. per sq. inch.

The fire limits on both the east and west sides are outlined on Exhibit No. 3, Map of Long Map.

Police Protection

The police department consists of 25 men. The city jail has an accommodation of from 6 to 7. The jail was burned & replaced in July 1907. County Jail has an accommodation of from 20 to 25.

10. PUBLIC SAFETY AND HEALTH

Cemeteries

There are three cemeteries in Green Bay.

<u>Name</u>	<u>Location</u>	<u>Area</u>	<u>Remarks</u>
Fort Howard	Velp Ave. near city limits	40 acres	Only cemetery within city
Woodlawn	S. Webster Ave.		$\frac{1}{2}$ mile south and outside city limits
Allouez	Depere Road		$1\frac{1}{2}$ miles south and outside city limits

Fire Protection

There are three fire halls maintained by the city, two on the east side and one on the west side.

<u>Situation of Fire Hall</u>	<u>Equipment</u>
111-115 S. Washington Street	10 men, motorized
1016 Main Street	6 " 2 horses
114 S. Pearl Street	6 " motorized

There are 8,408 hydrants and 57 fire alarm boxes, and the fire pressure of the water supply obtained is 90 to 100 lbs. per sq. inch.

The fire limits on both the east and west sides are outlined on Exhibit No. 5, Use of Land Map.

Police Protection

The police department consists of 26 men. The city jail has an accommodation of from 6 to 7. The jail was without occupants in July 1920. County Jail has accommodation of from 60 to 75.

Hospitals

Green Bay is noted for the excellence of its hospitals. Patients are received from a wide area around the city. The following are the institutions and their accommodation:-

<u>Name</u>	<u>Location</u>	<u>Beds</u>
St. Vincent's	840 S. Webster Ave.	300
St. Mary's	403 S. Webster Ave.	150
Deaconesses	742 S. Webster Ave.	60

Health Center

During the war period a Red Cross center was inaugurated in Green Bay and it has since resulted in the establishment of the Health Center for Brown County.

The City has provided splendid quarters for the organization which now comprises four agencies.

The City Health Department with the Health Commissioners, Vital Statistician, Food Inspector and City Public Health Nurses.

The State Board of Health Department with public health nurse in charge.

The State Co-operative Laboratory with its trained bacteriologist.

The Brown County Chapter of the Red Cross with its Health, Nursing and Home Service Sections and also the Dental Clinic Department of the Junoir Red Cross.

Each of the four agencies keep their own identity, develop and carry out their own programs for their own special work and at all times they co-operate in the carrying out of an agreed unified program to raise the standard of health.

The educational work is carried on by all departments but is concentrated upon especially by the Red Cross whose slogan is - "Prevention of disease through education." This education is done through the distribution of health literature, furnishing speakers on health subjects and through the health information service. Several thousand pamphlets dealing with the education for health are distributed to the community each month. Health exhibits have also been prepared and displayed as means of showing the work done by the Health Center.

Other Health and Social Activities

There are four licensed homes for maternity cases, and a day nursery conducted by Catholic workers. The Green Bay Apostolate does social work among Catholics. There are no kindergartens privately conducted and no Y.M.C.A. although there is a Y.W.C.A. No particular work is being conducted among foreigners. The Associated Charities is an active body. Boy Scouts now established in the old County office Building.

Public Comfort Stations

The closing of 59 liquor saloons, owing to the operation of prohibition, has likewise reduced the number of facilities of men's sanitary accommodations. There are conveniences at the City Hall, Public Library, Court House, some of the parks and also at the Railway Stations but no actually public establishment along the streets where people mostly congregate. Hotels and office buildings - more essentially private buildings than any of those previously mentioned - are generally available, either open without restraint or by permission.

