Indiana Central Canal - Indianapolis Division
Parallel to West Street between Ohio Street and Interstate 65
North of Eleventh Street, and
Parallel to Ohio Street between Senate Avenue and West Street
Indianapolis
Marion County
Indiana

HAER No. IN-32

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD NOTES

HISTORIC AMERICAN ENGINEERING RECORD
MID-ATLANTIC REGION NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR
PHILADELPHIA, PENNSYLVANIA 19106

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HISTORIC AMERICAN ENGINEERING RECORD

Indiana Central Canal - Indianapolis Division

HAER No. IN-32

Location:	Parallel to West Street between Ohio Street and Interstate 65, just north of Eleventh Street; and parallel to Ohio Street between Senate Avenue and West Street. Indianapolis, Marion County, Indiana
Date of Construction:	1836
Builder/Contractor:	State of Indiana
Present Owner:	City of Indianapolis Department of Metropolitan Development 1860 City-County Building Indianapolis, Indiana 46204
Present Use:	None
Significance:	The Indianapolis Division of the Indiana Central Canal is possibly the oldest remaining man-made structure or facility in Indianapolis-Marion County. The canal is listed on the Indiana State Register of Historic Places. On August 11, 1971, the American Water Works Association recognized the canal between 18th Street and the headwaters at Broad Ripple as an American Water Landmark. In 1975, the canal was also cited by the Historic Landmarks Foundation of Indiana, as part of a detailed neighborhood survey which focused on the downtown segment of the canal. The Indianapolis Historic Preservation Commission has also cited the canal as historically significant in a broad brush survey of potential National Register sites in Indianapolis-Marion County.
Report prepared by:	Jay W. Alley Division of Economic and Housing Development City of Indianapolis 148 East Market Street Indianapolis, Indiana 46204 March 22, 1985
Transmitted by:	Jean P. Yearby, HAER, 1985

The Central Canal was originally constructed as part of a massive Indiana internal improvements initiative which included as a statewide system of canals (see Exhibit A, Map A1), roads and railroads. The intent underlying this internal improvements initiative was to improve the transportation system in Indiana in order to further Indiana commerce and industry and the transportation of people and products throughout the State. The statewide system of canals was intended to connect Indiana markets with those of the more densely populated eastern portion of the United States.

The internal improvements initiative resulted in passage of the Mammoth Internal Improvement Bill of 1836, adopted by the Legislature on January 27, 1836. At this time in the state's history, Indiana had been a state for less than 20 years and was primarily forest and wilderness with most of the state's population clustered around the Ohio River valley in southeastern Indiana. The fledgling state capital in Indianapolis had only been platted in 1821 and was in an area of dense forest and swamp lands, isolated from most of the rest of the state by the lack of an adequate transportation system. Lt. T. A. Morris later recalled the area as one of rough terrain with a large swamp which contained water year round, located south of Broad Ripple (2, p. 116). The attached map of Indianapolis (Exhibit A, map A2) depicts the city as it existed in 1836 prior to the initiation of canal work.

In recommending passage of the Internal Improvement Bill of 1836, Governor Noah Noble (who had been elected on a platform advocating internal improvements) cited public interest in "... such internal improvements as will facilitate the transportation of such surplus to market, and thereby increase the rewards of industry and enhance the general value of property" (12, p. 14). Indiana chose New York State as a model, feeling that the success of the Erie Canal could be repeated in Indiana (1, p. 15). Indiana's legislators eagerly anticipated benefits from the canal construction including increased commerce through faster and cheaper transportation, water power for industrial purposes, and an enlarged tax base. The bill provided for almost 1,300 miles of canals and railroads to be funded by $10 million in bonds and loans. The fact that this figure was twenty times the state government's estimated revenues for 1836 indicates the magnitude of the undertaking (20, p. 1). So enthused were legislators that House rules were waived and the bill's second reading requirement was dropped (13, p. 22).

Under the bill, the $3 million Indiana Central Canal was to be constructed "between Fort Wayne and Logansport, running thence to Indianapolis, thence down the valley to the west fork of White River, and thence by the most practiced route to Evansville, on the Ohio River (18, p. 8). The Central Canal would connect the Wabash and Erie Canal betwen Peru and Worthington, Indiana (18, p. 6). Work began on the Central Canal in October 1836 after speculators along the canal route had already inflated real estate values (26, p. 98; p. 114).

The Indianapolis Division of the Central Canal was one of the first improvements undertaken, yet before it was finished, the state's financial difficulties were already becoming apparent. Surveyor's salaries alone exceeded the annual cost of state government operations (9, p. 79). Shady financial deals, over-expansion, poor fiscal management and overly optimistic cost estimates, combined with the Panic of 1837, left the state with a debt of nearly $13 million by 1840. Ten million dollars of this total had been spent on internal improvements, of which one million dollars had been spent on the Central Canal, even though only a fraction of it was near completion.

When word of the financial fiasco hit, work stopped in 1839 with the Indianapolis Division being the only portion of the Central Canal completed. Indiana was forced to sell holdings and issue more bonds to save it from bankruptcy. Despite the millions spent on canal, the Central Canal could have been opened between Noblesville and Martinsville, Indiana, with only a small additional expenditure. But, as W. R. Holloway noted in 1870, "...everything was left, the spade in the dirt, the wheelbarrow on the plank, when news of the State's bankruptcy overtook it. (11, p. 67). Disillusioned and devastated, the state legislature dropped its ambitious plans for extensive internal improvements. Of the 459 mile canal system proposed by the bill (Exhibit A, map A1), only 43 miles were ever completed. Of this total, 11 miles were completed for the Indianapolis Division of the Central Canal (Exhibit A, map A3), with only 8.79 miles still existing and watered today (Exhibit A, map A5). One important result of the abandonment of internal improvement plans brought on by the state's effective bankruptcy was a provision of the state constitution adopted in 1851 by the State's General Assembly which prohibits deficit spending by the state. The provision is still in effect today (17, p. 17).

Construction on the Indianapolis Division began in October 1836 when contracts were let for work from Broad Ripple to Indianapolis. After the land was grubbed and cleared to a width of 100 feet, muck ditches were built on both sides and excavations were made by four man teams which filled horse cars with earth to be dragged away (15, p. 13; 9, p. 85) Hoosier artisans were hired to construct bridges, aqueducts, wooden walls and masonry locks, since the Irish immigrants involved in the clearing and excavating processes were too "awkward" for such skilled work (15, p. 13; 9, p. 87). Malaria, cholera, powder blasts and kicks from mules caused roughly one life to be lost for every six linear feet of canal constructed (17, p. 17; 21, p. 150).

The only portion of the Indiana Central Canal ever completed was the 11-mile long segment called the Indianapolis Division (Exhibit A, map A3). As completed, the Indianapolis Division closely followed its present route from Broad Ripple to Ohio Street (Exhibit A, map A5). Two stone locks at Market Street protected the mill basin which ran west to Blackford Street, flowing

into a U-shaped basin before it turned south down Giesendorf Street and then emptied into White River below Washington Street (Exhibit A, map A3). Prior to 1874, the canal continued south of Market Street along Missouri Street. Because the state owned the public streets at this time, Missouri Street was vacated for the canal (26, p. 16). The canal then flowed south to Merrill Street where it turned southeast and continued to Arizona Street, thence turning due south along Meridian Street before turning southwest to parallel Bluff Road until it reached Pleasant Run where a partially finished aqueduct marked the end of the canal. Further south near Kansas Street, two wooden locks were constructed but the surrounding gates were never completed (26, p. 115). Between 1872 and 1874, the canal south of Market Street was abandoned and filled in (compare Exhibit A, map A3 and Exhibit B, Item B1 to Exhibit A, map A4).

Despite the financial problems for the state, which resulted from the massive internal improvements program, canal construction had a significant impact on Indianapolis and on Indiana. As abovementioned, speculators caused real estate values to rise along the proposed canal route. From its inception, internal improvements and the Bill of 1836 which authorized them were the focus of heated debate in the state legislature. Canal construction required the surveying and excavation of acres of forest and swamp lands. Immigrants supplying cheap labor moved into Indianapolis and new industries clustered around the canal route, hoping to utilize water power provided by the canal.

When work on the canal began, Indiana anticipated an abundance of water power and purchased land adjacent to the planned mill basin near Market Street for industrial development (19, pages 1-4). On June 11, 1839, a few weeks before the Indianapolis Division officially opened, leases were opened for water power, but the response was disappointing. Leases were taken out by only ten mills, including woolen, cotton, paper, grist saw and oil mills (11, p. 68). Disruptions in the canal's flow, due to breaches of the weak bands and grasses in the canal bed, hindered industrial use of the canal's power in its early years.

Persistent problems with the canal's flow continued to hinder industrial development until 1870 when one of the most important uses of the canal was initiated by the Water Works Company of Indianapolis. Organized by James O. Woodruff (founder of Woodruff Place, a National Register Historic District), the Water Works Company of Indianapolis was granted a charter by the Indianapolis City Council to provide a water supply and fire protection for the city, utilizing the canal water. Woodruff's company purchased the canal and built the West Washington Street Pumping Station (26, p. 68). The pumping station relied on the canal to drive water wheels which pumped water throughout the city. Hydraulic turbines, installed in the pumping station in 1908, utlilized the canal water until 1969 when the station was closed (9, p. 183), thereby terminating its role in supplying Indianapolis' fresh water. While many industrial leases for canal water usage were still in force

during the late 1800s, the canal's use as a power source gradually declined. Even so, adjacent industries still used it for boiler feed, condensing water and fire lines (28, p. 7). Even today, the Indianapolis Power & Light Company relies on canal water to feed its steam generating plant south of Military Park. To illustrate the canal's early failure as a power source, annual revenues of $14,000 had been protected, but actual receipts for the first six years (1840-1845) totalled only $10,000 (7, p.1; 6, p. 2).

In most respects, the canal never lived up to initial expectations. Though inspired by the successful Erie Canal in New York State, Indiana canals never reached the vast agricultural and commercial markets of the eastern United States nor did the statewide transportation network ever reach completion in Indiana. While commercial activity initially increased during construction of the canals, such activity later grew to rely on other catalysts, most notably the railroads. In a like manner, the economy of Indianapolis fluctuated with the successes and setbacks of the canal.

The Indianapolis Division of the Central Canal was nonetheless successful in certain respects and had important impacts on local commerce, transportation and industry. Locally, the canal was used to transport grains, corn, hay and flour from mills in Broad Ripple (26, p. 115). Local commerce was strengthened due to the use of local resources and manufactures during canal constructon. Further local impact is evidenced by the boom in real estate values along the canal's route and by the economic depression which followed the canal's failure (11, p. 67).

The canal had other important impacts on the growth and composition of Indianapolis. When contracting began for the canal's construction, workers were offered $20 per month with fare and lodging "of the most comfortable character" (27, p. 1). The resulting heavy influx of immigrants (mostly Irish) drawn by the simultaneous construction of the National Road and the canal, created "long lines of little shanties stuck among the heaps of sand, piles of logs, and brush cut out of the line of the canal" (26, p. 115). The land from 16th Street to Military Park became known as the "Chain", with its thousand men imported to build the canal referred to as the "Chain Gang" (17, p. 17).

Despite the provision that "each contractor will ... discourage and prevent the use of spirited liquors by the laborers engaged in his contract, "there were still incidents of theft and violence (22, p. 6; 26, p. 115). On one occasion in 1838, a row between "Corconions" and "Fardowshers" raged for nearly a day, engaging several hundred persons (26, p. 115). Despite the violence and liquor, the canal was completed and many of the burly immigrants became permanent residents of Indianapolis.

The canal was also an important recreational area in Indianapolis and has historically accommodated a range of activities such as fishing, swimming, baptisms, canoeing, boating and ice skating, along with bicycling, along the the canal tow-paths. After the canal was first watered at the headwaters in Broad Ripple, it took several days for the water to reach Indianapolis, since much of it sank into the canal's gravel bed. Boys waited for days to see the water finally come creeping down to Market Street (25, p. 16). For the canal's official opening on June 27, 1839, a packet drawn by two horses brought officials to Broad Ripple for the ceremonies (25, p. 16).

Almost immediately, the canal began attracting Indianapolis' citizens for leisure time activities. As early as 1839, advertisements assured canal boat passengers that "good order will at all times be maintained on the boat, and every attention paid to render those comfortable who may take passage" for a fee of $1.00 (14, p. 3). Barges hauled citizens up to Crown Hill Cemetery for Memorial Day ceremonies (23, p. 4). Other boats often towed picnic parties to Golden Hill or Fairview Park (now site of Butler University) throughout the late nineteenth century (8, p. 24).

Good swimming holes were reported near St. Clair Street and under the Fall Creek aqueduct. Swimming gradually declined in popularity as young ladies paddling canoes to Golden Hill often complained to the water company about the attire and disposition of swimmers (5, p. 21; 9, p. 183). By the early 1900s, such complaints combined with the installation of filter beds as part of the water supply system to cause swimming and boating to be prohibited since the water had to be allowed to clear as part of the filter bed's process (16, p. 5). Also in the late 1800s, highwheeler bicycles became popular and the League of American Wheelmen discovered that the tow path between Broad Ripple and the 30th Street toll gate was an excellent biking path (10, p. 7; 9, p. 183) (Exhibit B, Item B16).

Some of the most significant engineering work on the canal can be found in the various aqueduct structures which have carried the canal water over Fall Creek near 23rd Street. The present aqueduct (Exhibit B, Item B13), constructed in 1904, was the final resolution to a problem which had persistently plagued the canal. The original structure of 1838 was constructed of timber crib piers filled with boulders. This structure was replaced in 1870 by another wooden aqueduct made of coursed rubble masonry and cement abutments and piers. In 1880, the Massillon Bridge Company constructed an iron and wood replacement aqueduct which was then replaced by a steel structure in 1890 (19, p. 30).

In 1904, the entire aqueduct structure was swept away by a flood and work commenced on the present aqueduct. At that time, the properties of reinforced concrete were in the infant stages of being explored. Invented in France in the 1860s, reinforced concrete was first used for American bridge construction in 1889 (3, p. 173; 24, p. 106). By 1894, Josef Melan had designed a concrete bridge using curved I-beams for reinforcement - a system which he patented in the same year (4, p. 195). Construction of the 1904 Fall Creek aqueduct makes

it an early example of the use of the Melan system. The Melan system was chosen because of the need for a sturdy, durable structure. In addition to the steel I-beam reinforcement, the 1904 aqueduct was further strengthened by waterproofing and the inclusion of expansion joints. Concrete piers, abutments, and arches with wing walls helped retain the canal embankments. While the floods of 1913 destroyed most other Midwestern aqueducts, the Fall Creek aqueduct stood fast and has lasted longer than all of its predecessors combined.

