A Presentation of W. R. Grimshaw Company Construction
309 Philtower Building
Tulsa, Oklahoma

Tulsa Historical Society & Museum
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W. R. GRIMSHAW CO.

A Construction Contracting Organization

Company History

W. R. Grimshaw, Sr., Chief Executive, entered construction work in 1907. After engaging in the construction business as employee or Partner with other organizations, he organized the present company.

W. R. Grimshaw Co. was organized in October, 1925, as a co-partnership.

On July 25, 1927 the company incorporated under the laws of the State of Delaware.

On January 2, 1942 the company reverted to the co-partnership form of organization.

Principal executive offices have always been situated in Tulsa, Oklahoma, although operations have spread over most of the Central States, including Oklahoma, Texas, Arkansas, Missouri, Illinois, Kansas and Nebraska.

Since organization the company has executed many widely diversified projects, including hundreds of buildings and other construction, among which are such as the following:

Factory Buildings	Power Plants (steam and hydro-electric)
Store Buildings	Air Conditioning Plants
Theatres	Underground Electric Transmission
Office Buildings	Highline Electric Transmission
Churches	Filtration Plants
Schools	Sewage Disposal Plants
Hospitals	Heavy Piping such as sewage, water, etc.
Court Houses	

Since including all of the available illustrations of our work would cause our presentation to be cumbersome, we are not attempting to illustrate too large a number of the jobs we have constructed but on the pictorial pages following we are illustrating a few representative examples of projects which we have constructed, and which are pertinent to this particular presentation.

W. R. GRIMSHAW CO.

MAJOR EQUIPMENT

EARTH HANDLING EQUIPMENT

1 - Byers B.C. Hoe D-739-1 Gasoline
1 - Bulldozer 35 H.P. Diesel
1 - 1-1/4 Cu.Yd. Electric Crane
1 - 1 Cu.Yd. Clam Shell Bucket
1 - 1 Cu.Yd. Dragline Gasoline
1 - 1-1/4 Cu.Yd. Dragline Bucket
1 - 21'0" Boom Digger Stick
1 - 30'0" Boom
1 - Hoe for Byers Hoe
1 - 1/2 Cu.Yd. Clam Shell Bucket

PILE DRIVING EQUIPMENT

1 - #7 Steam Pile Hammer
1 - #5 Steam Pile Hammer

AIR COMPRESSORS & PNEUMATIC TOOLS

1 - Ingersoll-Rand Compressor Gas 210 Cu.Ft.
1 - Chicago Pneumatic Air Compressor Gas 105 C.F.
1 - Chicago Pneumatic Air Compressor Gas 105 C.F.
1 - Air Compressor Kellog 30 Cu.Ft.
1 - Chicago Pneumatic Air Wrench for 4" Nuts
1 - Thor Air Drill
1 - Chicago Pneumatic Chipping Hammer Size #1
1 - Chicago Pneumatic Chipping Hammer Size #3
2 - Riveting Hammers Boyer
7 - Paving Breakers - 1 Cleaveland
6 Chicago Pneumatic
2 - Jack Hammers Chicago Pneumatic
3 - Ingersoll Air Tamps Size 34
1 - Chicago Pneumatic Air Grinder
4 - Air Spades

SAW RIGS

1 - DeWalt complete with Bench 4 H.P.
1 - Circle Saw complete 5 H.P.
1 - 36" Parks Band Saw
1 - DeWalt Saw Rig 2 H.P. Electric
6 - Circle Saw Rigs steel frame
2 - Skilsaw Model J #41488
1 - Skilsaw Drill Press

VIBRATORS

3 - Electric Vibrators
2 - Gas Malls #72555 Type GC 1 Serial #72144
1 - Mall Grinding attachment for Vibrator #A-4214
1 - Electric Grinding Machine Mall #11059
10 - Vibrator Heads
15 - Vibrator Leads - assorted 1 steam

CARS & TRUCKS

1 - Buick Sedan 1940 Model
1 - Chevrolet DeLuxe Sedan 1940 Model
1 - Chevrolet Coupe 1939 Model
1 - Chevrolet Pickup 3/4 Ton 1940 Model
1 - International Truck 3 Ton 1934 Model
1 - International Truck 1-1/2 Ton 1941 Model
1 - International Truck 1941 Model
1 - International Truck 1937 Model
1 - Dodge Pickup 1/2 Ton 1940 Model
1 - Diamond-T Truck Trk-Tractor #JXB-AR-901873
1938 Model
1 - F.W.D. Truck With Auger and Mast
Boring Machine