11. EDUCATION

Public Schools

The public educational institutions administered by the city are:-

No.	Name	Location	Area of School and Playground	1919-20 Teachers	1919-20 Scholars	Building Valuation	Land Valuation
1.	East High School	Webster Ave. & Chicago St.	1.81 a.	17	351	\$75,000	\$15,000
2.	West High School	Shawano Ave. opp. Yale St.	2.81 #	23	518	140,000	8,000
3.	Howe (Junior High)	Madison & Chicago Sts.	1.84	15	1002	92,000	25,000
4.	Whitney	Webster Ave. & Pine St.	1.20	14	528	112,000	5,000
5.	Woelz	Irwin Ave. & Elm St.	1.29	12	391	35,000	6,000
6.	Sale (Man. Training)	Howe St. & Monroe Ave.	.30	*	*	5,000	5,000
7.	Mason	Mason St. & Irwin Ave.	.87	4	193	10,000	4,000
8.	Lincoln	Shawano Ave. & Garfield St.	2.61	6	196	40,000	8,000
9.	Elmore	Elmore St. & Krooman St.	1.42	8	275	12,000	4,000
10.	Dousman	Dousman St. & Chestnut Ave.	1.73	9	337	15,000	12,000
11.	McCartney	School Pl. & Ashland Ave.	1.70	13	333	15,000	12,000
12.	Tank	Fifth St. & Oakland Ave.	1.15	8	281	15,000	10,000
13.	Norwood	Ninth St. & Norwood Ave.	1.34	5	212	40,000	2,000
14.	Jackson	Ninth St. & Ridge Rd.	1.43	1	31	4,000	1,000
15.	Chappel	Fisk St. & Shawano Ave.	.83	3	110	5,000	1,000
16.	Mather	Mather & Harrison Sts.	.39	1	51	2,000	1,000
a.	Open Air (Howe)			2	23		
b.	Deaf & Dumb			7	54		
Totals -			22.72	148	4,888	\$617,000	\$119,000

* Included in total of Howe School.

Exclusive of new playfield just acquired. There are four overhead teachers additional to above (2 music, 1 physical culture and 1 drawing). The Vocational School, 100-102 N. Adams Street is a state-aided institution under city control.

Parochial Schools

There are 10 day schools conducted by religious denominations in Green Bay:-

	<u>Teachers</u>	<u>Scholars</u>
St. Patricks Hubbard St. & No. Ashland Ave.	12	540
St. Josephs 12th Ave. & 9th Street	--	170
Cathedral S. Monroe Ave. & Doty Street	8	359
St. Johns Milwaukee & S. Jefferson Sts.	7	321
St. Willebrords Doty & S. Jefferson Sts.	4	222
St. Marys S. Irwin Ave. & Cass Sts.	3	173
St. Peters & Pauls Baird & Willow Sts.	5	372
St. Joseph's Academy Eliza, bet. S. Monroe & S. Quincy	--	171
German Luthern N. Van Buren & Cherry Sts.	1	33
Adventist W. Walnut St. & N. Ashland Ave.	<u>1</u>	<u>21</u>
Totals -	41	2,382

Note:- There are 32 churches of various religious denominations in the city.

Business Colleges

There are two business colleges in Green Bay viz:-
The Badger Commercial College, Y.W.C.A. Building, and
the Green Bay Business College, 219-221 Pine Street.

Public Libraries

The Green Bay Public Library is located on Jefferson Street opposite the Court House and was founded in 1899, by an endowment of the late Rufus B. Kellogg of \$15,000. The building is a Carnegie munificence and cost \$45,000. Three branch libraries have been established in various parts of the city but are not now being operated regularly.

Museum

The basement floor of the Kellogg Public Library Building is devoted to the purposes of a museum and has an interesting collection of material from outside sources as well as local historical relics.

Band Concerts

During the summer a series of Band Concerts are held in various parts of the city and are well attended and appreciated. Unfortunately many of them are held without the best accommodations being provided for either musicians or audience.

12. RECREATIONPublic Parks

The following parks and open spaces are within the city and under city jurisdiction:-

<u>Name</u>	<u>Acerage</u>	<u>Remarks</u>
Union Park Third St. & Greenwood Ave.	7.25	Improved
Astor Park Porlier & S. Clay Streets	8.30	Unimproved
St. James Park S. Madison & Spring Streets	2.27	Improved
Baird Park Baird St. & S. Webster Ave.	3.63	Improved
St. John Park S. Jefferson & Milwaukee Sts.	1.36	Improved
Jackson Park S. Madison & Howe Streets	1.36	Improved
Whitney Park Main & S. Jackson Streets	2.50	Improved
Astor Place S. Adams & Chicago Streets	.20	Improved
Joannes Park S. Baird St. & Walnut Street	37.00*	Beginning
New West Side Park Reed St. & Oxford Street	22.06	Unimproved
Total -	85.93 acres	

*The larger portion of the park contains 30 acres, the extension on east bank of East River contains 7 acres.