In summation, the Indianapolis Division of the Indiana Central Canal has played a significant role in the early history of Indianapolis, even though the statewide system of canals, of which the Indianapolis Division was a small part, was a dismal failure, resulting in an economic depression and virtual bankruptcy for the State of Indiana.

PART I. HISTORICAL INFORMATION

A. Physical History

1. Date(s) of construction: 1836-1839

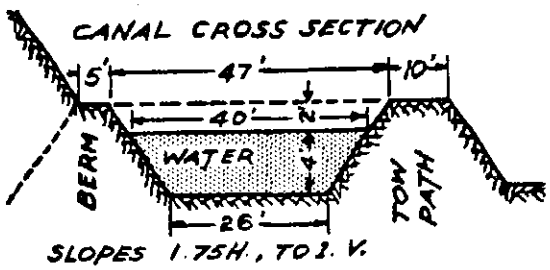
2. Engineer: Lieutenant T. A. Morris

3. Original and subsequent owners:

State of Indiana	1836-1850
George G. Shoup, James Rariden and John S. Newman	1850
Francis A. Conwell	1851
M. T. C. Gould and Jeremiah Jackson	1851
Central Canal Manufacturing, Hydraulic & Water Works Company	1851-1853
Jeremiah Jackson & William Jacob Burnett	1853-1856
Jeremiah Jackson	1856
Nicholas E. Payne	1856
Calvin T. Chamberlin	1856-1858
Nicholas E. Payne	1858
Henry R. Selden	1859-1863
James O. Woodruff, Nicholas E. Payne and the Indiana Central Canal Company	1863-1870
Water Works Company of Indianapolis (predecessor to the Indianapolis Water Co.)	1870-1975
Indianapolis Water Company (portion north of 21st Street)	1975 to date
City of Indianapolis (portion south of 21st Street)	1976 to date

4. Builder, contractor: State of Indiana

5. Original plans and construction:



(Source: 9, p. 54)

6. Alterations:

1872-1873:	Canal south of Market Street filled in after abandonment (compare Exhibit A, Map A3 and Exhibit B, Item B1 to Exhibit A, Map A4).
1959-1960:	The right angle bend in the canal south of Ohio Street was altered to form two smooth 45 degree bends during site preparation for construction of the State Office Building (compare Exhibit B, Items B8 and B9 to Exhibit B, Photo B11).
1970-1971:	The canal was placed underground into a 60" pipe between 11th Street and 13th Street during construction of the Interstate 65 ramp system.
1983-1984:	During replacement of the West Street Bridge, the canal was placed underground into 48" and 24" pipes along the southern edge of Military Park.

Supplemental historical photographs and descriptions (Exhibit B) depict the above alterations. Recent discussions with representatives of the local historic preservation community indicate that two areas of the canal are no longer considered historic due to their significant alteration in the past. These areas are those located south of Ohio Street and between 11th and 13th Streets.

B. Historical context:

The Indianapolis Division of the Indiana Central Canal was constructed between 1836 and 1839, as part of a statewide canal system following the passage of the Mammoth Internal Improvement Bill of 1836 by the state legislature. At the time of the bill's passage, Indiana was barely 20 years old as a state and Indianapolis had been state capital for just 15 years. Much of the state was forest and

wilderness, and Indianapolis was isolated from much of the remainder of the state by an inadequate transportation network, having only a few rutted roads and no major navigable waterways available for use in transporting people and products to and from the young state capital. As such, the population of the state clamored for internal improvements in order to ease transportaton problems within Indiana and to provide linkages for Hoosier markets with the lucrative markets in the eastern United States.

Since gaining statehood in 1816, Indiana had watched other states, such as New York, Ohio and Pennsylvania, forge ahead with internal improvements. The 1836 bill was passed to answer the demonstrated need for improvements in Indiana's transportation network. In view of the success of New York's Erie Canal, and following earlier work in Indiana on the Wabash-Erie Canal connector, the 1836 bill mandated a statewide system of canals along with railroads and road improvements. The Indianapolis Division was but a small part of the statewide canal system and became the only portion of the Indiana Central Canal ever to be watered. Indiana's canal plans proved overly ambitious and canal construction ceased in 1839 due to the impending bankruptcy of the state which had been brought only by the massive state debt incurred by the internal improvements authorized by the 1836 bill.

PART II. ARCHITECTURAL INFORMATION

A. General statement:

The Indianapolis Division of the Indiana Central Canal was inspired by and modelled after other existing canals of the early 1800s, most notably the Erie Canal in New York State. As such, the remaining portion of the canal is a good example of the engineering skills available at the time.

1. Architectural character: Linear

2. Condition of fabric: Deteriorated but stable

B. Description of exterior:

The canal consists of earthen banks with a clay liner and flows between banks which ar roughly parallel to one another with some areas bayed out or pinched in due to past alteration or collapse of the canal banks.

1. Overall dimensions:

Length of entire system: 8.79 miles
Length of downtown portion: 5,400 linear feet approximately
Average width at top of water: 50 feet

2. Structural system: earth and clay

C. Site:

Entire system: Washington and Center Townships in Indianapolis, Marion County.

Project site: Downtown Indianapolis between 11th, Senate, West and Market Streets

1. General setting and orientation:

The downtown portion of the canal, which is the subject of this HAER documentation, runs through the most heavily urbanized area of Indianapolis between Interstate 65 at 11th Street and Military Park, west of West Street. From Interstate 65, south to St. Clair Street, the canal lies in a southeast-northwest orientation. At St. Clair Street, the canal bends due south and lies in a north-south orientation until it reaches Ohio Street. At Ohio Street, the canal bends in a southwesterly direction for a short distance (roughly 300 feet), then bends again due west, thence lying in an east-west orientation until it goes into pipes underneath the West Street bridge. As an integral portion of downtown Indianapolis, the canal lies near the Indiana University-Purdue University at Indianapolis (I.U.P.U.I.) campus and historic Military Park, while travelling through the central business district, the State Office Complex and a declared urban renewal area known as the Northwest Redevelopment Project.

The remainder of the canal north of 13th Street will not be impacted by this HAER project. This segment of the canal begins at White River in Broad Ripple, north of 63rd Street. The canal then runs west-southwest through residential areas, paralleling Westfield Boulevard to 52nd Street, thence continuing west-southwest through Butler University property and bending west near 44th Street to parallel White River until reaching U. S. Highway 421. Thence the canal bends south, paralleling Woodstock Drive to 38th Street, thence southward parallel to White River Parkway to near 33rd Street where it bends southeast to parallel Penn Central railroad tracks and continues southeast over the Fall Creek aqueduct near 23rd Street. Thence the canal

continues southeast until it reaches Interstate 65 downtown near 13th Street, where the canal goes into pipes beneath the Interstate 65 ramp system.

PART III. SOURCES OF INFORMATION

A. 1. Drawings

Fatout, Paul. Indiana Canals. West Lafayette, Indiana, Purdue University Press, 1972.

2. Maps

Fatout, Paul. Indiana Canals. West Lafayette, Indiana, Purdue University Press, 1972.

Indiana State Library - Indiana Division: map files.

B. Early views

Exhibit B:

Bass Photo Company (files)
308 South New Jersey Street
Indianapolis, Indiana 46204

Indiana State Library - Indiana Division

C. Bibliography

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7. Documentary Journal, 1845 (29th Session) Part 2, Report #15. Indianapolis: J. P. Chapman, State Printer, 1846.

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11. Holloway, W. R. Indianapolis. Indianapolis: Indianapolis Journal Printers, 1870.

12. Indiana House Journal, 1834-35 (19th Session). Indianapolis: Douglass and Maquire Printers, 1834.

13. Indiana House Journal, 1835-36 (20th Session). Indianapolis: Douglass and Noel Printers, 1836.

14. Indiana Journal 7/27/1839, p. 1.

15. Indianapolis Journal 1/29/1899, p. 13.

16. Kleinhenz, John E. Notes, p. 4.

17. Knap, Ted. "Rowboat Trip Down Canal Stirs Fond Memories of Another Era", Indianapolis Times 9/12/1956, p. 17

18. Laws of Indiana 1835-36 (20th Session). Indianapolis: Bolton and Emmons, 1836.

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20. Palmer, N. B. "Reports of the Treasure of the State - 12/29/1835", Documentary Journal, 1835 (20th Session) Report #1.

21. Payne, Robert. The Canal Builders: The Story of Canal Engineers Through the Ages. New York: The Macmillan Co., 1959.

22. Rabb, Kate Milner. "A Hoosier Listening Post", Indianapolis Star, 2/4/1926, p. 6.

23. Sabin, Harold. "Debt Prohibition Law In State Goes Back to Ill-Fated Canals," Indianapolis Star. 9/29/1968, sec. 2, pg. 4.

24. Silverberg, Robert. Bridges. Philadelphia: Macrae Smith Co., 1966.

25. Smith, William H. "Indiana Central Canal," Indianapolis Journal. 8/12/1900, p. 16.

26. Sulgrave, B. R. History of Indianapolis and Marion County, Indiana. Philadelphia: L. H. Everts & Company, 1884.

27. "Two Thousand Laborers Wanted on the Central Canal of Indiana," (Broadside), 5/1/1837. Collection of the Indiana State Library - Indiana Division.

28. "Water Service," Publication of the Indianapolis Water Company, 1932.

PART IV. PROJECT INFORMATION

The Lower Canal Improvements Project (hereinafter Project) involves the portion of the canal in downtown Indianapolis between Interstate 65 near 11th Street and Military Park near West and Ohio Streets. The Project entails lowering the elevation of the canal by approximately 12 feet. The new canal channel will be lined with concrete, and concrete or brick pedestrian walkways will be installed on both sides of the lowered canal. The canal banks will be landscaped and/or sodded at a 3:1 slope where no adjacent development is proposed (see Figure 2). Where development is proposed next to the canal, structures may abut the canal walkways so that canal level building space can be developed for commercial purposes such as retail, restaurant and entertainment usages (see Figure 3). Redevelopment of the canal is intended to spur private sector development in the area in order to alleviate the blighted and deteriorated conditions which had previously necessitated designation of the area as an urban renewal area known as the Northwest Redevelopment Area. Figure 1 depicts the proposed new canal channel and clearly defines the Project area.

In addition to alleviating problems associated with the blighted and deteriorated conditions of the area, the Project will create a pedestrian corridor below street level which will connect proposed canal area developments with existing developments such as the central business district, Military Park, the State Office Complex and the Indiana University - Purdue University at Indianapolis campus. While the Project ultimately will entail the entire downtown segment of the canal, the Project will be implemented by means of a phased construction schedule. Construction is anticipated to begin

in Spring 1985 near the southern terminus of the canal (near Military Park) and will proceed northward ultimately to Interstate 65 near 11th Street.

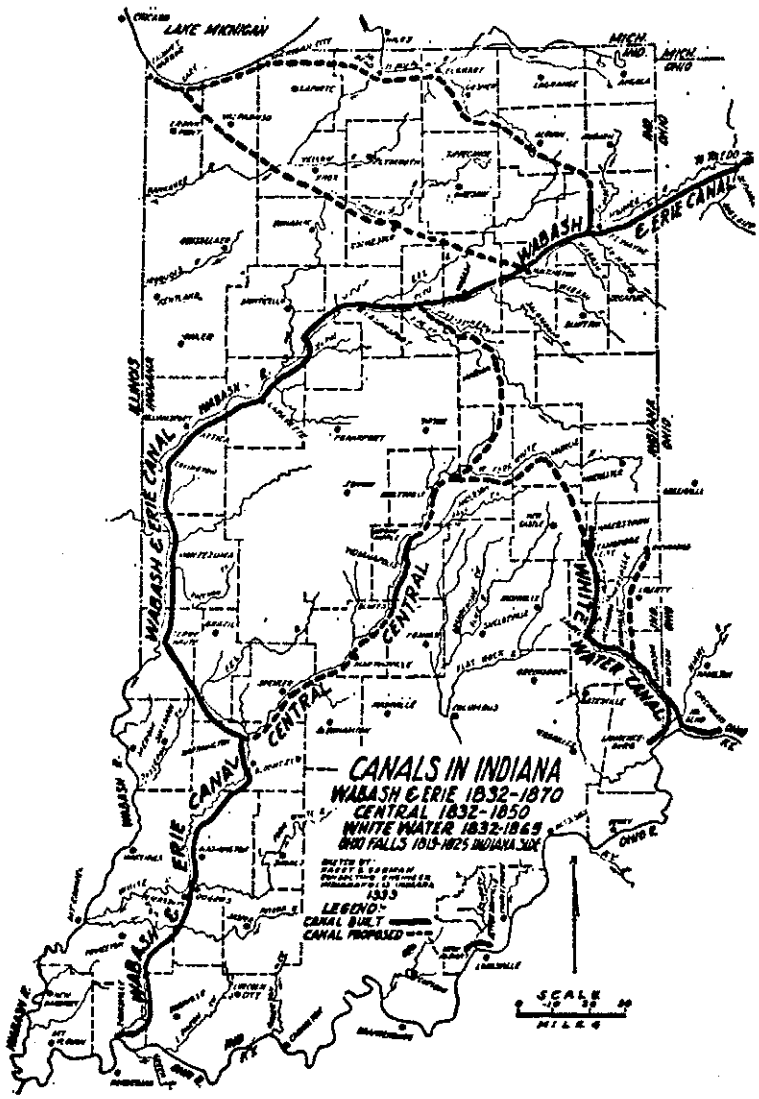
Total development of the downtown canal by this Project will enable pedestrians to walk the length of the downtown canal without ever encountering vehichular traffic. Stairways from canal level to street level will be provided at the bridge interfaces as well as at various points along the canal. Maintaining the pedestrian circulation system in this area will be especially important in the city's near term future since the canal corridor has been targeted for high density residential development along with the incidental commercial uses at street and the lowered canal levels. The Project is being funded in part by a grant of Section 9 funds from the United States Urban Mass Transportation Administration as the renovation of an historic transit way.