Joannes Park

On April 27, 1920, the City of Green Bay acquired this park by gift of the Joannes Brothers. It is situated on the extreme east of the city, close to the city limits, on the bank of the East River. It is actually divided into three sections, the major portion being on the west bank of the East River and the remainder reaching across low-lying land to Main Street. There are a number of fine trees, Elm, Pine and Balm of Gilead mostly in the center of the property. The soil is sandy, and near the river, swampy, but the average elevation of the park is about 10 feet above the river. The park is accessible by street car on Walnut Street or on Main Street from which it can be reached over the Baird Street Bridge. At present the land is unimproved. The City of Green Bay has not spent anything on the park since it came into its hands.

Bathing Beach

Bay View Beach came into the possession of the City of Green Bay in 1920. The owners of the land and property were the Rahr Realty Co., and Mr. Frank E. Murphy who conveyed it to the city for park and bathing beach purposes. It is situated on the shore of Green Bay at the extreme north end of Irwin Avenue and is outside the city limits of Green Bay being within the limits of the

town of Preble. The district is almost entirely marsh 18 inches or less above the water of the Bay. Irwin Avenue is an artificial road across the marsh which gives access to the Bay Shore at this point. The property had been previously developed as an amusement park and bathing beach. The existing pavilion and bath house etc. are available for public use. Although the land has been improved inroads of the bay and lack of maintenance have left it in a state of deterioration.

Commercial Amusements

There are four theatres in Green Bay, all showing moving pictures and two (Orpheum and Grand) giving vaudeville. These are the Bijou, 315-317 N. Washington Street, Colonial 106-108 N. Washington Street, Grand 310-312 N. Washington Street and the Orpheum 217-219 Walnut Street. The Royal Theatre at 105 S. Washington Street was burned down and is to be replaced by the Strand which is being constructed on the same site.

Hagemeister Park, Baird Street and East River, is an amusement park conducted by the Hagemeister Estate and it is used to a more or less extent for picnics and sports. The area is 21 acres.

Ball Field. The Packers Football Club (Indian Packing Plant) have now enclosed a field at Hagemeister Park for football games.

13. PUBLIC PROPERTIES*

<u>Name</u>	<u>Approximate Total Area</u>
Federal	
Post Office Building S. Adams & Walnut Sts.	.75 acres (open space .55 acres)
County	
Court House & Offices Walnut bet. Adams & Jefferson	1.60 acres (open space 1.30 acres)
County Jail Doty & Adams Streets	.89 acres (open space .71 acres)
Boy Scouts' Building 309 Walnut Street	1.21 acres (open space 1.10 acres)
City	
City Hall 122 N. Jefferson St.	.44 acres (open space .33 acres)
Public Schools (16)	(See Education)
Public Parks etc. (11)	(See Recreation)
Fire Halls (3)	(See Public Health and Safety)
Bridges (8)	(See Streets)

*See Exhibit No. 7, Public Properties Map

CITY OF
GREEN BAY
 WISCONSIN
 1920

SCALE

PLANNING SURVEY
PUBLIC PROPERTIES MAP
 Showing Parks, Schoolgrounds, Cemeteries,
 and other Federal, State, County, and City
 Holdings.

Parks
 Schoolgrounds
 Cemeteries
 Other Public Properties

LEGEND
 Streets
 Street Car Lines
 Parks and Playgrounds
 Schoolgrounds
 Public and Semi-Public
 Streets
 Railroad and Industrial
 Properties
 Cemeteries

JOHN NOLAN, CITY PLANNER
 PHILIP W. FOSTER, ASSOCIATE
 HARVARD UNIVERSITY, CAMBRIDGE, MASS.

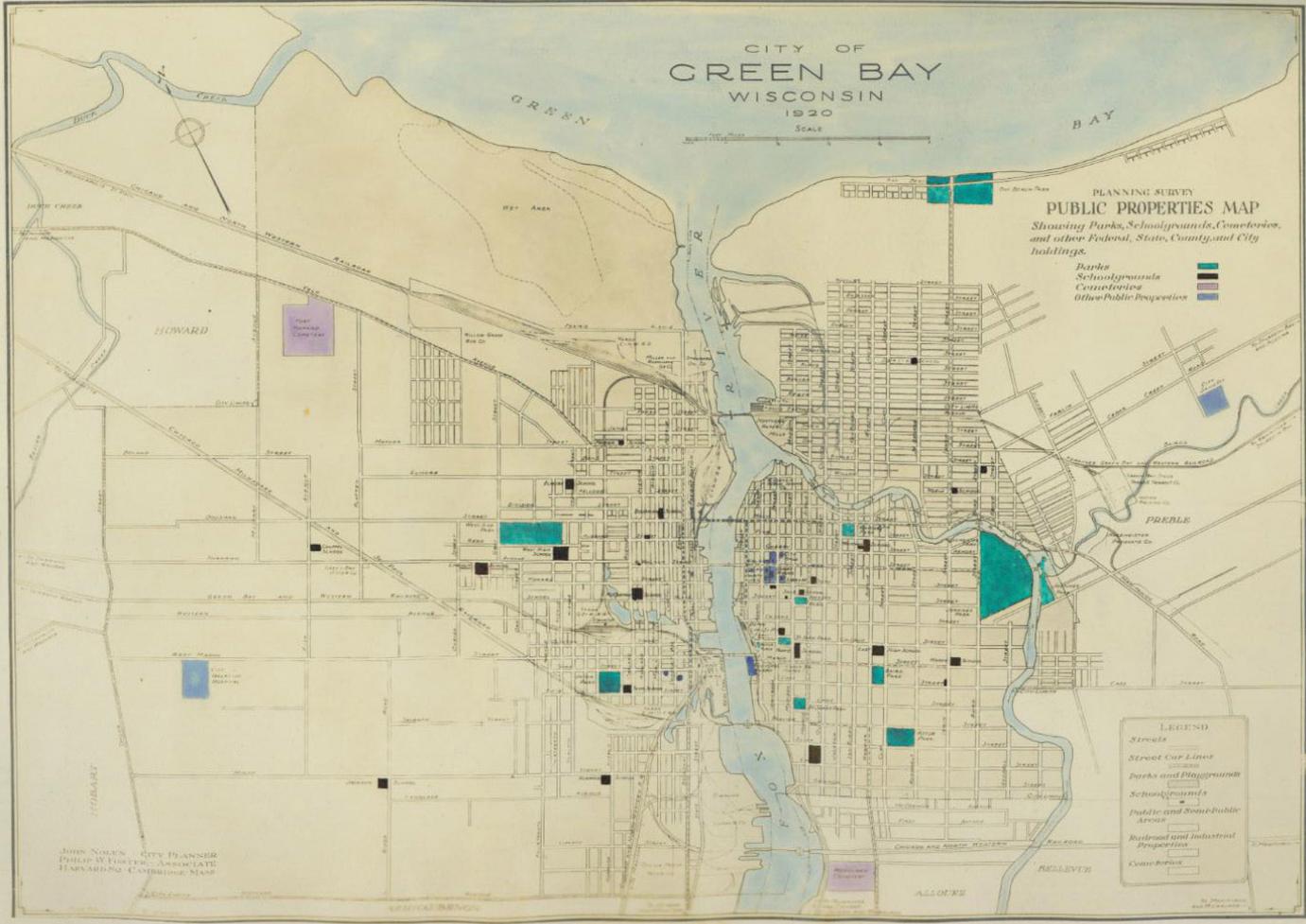


EXHIBIT 7

Other Properties Having Public Uses

<u>Name</u>	<u>Location</u>
Hospitals (3)	(See Public Health & Safety)
Cemeteries (3)	" " " "
Convent of Notre Dame	139 S. Monroe Avenue
Franciscan Monastery	S. Irwin Ave. & Cass Street
Odd Fellows Home	822 Grignon Street
St. Joseph's Convent	1015 S. Monroe Avenue
St. Mary's Home	403 S. Webster Avenue
Sisters of Our Lady of Charity	Porlier St. & S. Webster Avenue
Sisters of St. Agnes	1325 - 13th Avenue
Railroad Stations (3)	(See Transportation)

14. REGIONALGreen Bay and Brown County

The City of Green Bay is situated in what might be termed the interior of Brown County. The agricultural resources of the County naturally gravitate to Green Bay as a market and distributing point. Within the city area itself the amount of land devoted to farming is very small.