Related closely to this project is the replacement of several vehicular bridges which cross over the downtown canal. The vehicular bridges will be replaced by the city's Department of Transportation and are not included as part of the funding for this HAER project. The vehicular bridges at Ohio, New York, Indiana/Michigan, North, Saint Clair, 10th and 11th Streets will be replaced by new vehicular bridges. Existing vehicular bridges at Vermont, Walnut and 9th Streets will be replaced by pedestrian bridges in the canal's ultimate development. Pedestrian bridges will be funded as part of this HAER project. All canal bridges, whether vehicular or pedestrian, will be replaced at the locations of the existing bridge structures in order to maintain the rhythm of bridge crossings over the canal in the downtown segment.

As mentioned above the canal corridor will ultimately be developed as an urban residential neighborhood. As such, the renovated canal will become a highly attractive and visible urban amenity, sharply contrasting with the area as it exists today.

Project exhibits (Figures 1, 2 and 3) are included herein in Section III of this submittal.

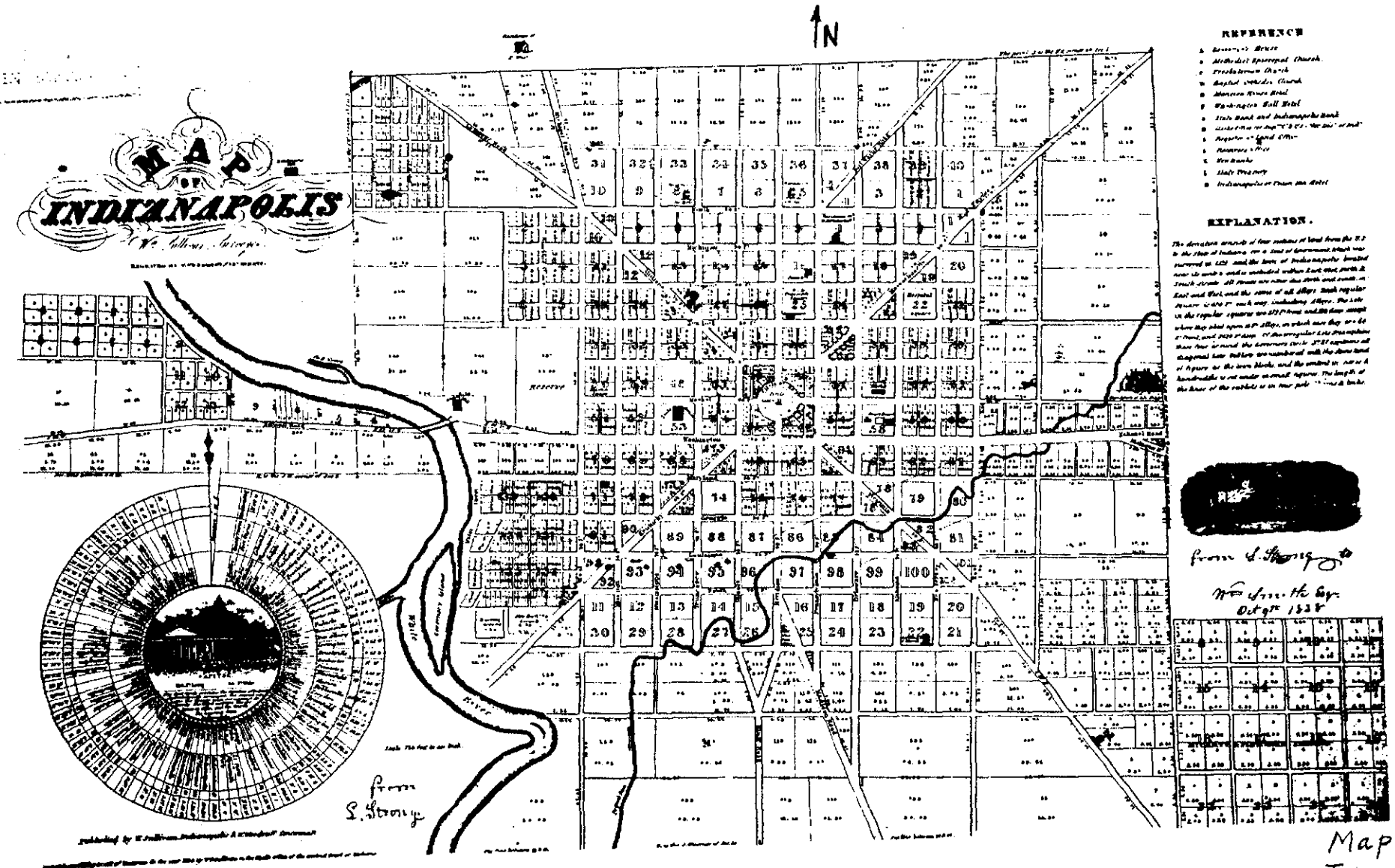
EXHIBIT A - MAP A1



H. O. Garman, The Whitewater Canal, 1944

SOURCE: Fatout, Paul; Indiana Canals; Page 144; West Lafayette, Indiana, Purdue University Press; 1972.

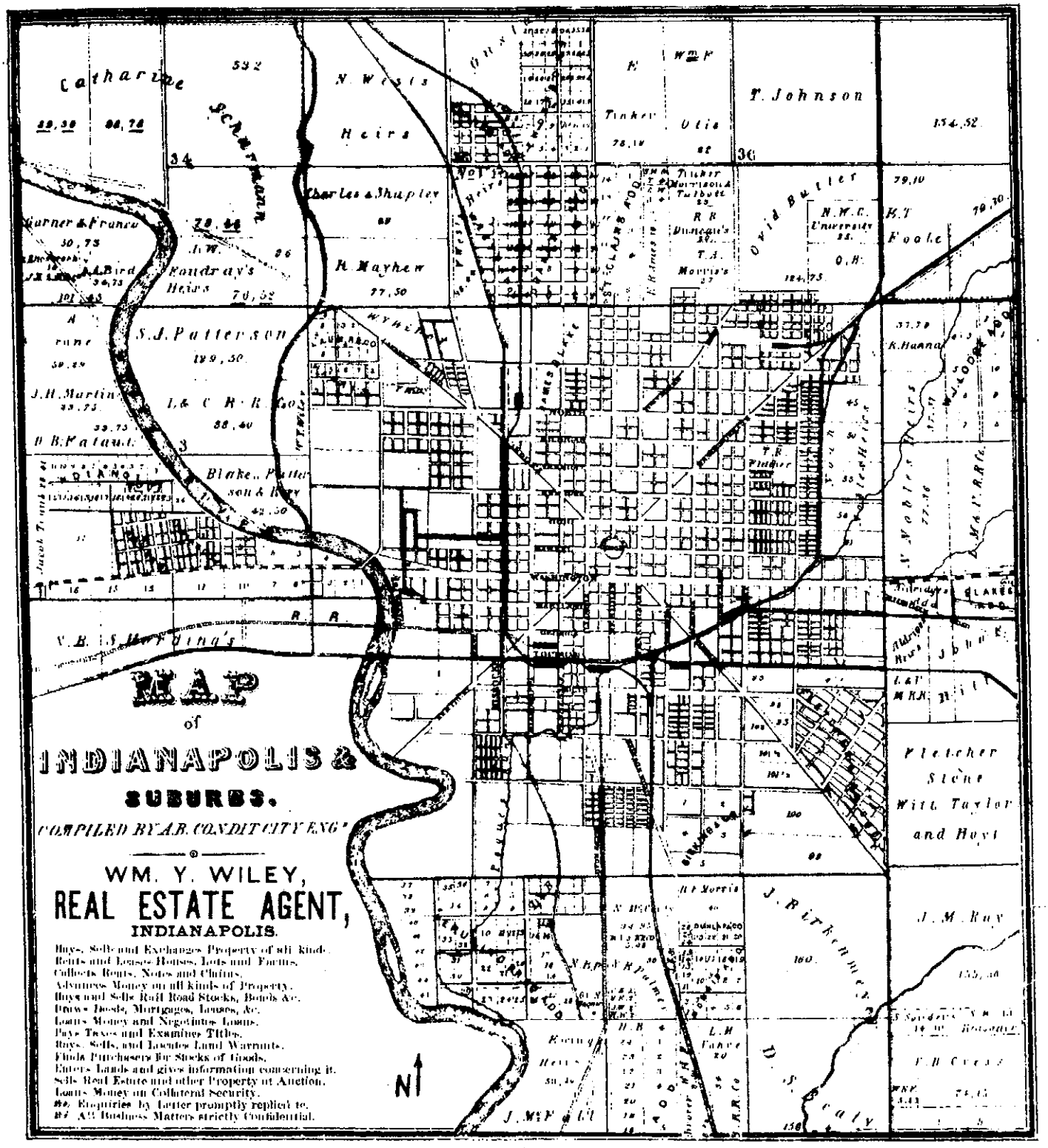
SOURCE: Indiana State Library map files 198[illegible] (1836 map)



This map of Indianapolis in 1836 was prepared by William Sullivan, surveyor and engineer. The original is in the Library of the Indiana Historical Society. Engraved by W. Woodruff of Cincinnati it was published at Cincinnati in 1836.