Brown County

The land area of Brown County is about 340,000 acres of which about 60 per cent is improved farm land. Scattered woodland amounts to about 50,000 acres. The soil is largely red till or clay loam with more or less sand around Green Bay. In the neighborhood of Green Bay this soil is ideal for truck gardening and this is practiced here more than in any other part of the Fox River Valley. Small farms are in the majority, the average being 83 acres. In 1915, some 93 per cent of these were operated by their own owners. The growing season is 150 days long and the first killing frost is about October 1st and the last, May 10th.

Agricultural Resources around Green Bay

The Wisconsin State Department of Agriculture issued the following statistics in May 1919 of the resources of Brown County:-

Agricultural acreage 1918

<u>Product</u>	<u>Acres</u>	<u>Product</u>	<u>Acres</u>
Corn	12,653	Alfalfa	156
Oats	36,422	Clover & Grass Seed	1,800
		(1917)	
Barley	11,522	Wild Hay	3,910
Spring Wheat	8,252	Dry Peas	2,329
Winter Wheat	1,254	Cabbage	977
Rye	8,920	Tobacco	3
Buckwheat	145	Peas for canning	1,185
Potatoes	3,589	Sugar Beets	743
Dry Beans	194	Root Crops	678
Clover & Timothy	60,039		

Live Stock 1918

Milk Cows	32,198
All Cattle	40,985
Mature Swine	7,063
Sheep	958
Horses & Mules	11,756

A considerable amount of poultry is raised annually.

Destination of Product

The acreage near Green Bay is largely given over to the cultivation of the following, which are destined for the various canning and other factories:-

Peas, beans, beets and tomatoes for canning factories.
Cucumbers for pickle factories.
Sugar Beets for beet sugar factories.

Dairying is a great agricultural interest, and cheese making is centered in some 40 cheese factories while butter making has over 20 creameries and skimming stations.

Public Markets in Green Bay

The City of Green Bay has established the following locations for public markets:-

West side - McCartney School Grounds, School Place and Ashland Avenue - Market held on Saturdays.

East side - Whitney Park - Market held on Wednesdays.

Marsh Lands

Green Bay has about 1,080 acres of marsh land within the city limits. This is situated on the west side, north of the Chicago and North Western Railroad tracks. On the east side of Green Bay the marsh land lies within the limits of the adjoining town of Preble. There are about 600 acres west of Irwin Avenue and about 700 acres east of Irwin Avenue up to a point as far as the projected line of Wisconsin Avenue in Lake Side Plat.

With northeasterly gales there is a rise of two feet of water over the marsh land, this water entering the region by way of the various sloughs.

The State of Wisconsin contains about $2\frac{1}{2}$ million acres of undrained swamps and overflow lands together with

some $4\frac{1}{2}$ million acres of marsh and other poorly drained lands.

The reclamation of the marsh lands of the state, it was estimated some years ago, could be effected at a cost of less than sixty-seven million dollars and would result in a profit above cost amounting to one hundred and fourteen million dollars. One of the largest projects of this kind is now being completed in Oconto County, Wisconsin, which will reclaim 10,000 acres of marsh.

The land near Green Bay, where reclaimed, is now yielding excellent crops. The existing marsh is doing little more than produce some willow grass for manufacturing purposes - although it has been established that many swamp products might be developed, such as peat for fuel or in the form of producer gas, Sphagnum Moss, chemical products, such as alcohol, fertilizers, paper, woven fabrics, artificial wood, mattresses, packing materials and dye stuffs.

PHOTOGRAPHS



Bath House. Bay View Beach



Shore Walk. Bay View Beach



Shore Walk and Bath House
Bay View Beach



Hagemeister Park



Bandstand
Hagemeister Park



Skating Rink
Hagemeister Park



Hagemeister Park. Existing Views
Present Entrance



Carnival Street



House Located in Joannes Park
Could be used by Superintendent



C. M. & St. P. R. R. Station



River Bank, end of Adams Street



West Bank of River on way to Depere



Dutchman's Creek. West bank, Fox River



Walnut Street
Looking Toward Hagemeyer Park



South Adams Street
Trees Mutilated by Electric Co.