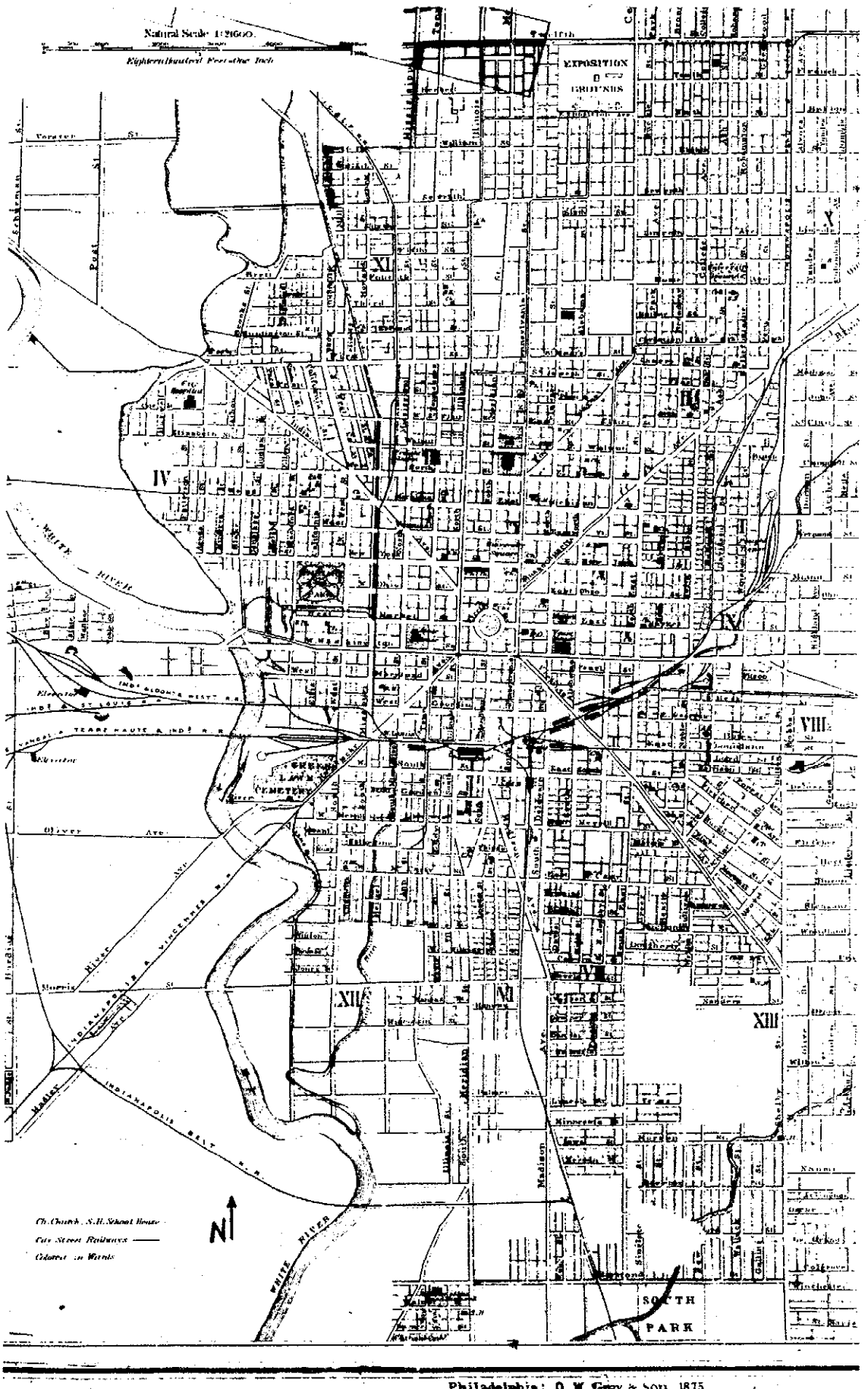
EXHIBIT A - MAP A2

EXHIBIT A - MAP A3



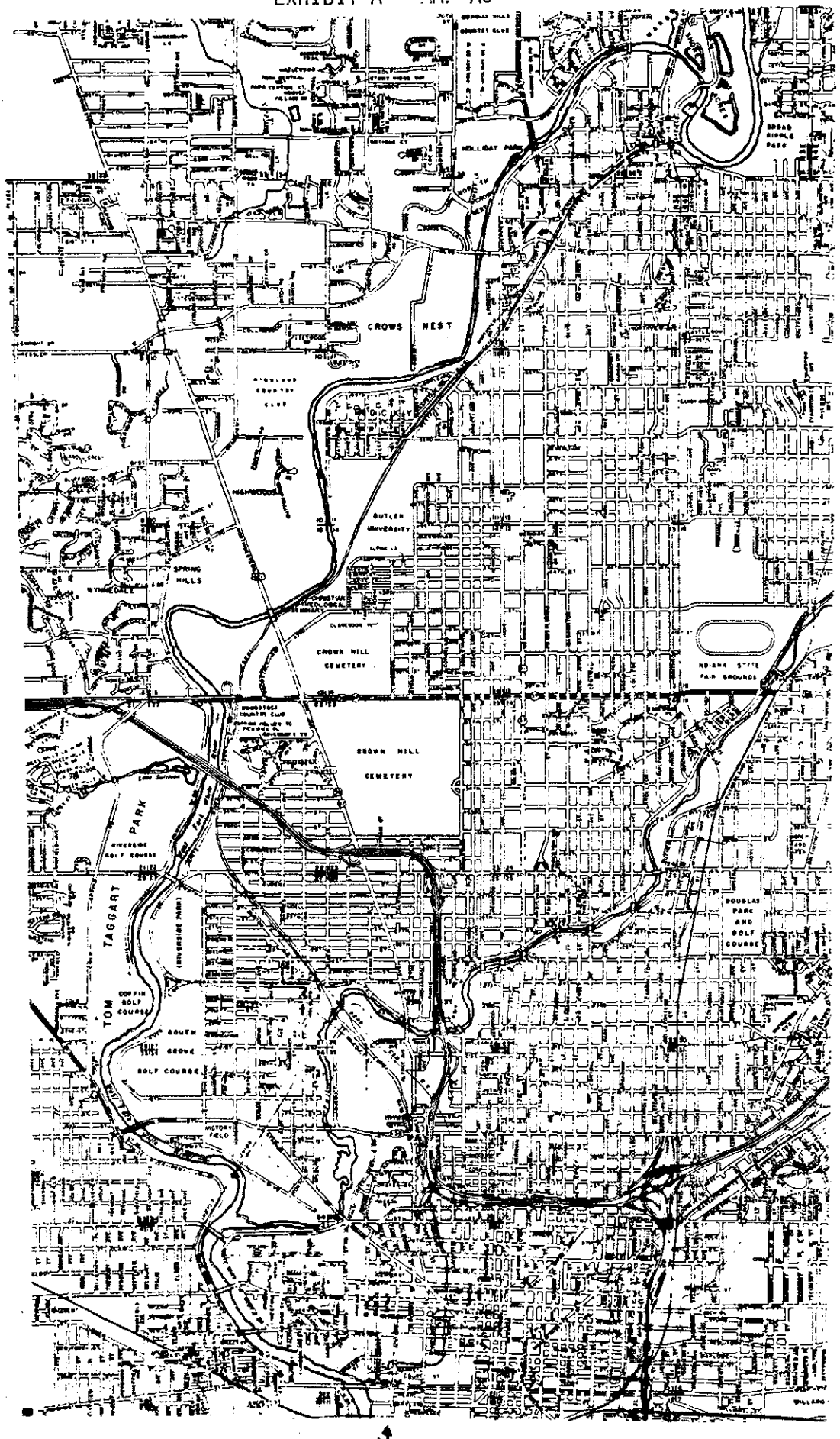
SOURCE: Indiana State Library map files 1985 (1855 map)

EXHIBIT A - MAP A4



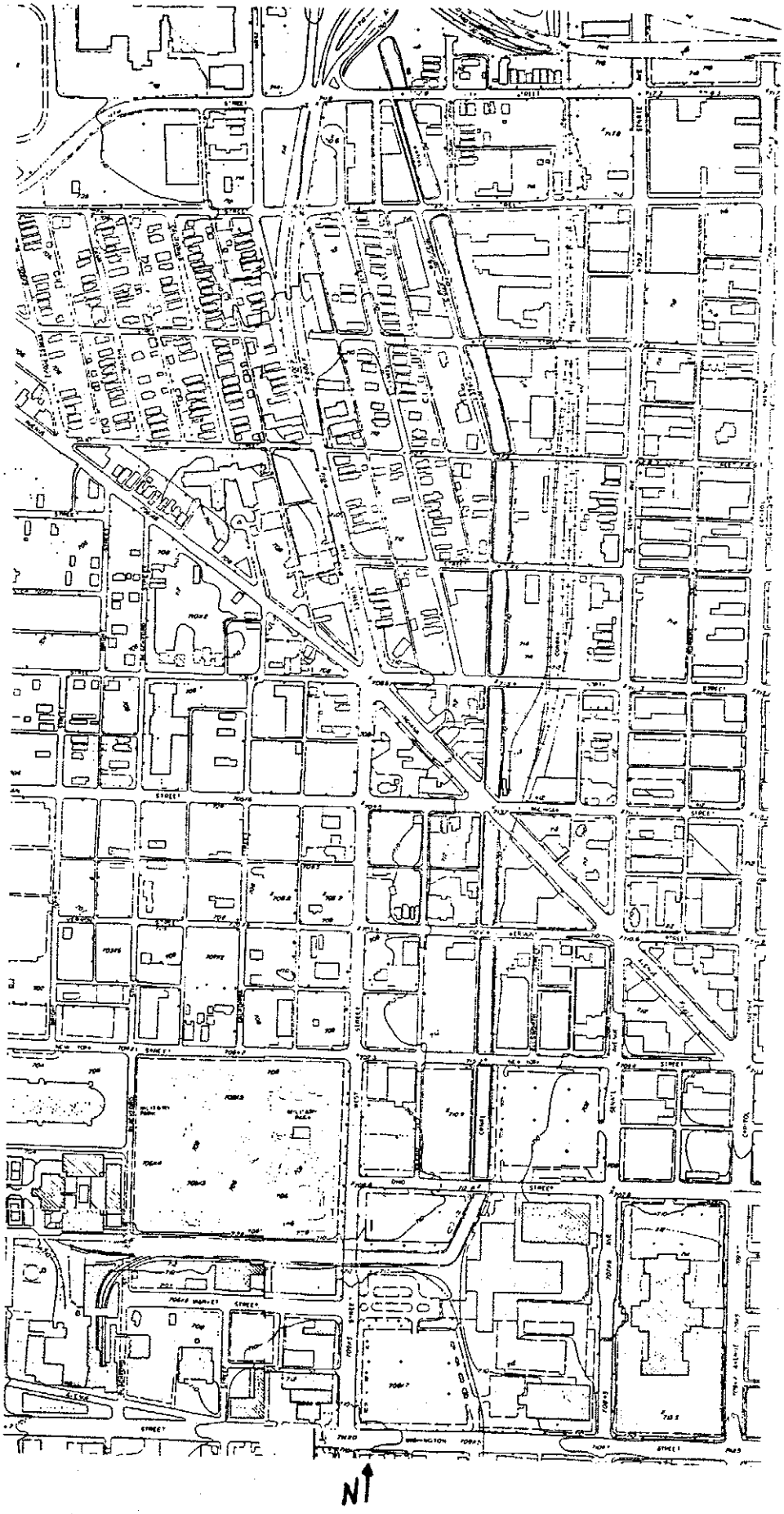
SOURCE: Indiana State Library map files 1985 (1875 map)

EXHIBIT A - MAP A5



SOURCE: City of Indianapolis, Dept. of Metropolitan Development, Division of Planning 1985

EXHIBIT A - MAP A6



SOURCE: City of Indianapolis, Dept. of Metropolitan Development, Division of Planning 1985

EXHIBIT B

DESCRIPTIONS OF "EARLY VIEWS" PHOTOCOPIES

NOTE: Original photographs and corresponding negatives utilized in making the photocopies identified as Exhibit B, Items 1-17, are on file in the offices of Bass Photo Company, 308 South New Jersey Street, Indianapolis, Indiana 46204. (Eight by ten copies of the historic views are in the Field Records.)

B1. 1871 "Birds Eye View" of downtown Indianapolis, looking east-northeast. Photo depicts canal downtown as completed and before the segment south of Market Street was abandoned and filled in.

B2. Photo of a drawing (circa 1880) depicts two horses towing a barge beneath a bridge which at one time crossed the canal as it existed south of Market Street prior to 1874.

B3. Photo of a drawing (circa 1880) depicts two horses towing a barge beneath a bridge. "The commercial dream of early Indianapolis before railroads. What might have been but railroads awoke the dreamers."

B4. Photo of a drawing (circa 1870) depicts the canal locks at Market Street which separated the east-west mill basin portion of the canal from the north-south segment which ran from Market Street to Pleasant Run prior to 1874.

B5. Photo, taken March 1907, from approximately 9th Street looking north, depicts typical industrial development along the canal. Dean Brothers Pumping Machinery still operates from this location in 1985.

B6. Photo, taken in 1927, depicts a typical canal bridge. This photo depicts the 13th Street bridge and commercial developments along 13th Street. This area has since been significantly altered by construction of the Interstate 65 ramp system in 1970-1971.

B7. Photo, taken circa 1930, depicts a Bismark Interurban car crossing the canal at West Street with the State Capital Building in the background.

B8. Photo, taken circa 1950, (compliments of Colonel Roscoe Turner) depicts aerial view, looking north, of the downtown canal prior to construction of the State Office Building in 1959-1960. Military Park is at left edge of photograph.

B9. Photo, taken circa 1935, depicts aerial view of the canal, looking west, toward Military Park with industrial buildings in the foreground.

B10. Photo, taken circa 1950, depicts the canal along the southern edge of Military Park, looking east towards the State Capital Building. This area has since been altered during the 1983-1984 reconstruction of the West Street bridge, when the canal in this area was placed into pipes underground.

B11. Photo, taken circa 1965, depicts aerial view of the canal, looking east towards the State Office Building. Military Park dominates the lower left of the photo.

B12. Photo, taken 1913, depicts canal workers near the headwaters in Broad Ripple.

B13. Photo, taken 1910, depicts the Fall Creek aqueduct which still carries the canal waters over Fall Creek near 23rd Street. Two swimmers are in the lower left of the photo. This aqueduct was constructed in 1904 and remains unchanged in 1985.

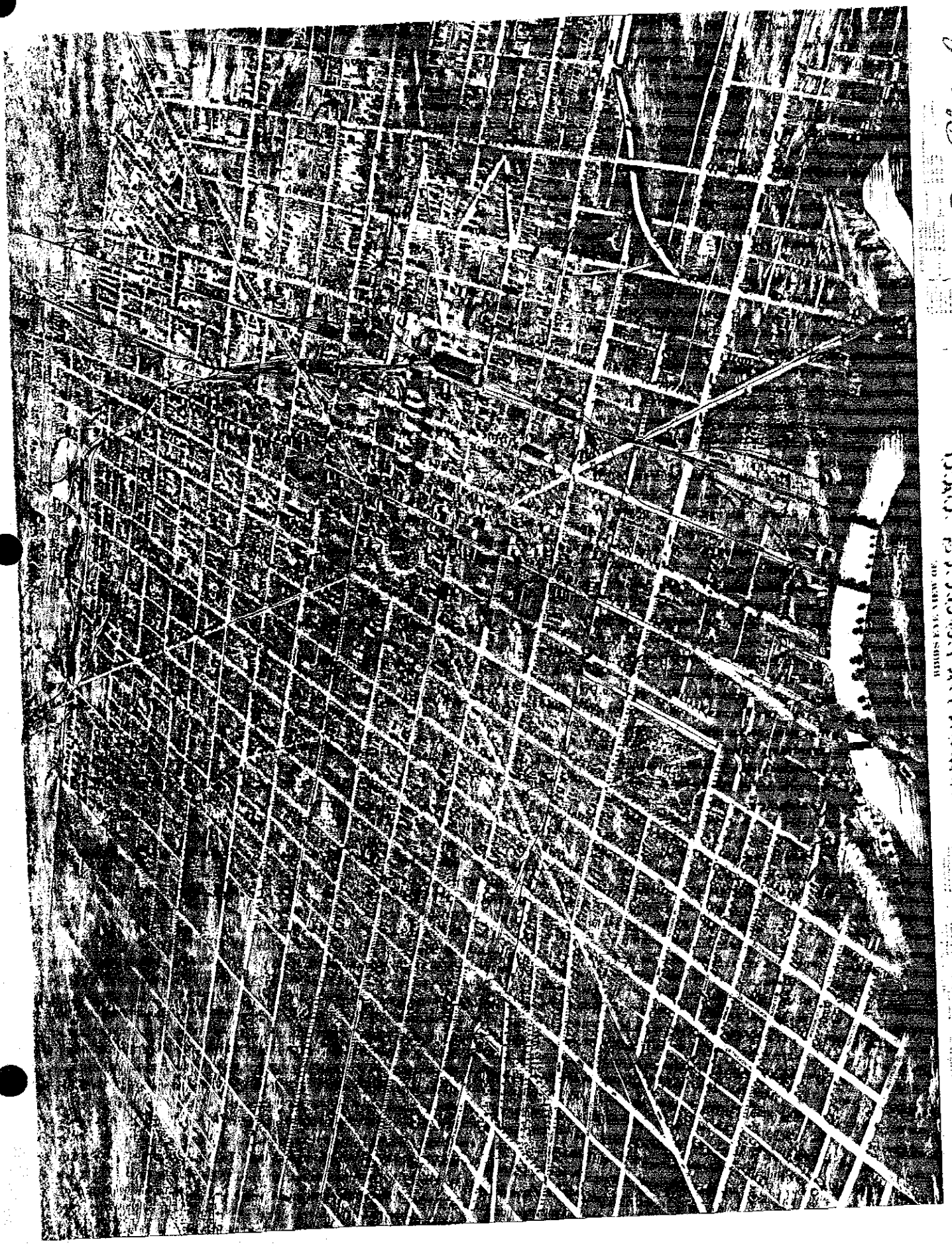
B14. Photo, taken 1902, depicts the canal and cycle path near Fairview Park (now site of Butler University).

B15. Photo, taken circa 1900, depicts boaters "On the Canal" in one of the heavily wooded areas surrounding the canal typical north of downtown.

B16. Photo, taken circa 1900, depicts a small cabin near, and a bicyclist on, the canal cycle path north of 30th Street.

B17. Photo, taken circa 1970, depicts a typical canal view of many areas of the canal north of downtown, particularly along White River or west of Butler University. Photo shows the canal and remnant of the tow path, looking south.

EXHIBIT B - ITEM B1



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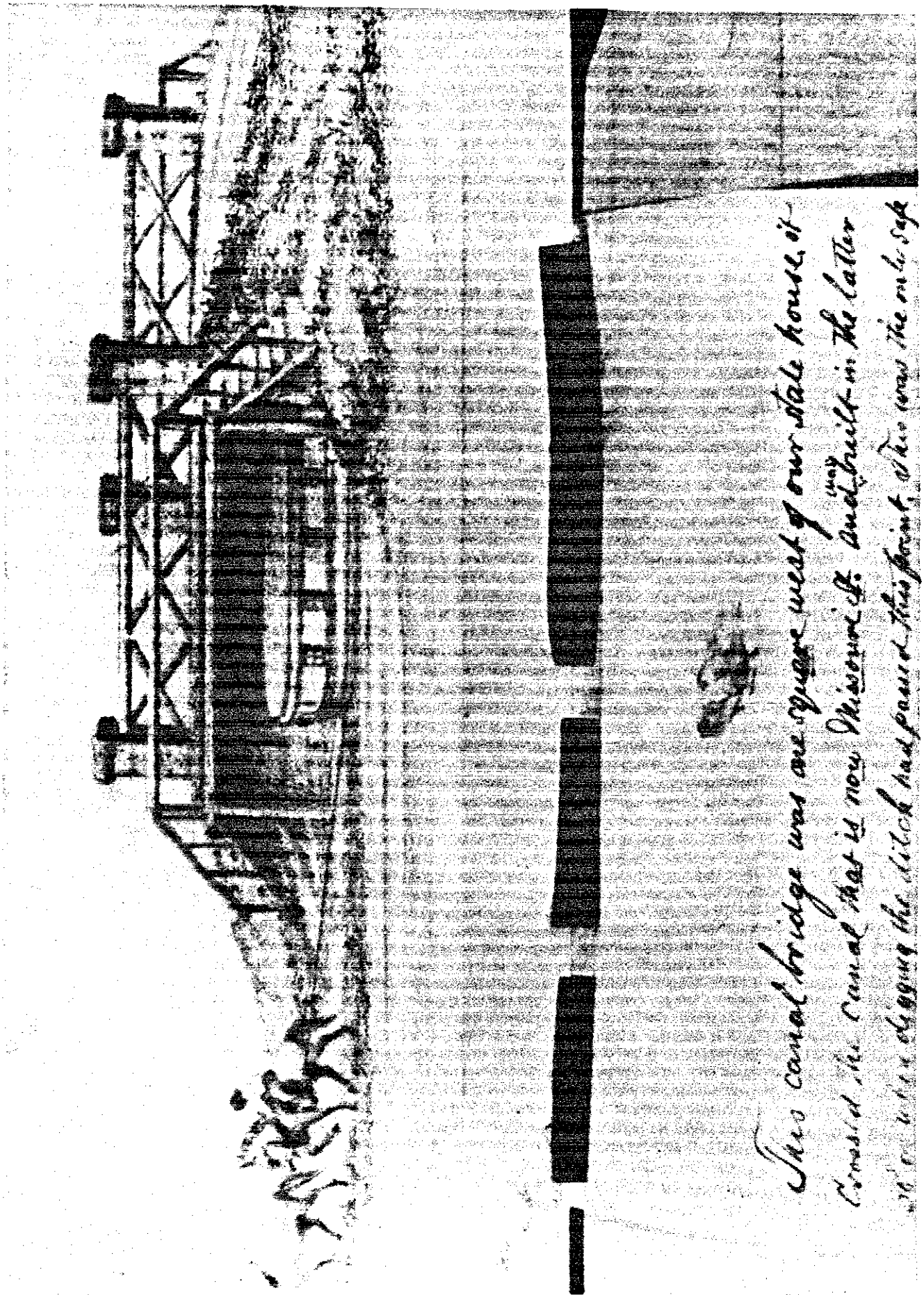

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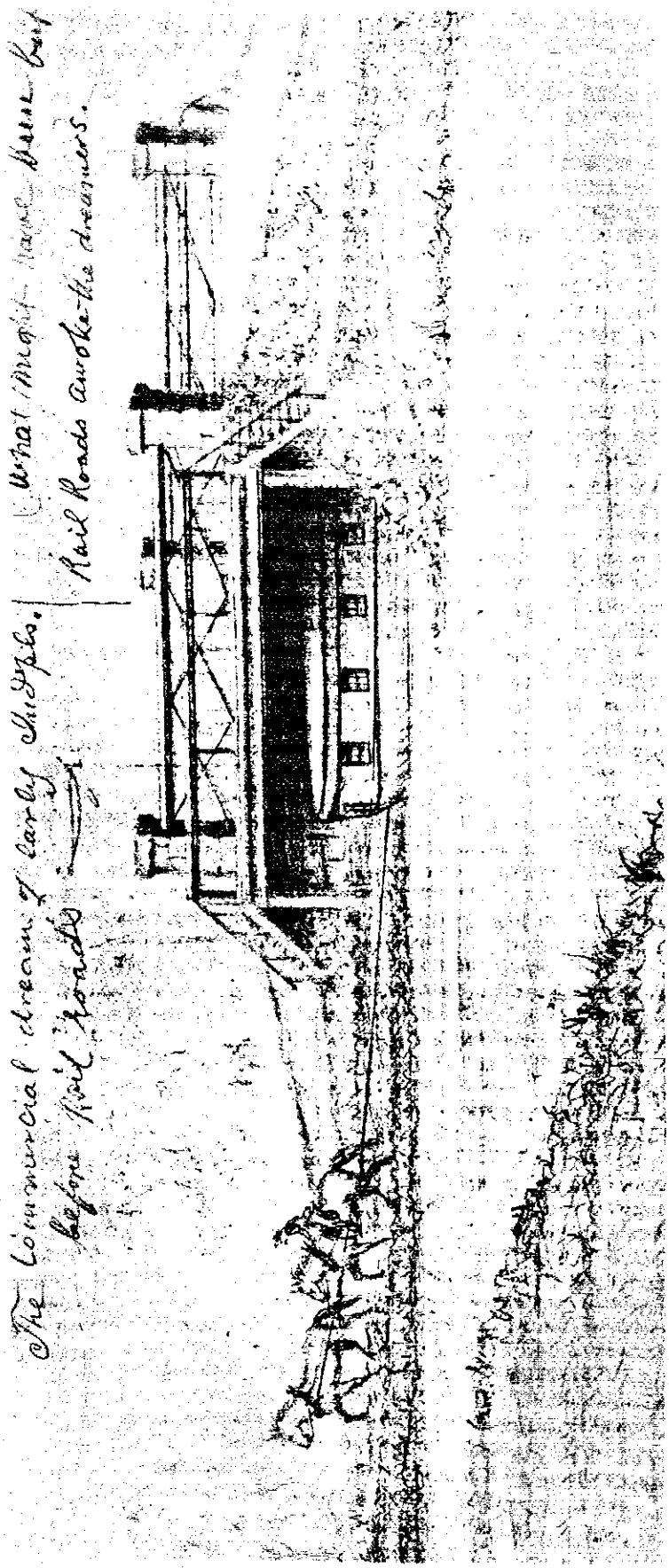
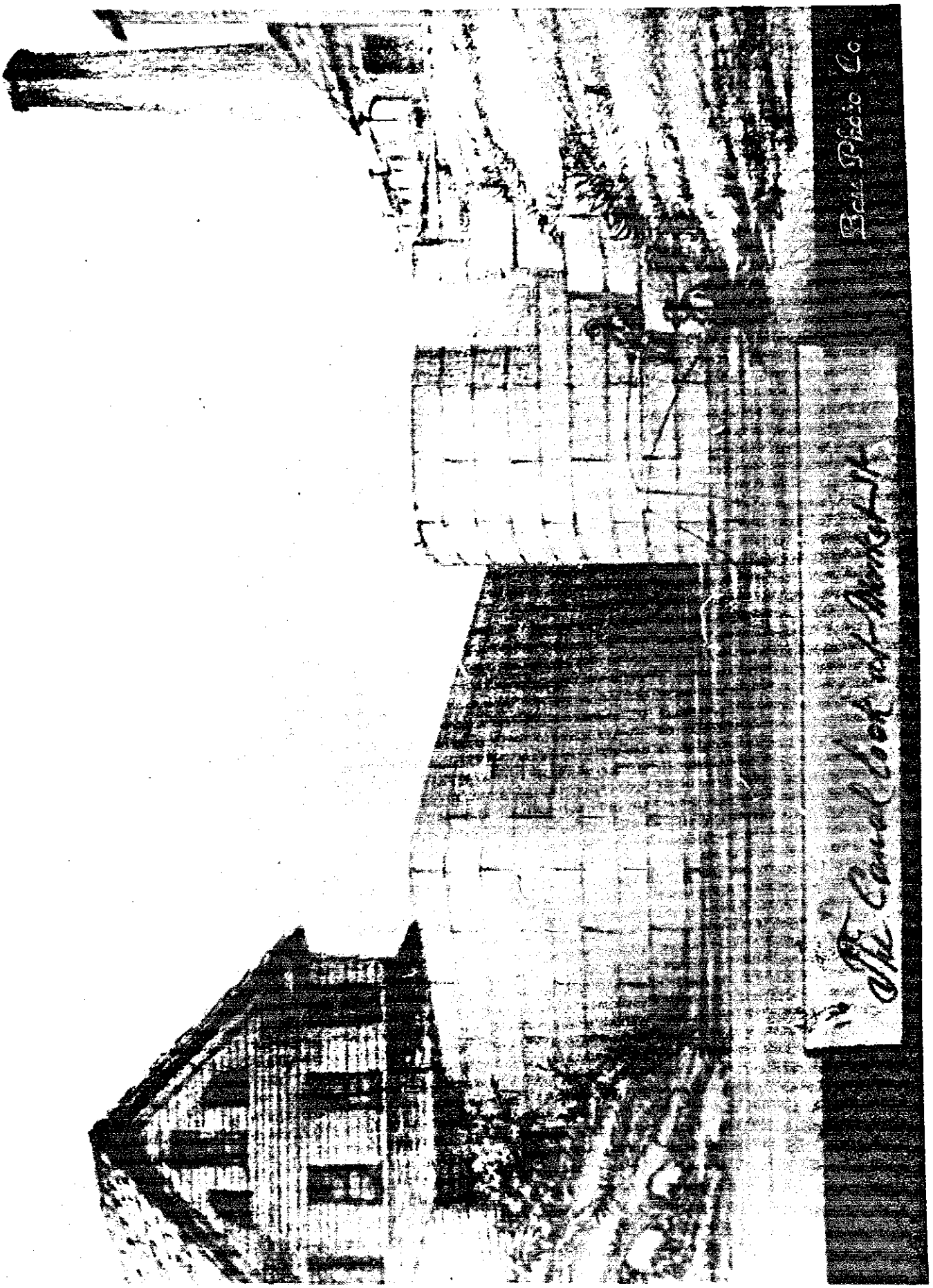


Ross Photo Co.

EXHIBIT B - ITEM B4



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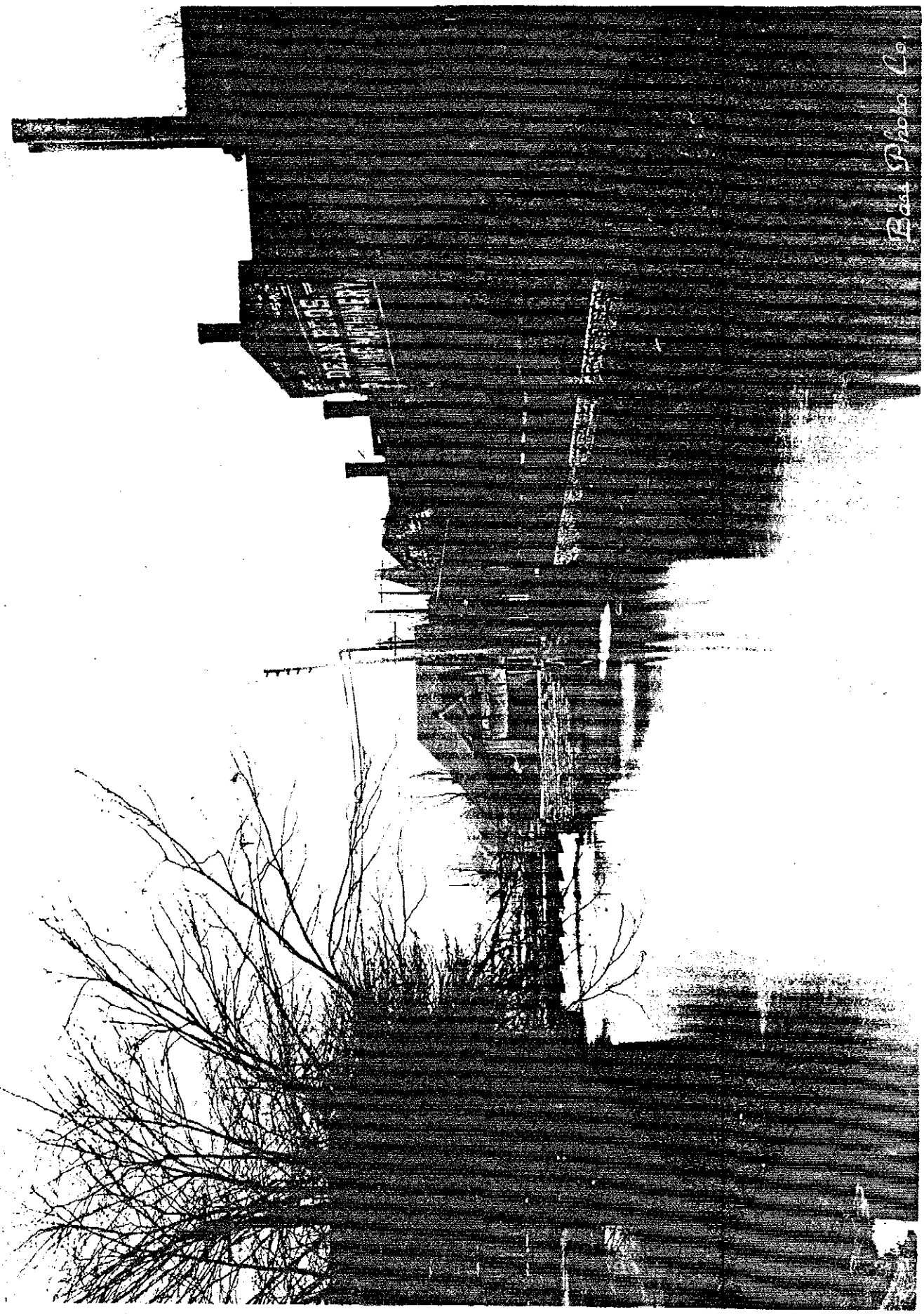
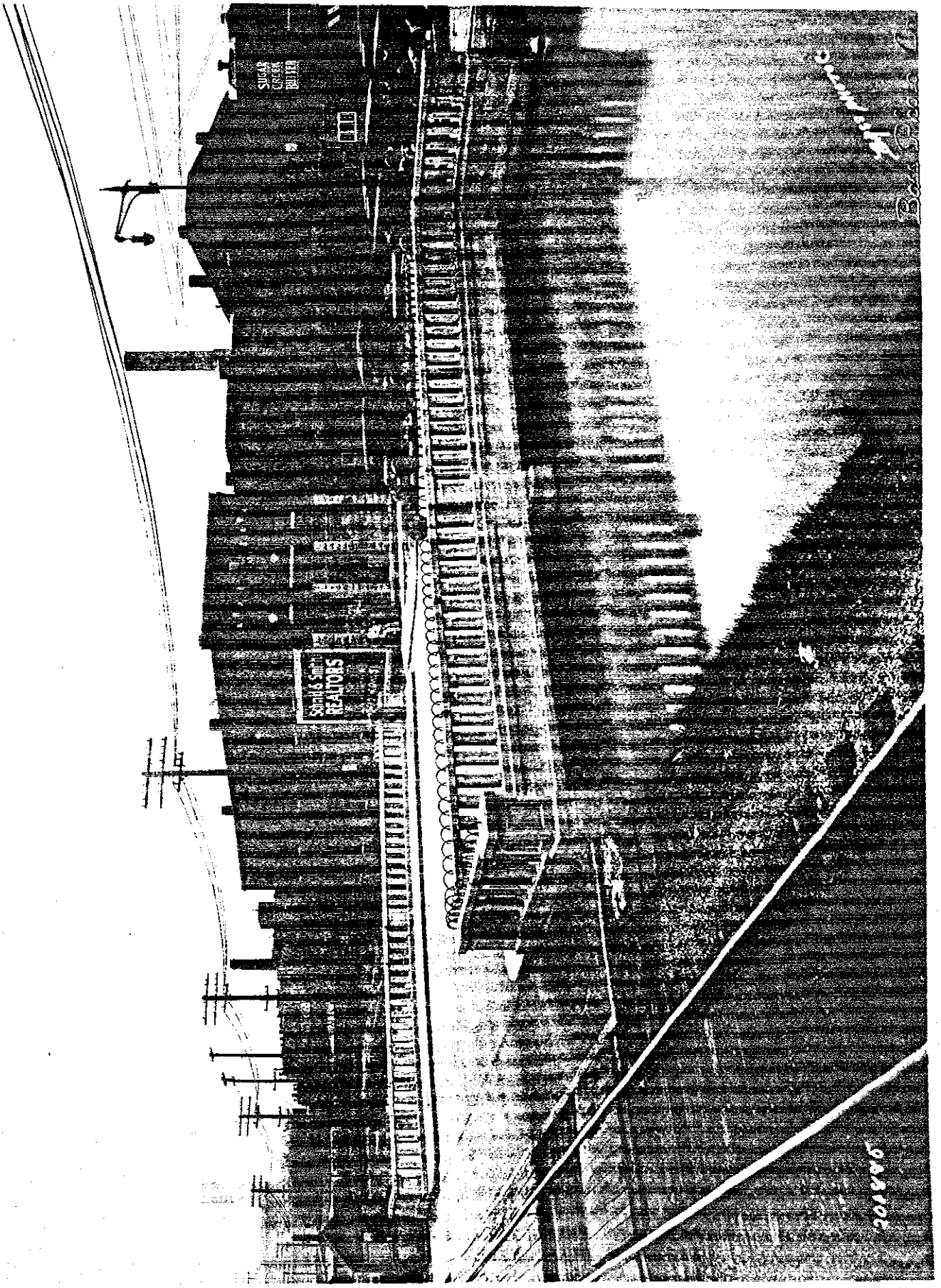