Fox River. Looking south.
Toward Walnut St. Bridge



Near mouth of Fox River



Fish Pier. Fox River



Another Fish Pier
Examples of the Fishing Industry



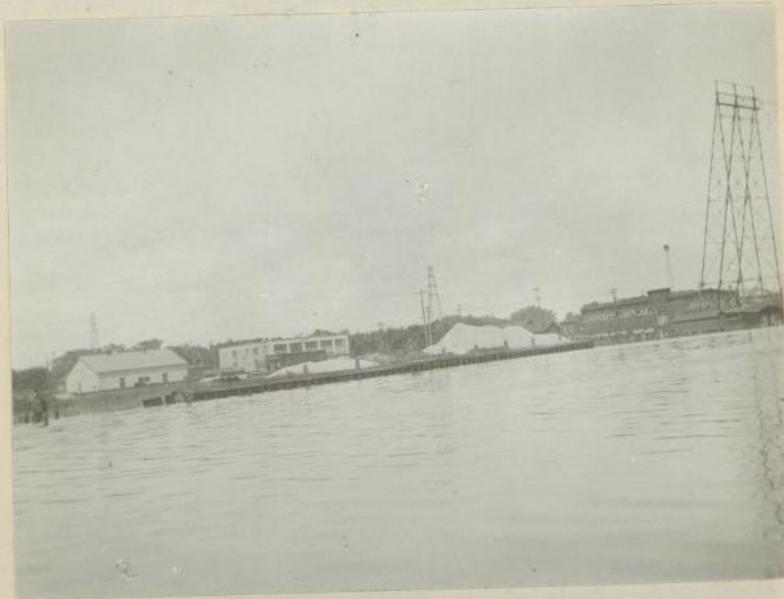
Northern Paper Mills



East Bank, Fox River above Walnut St. Bridge



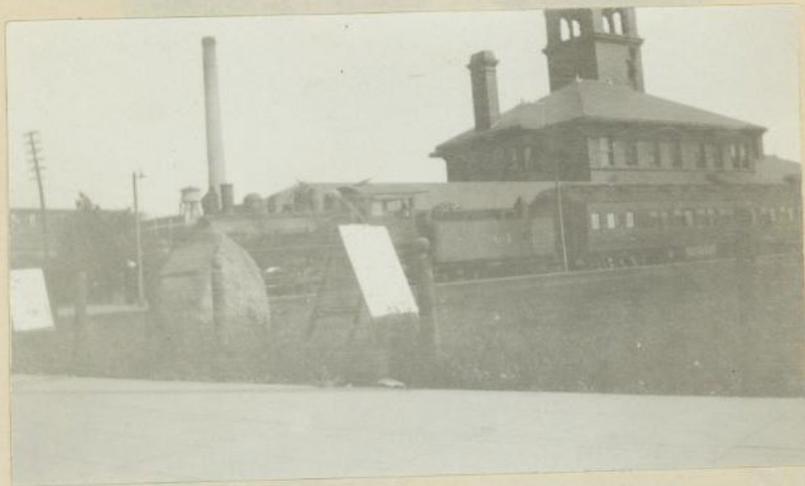
Example of the Coal Trade



West Bank of Fox River at Howard Street



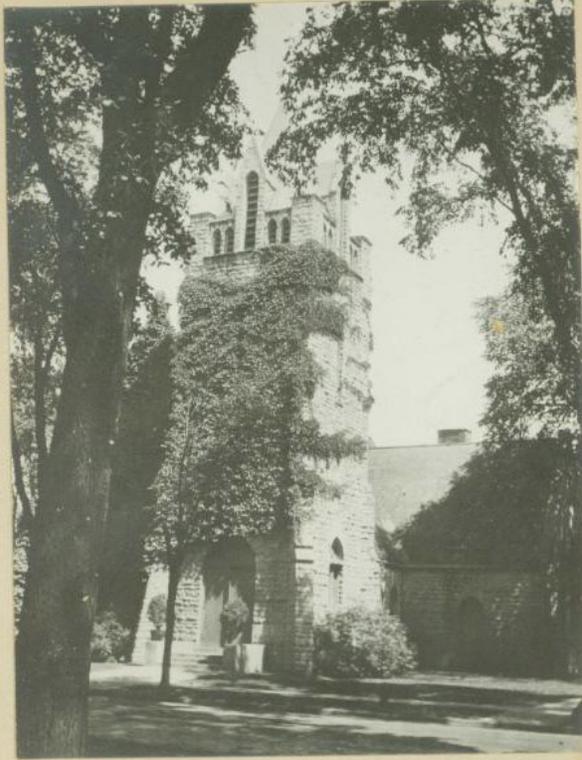
Fox River



G. & N. W. R. R. Station



Main Street Bridge



Episcopal Church



Whitney School
Showing Typical Small Yard