Canal View. March 07.

July 5/17.

EXHIBIT B - ITEM B6



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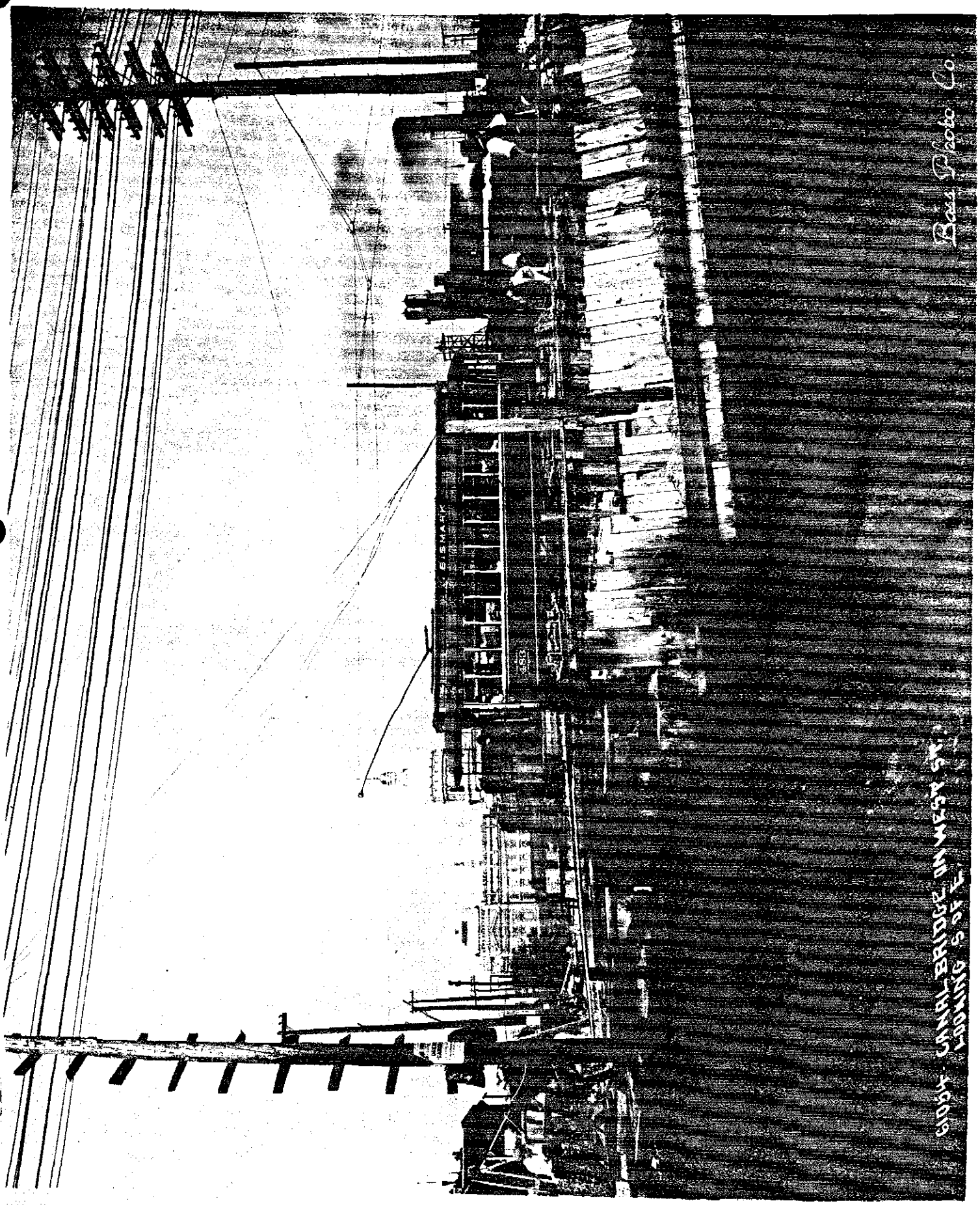

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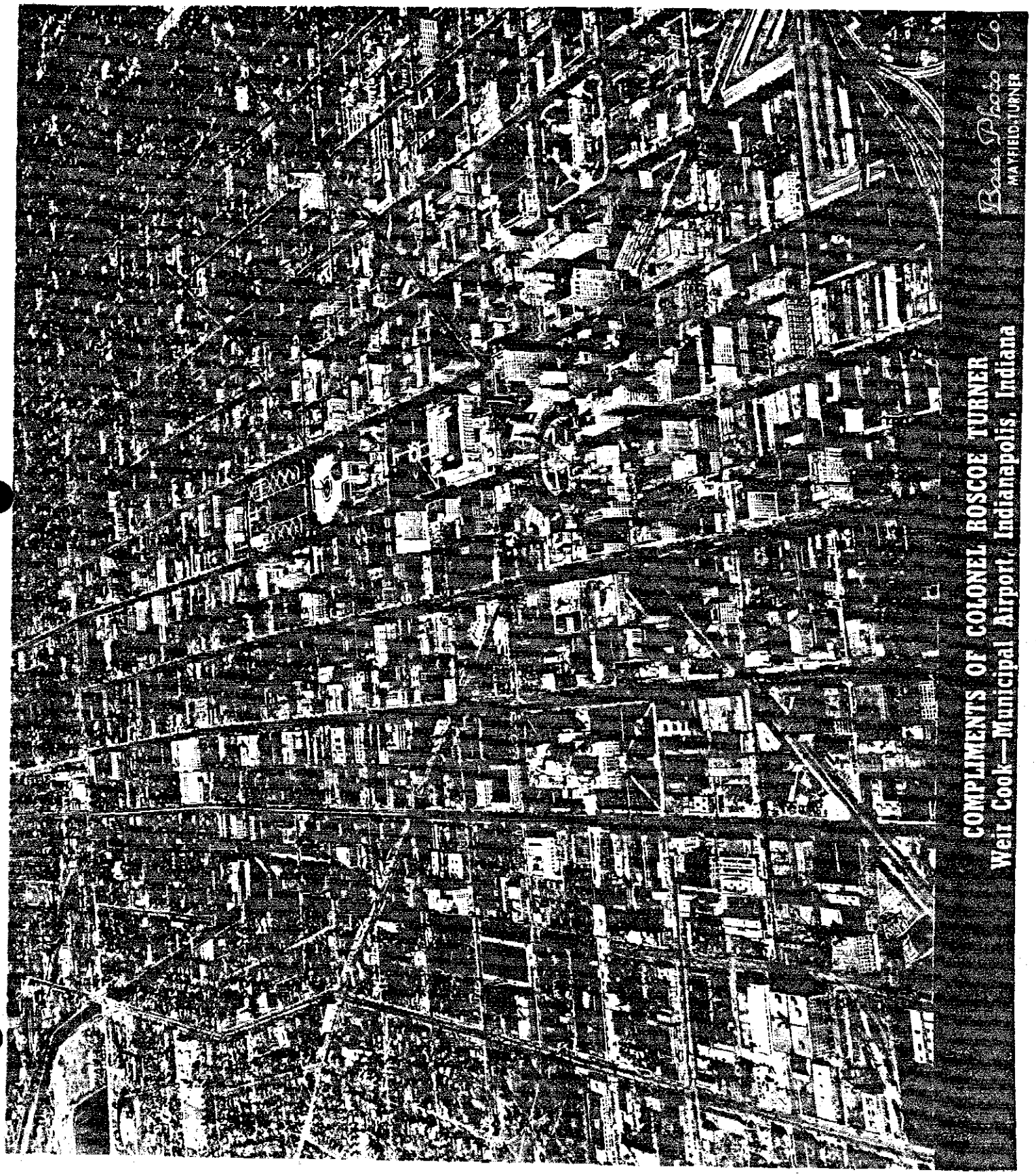

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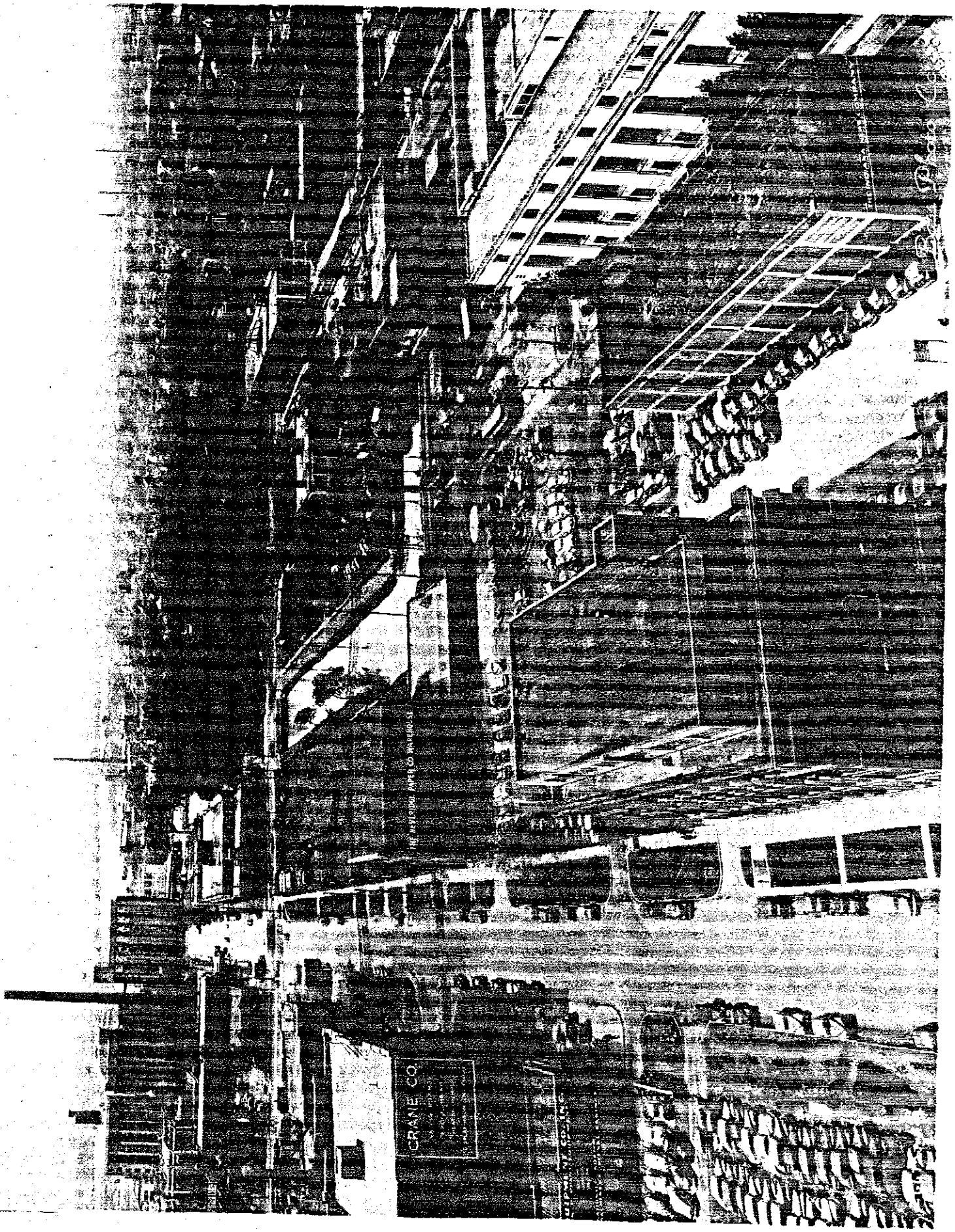


EXHIBIT B - ITEM B10

EXHIBIT B - ITEM B11

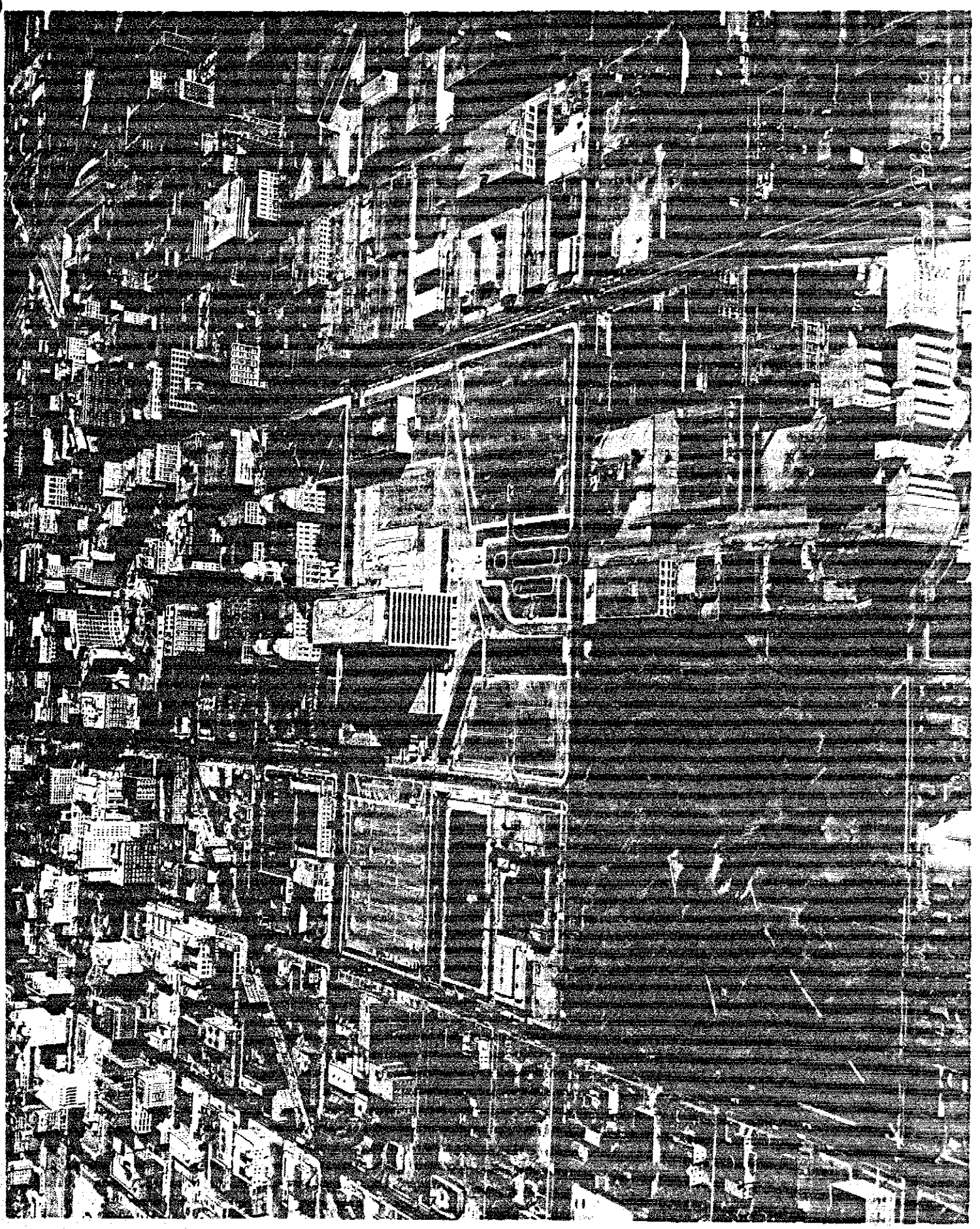


EXHIBIT B - ITEM B12

EXHIBIT B - ITEM B13

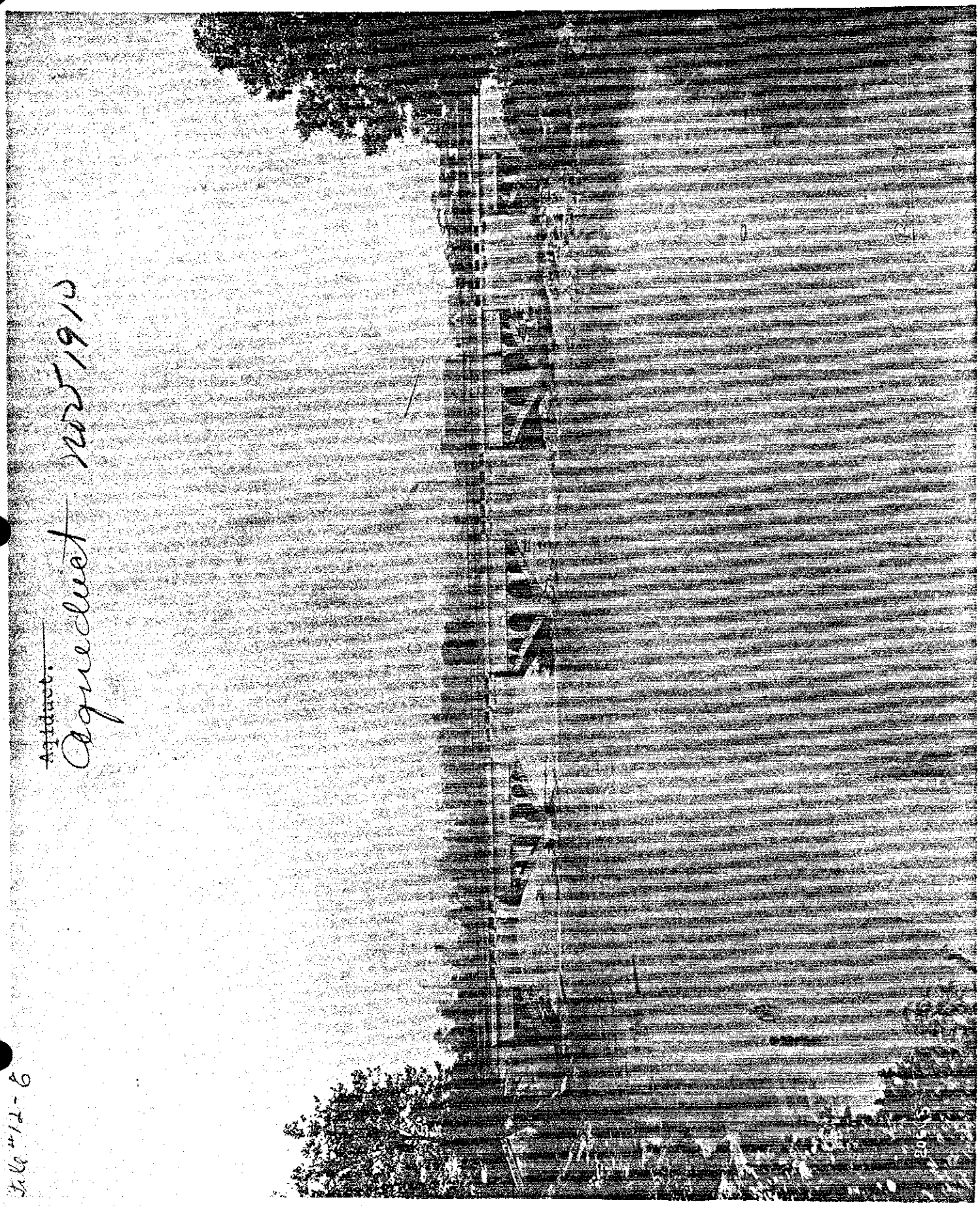
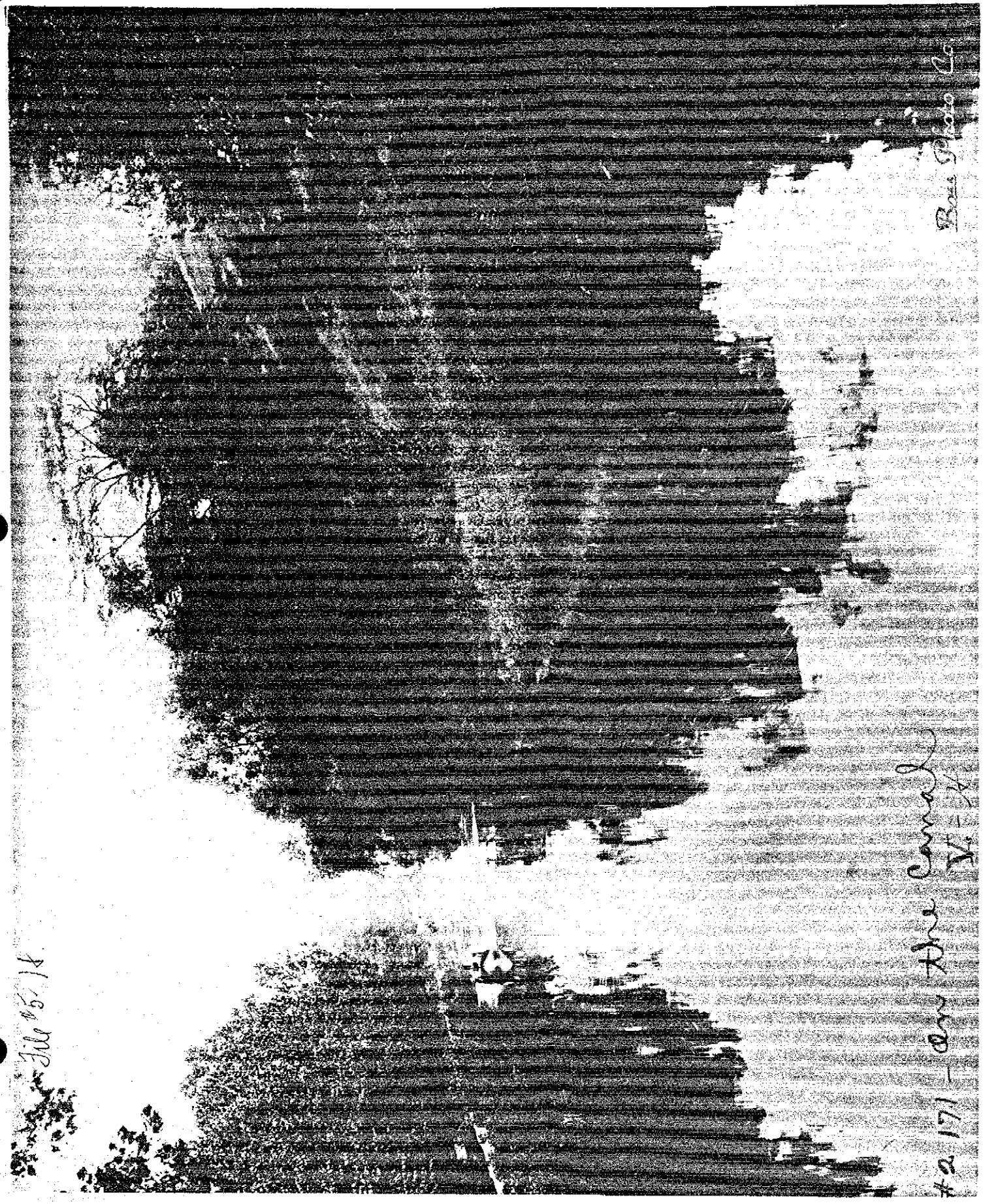


EXHIBIT B - ITEM B14

EXHIBIT B - ITEM B 15



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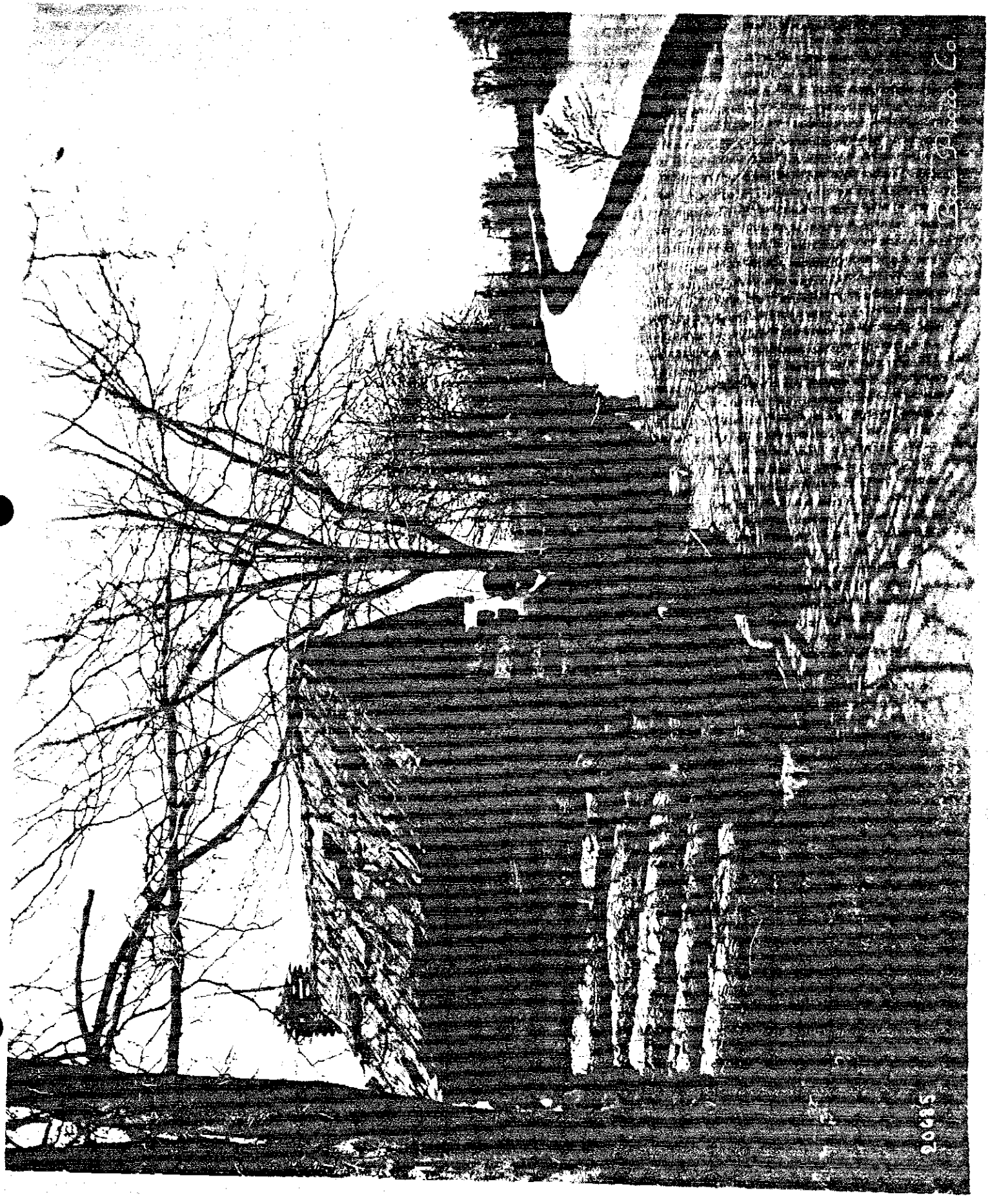
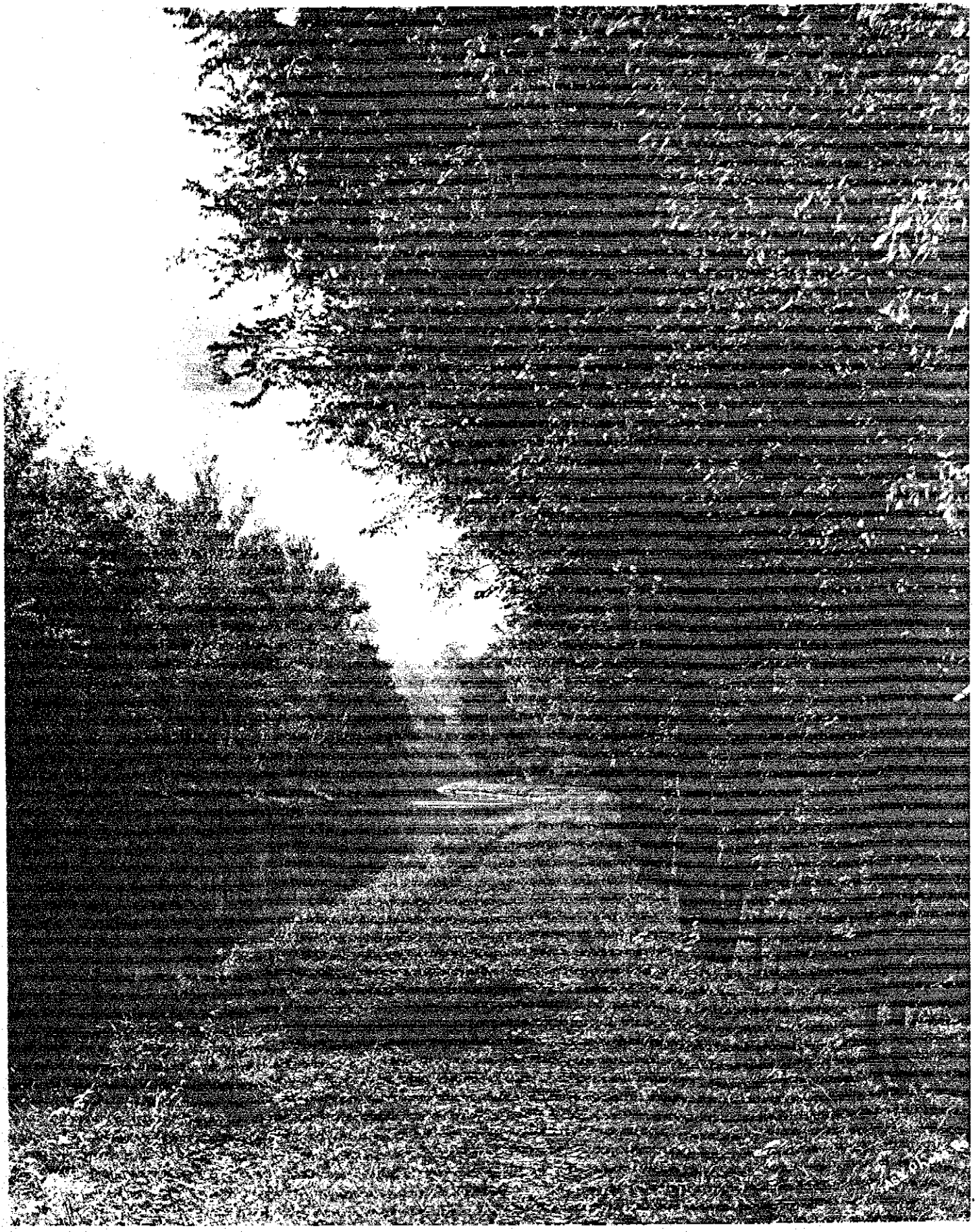
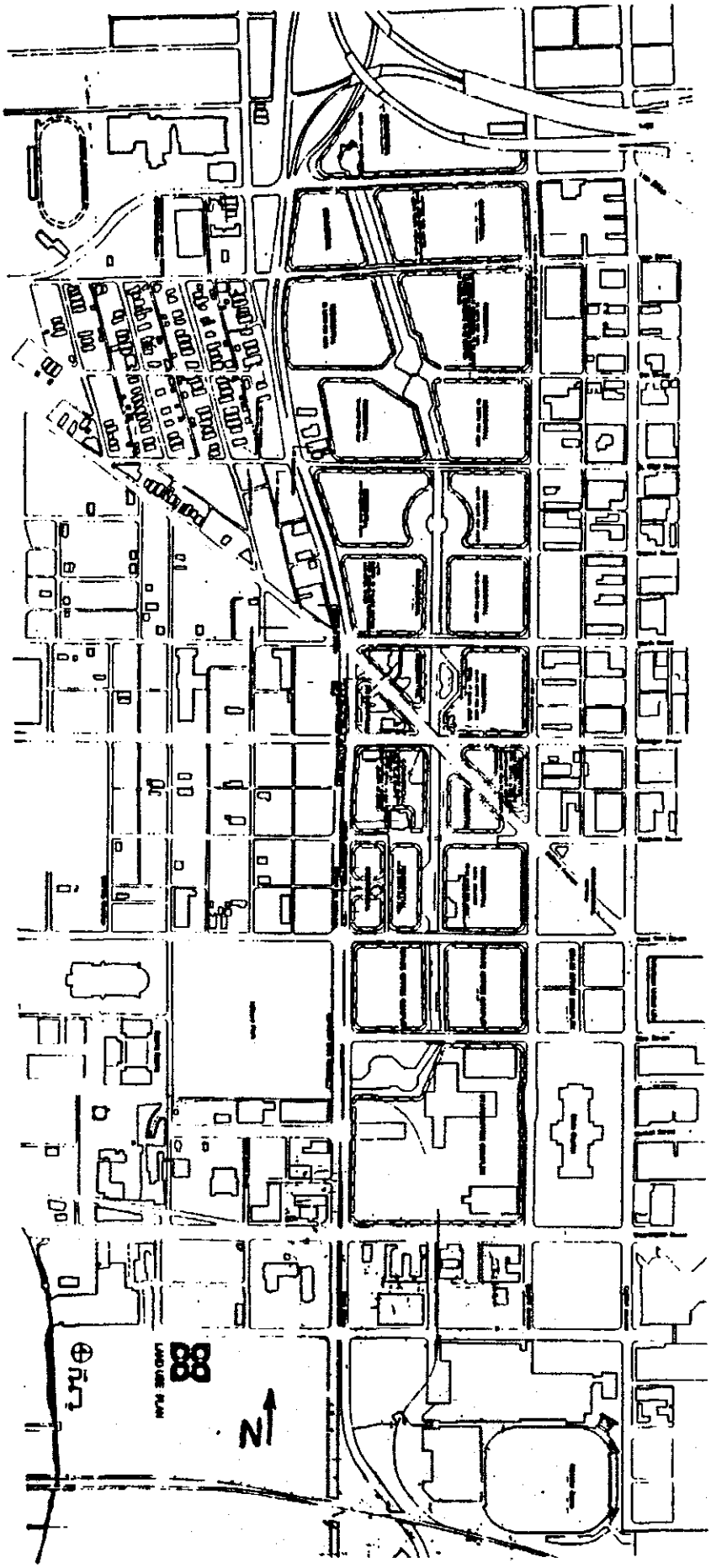


EXHIBIT B - ITEM B17



III. PROJECT EXHIBIT - FIGURE 1

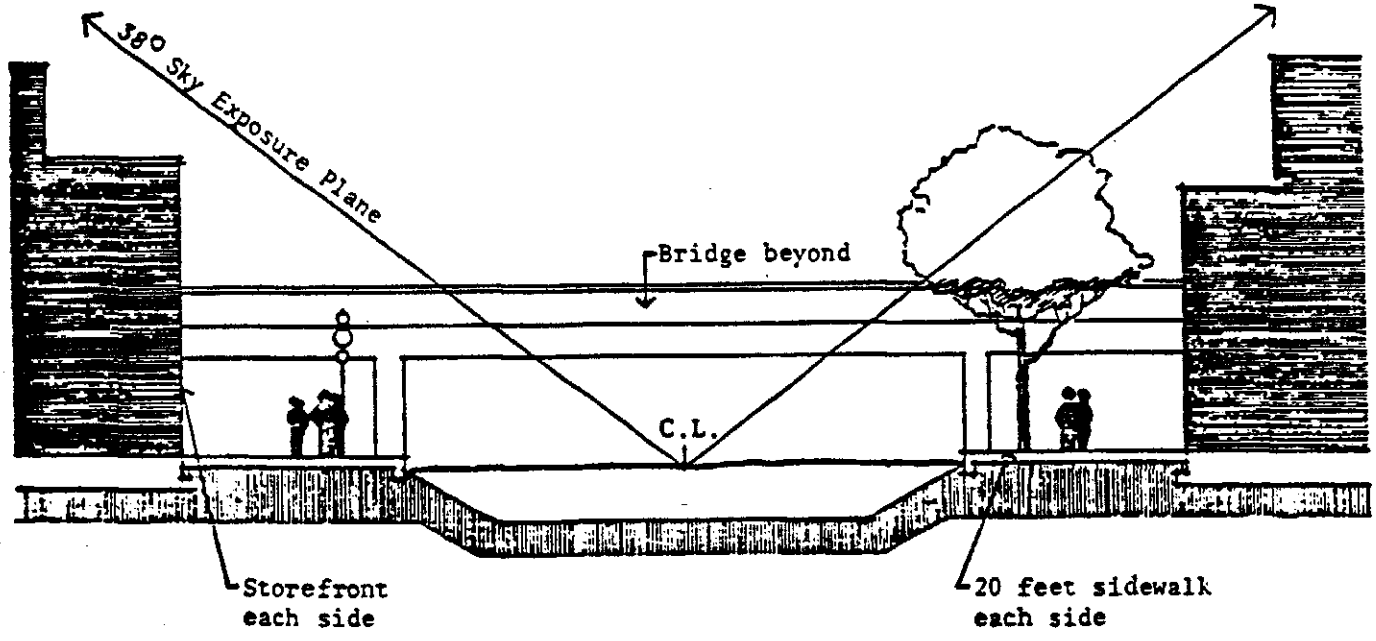


SOURCE: Browning Day Mullins Dierdorf, 124 S. Meridian St., Indpls., Ind. 46225 (1985)

III. PROJECT EXHIBITS

FIGURE 3

ULTIMATE DEVELOPMENT
TYPICAL CROSS-SECTION



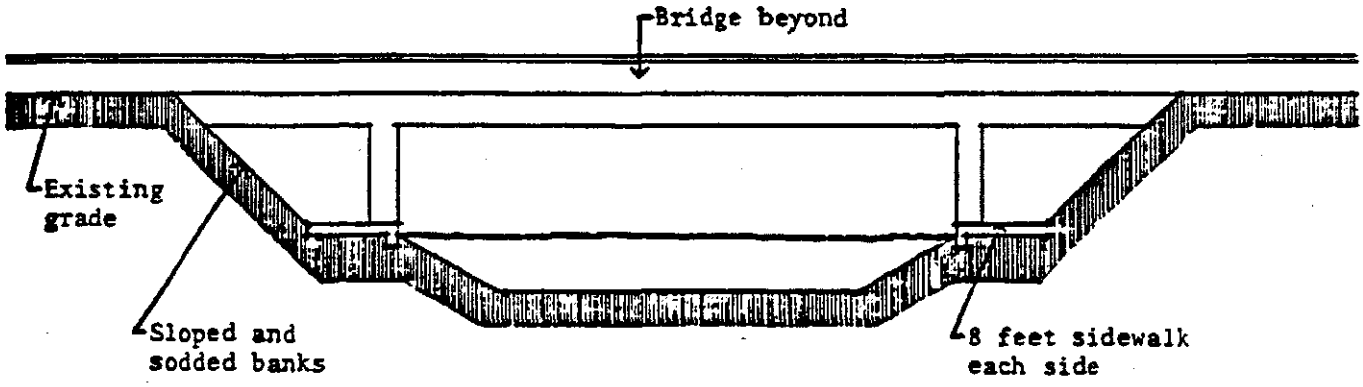
SOURCE: Browning Day Mullins Dierdorf (1983)
124 S. Meridian Street
Indianapolis, Indiana 46225

III. PROJECT EXHIBITS

FIGURE 2

INTERIM DEVELOPMENT

TYPICAL CROSS-SECTION



SOURCE: Browning Day Mullins Dierdorf (1983)
124 S. Meridian Street
Indianapolis, Indiana 46225