CONCRETE EQUIPMENT

1 - Rex Chain Belt Electric #28-S with
Feeding Hopper
1 - Koehring 14-S Electric
1 - Koehring 14-S Gas Engine
1 - Koehring Dandie Mixer 10-S Gas Engine
1 - Rex Mixer 7-S Gas Engine
1 - Marsh Capron Mixer 3-1/2-S Gas
3 - 1 Cu.Yd. Concrete Buckets
3 - 1 Cu.Yd. Concrete Hoppers
1 - 1 Cu.Yd. Concrete Dump Bucket
10 - Tremie Hoppers
25 - Chutes for Tremie Hoppers
4 - 20'0" Concrete Chutes 12" x 9"

MORTAR MIXERS

1 - Marsh-Capron 1 sack Gas Engine
1 - Quik Mix 1 sack Gas Engine

HOISTS

1 - Double Drum Electric 40 H.P.
1 - Steam Double Drum 40 H.P.
1 - Steam Double Drum 25 H.P.
1 - Double Drum Fordson Motor #37351 Gas 35 H.P.
1 - Single Drum Fordson Motor #160831 Gas 35 H.P.

PUMPS

1 - 6"x6" Centrif. Sterling - LeRoi Gas
1 - 3 Cyl. Plunger Pump
2 - Meyers Hand Pumps
2 - Nelson Jumbo Pumps Hand
1 - 4" Centrif.
1 - Sterling Centrif. size 2-1/2"x2"
1 - Sterling Centrif. size 4"
1 - Fairbanks Centrif. size 1-1/2"x1"
1 - Worthington Centrif. 1-1/2" Suc. Electric
1 - Harrison Centrif. size 4"
1 - Worthington Centrif. size 1-1/2"
1 - Worthington Steam Driven 2 Cyl.
4-1/2"x3-3/4"x4"
1 - Gorman-Rupp 2" Centrifugal

TOOLS

1 - Pipe Machine 1" to 8"
1 - Lincoln Arc Welder #A-9704 200 Amp.

Large quantity of accessories, etc. for above machines

Also large quantity of Hand Tools for Pipe

In addition to the foregoing, we have an almost unlimited amount of miscellaneous equipment, such as:

Oxy-Acetylene Welding Equipment
Blacksmith Tools
Electric Drills
Danger Lights
Concrete Aggregate Scales
Trench Jacks
Spray Painting Equipment
Flame Torches
Rigging Equipment
Temporary Wiring Equipment, etc.

W. R. GRIMSHAW CO.

KEY PERSONNEL

MEMBERS OF FIRM

W. R. Grimshaw, Sr., Managing Partner
R. Moody Burch, Partner and General Superintendent
Charles G. Webb, Partner, Engineer and Office Manager
W. R. Grimshaw, Jr., Partner
Harry D. Grimshaw, Partner
Bertha E. Grimshaw, Partner

TECHNICAL PERSONNEL

Geo. J. Bowie, General Superintendent
A. B. Hungerford, Superintendent
A. N. Ingle, Superintendent
J. J. Korten, Registered Professional Engineer, and General Superintendent
L. C. Roberts, Mechanical Superintendent

Our Key Personnel has been selected for broad experience to provide flexibility and this is made possible as any one man can creditably fill practically any important position in the organization.

In addition to the above Key Personnel, we also have a large following in our organization of job foremen of the various crafts who have followed our operations for many years, any of whom are trained and capable of full responsible charge of jobs of ordinary size.

OUTSIDE CONSULTANTS

W. R. GRIMSHAW CO.

Individual Histories of Key Personnel as at Jan. 1, 1942

W. R. Grimshaw, Sr.

Age: 49

Education: Architecture and Engineering.
Graduate of Cooper Union, New York City.

Experience: Thirty-five years experience in construction with experience in all departments.
Largest job, $15,000,000.00 as Assistant to Works Manager and Superintendent on Yorkship Village, West Collingswood, New Jersey, built in 1918. This was built by the Tidewater Building Company of New York. Lockwood Green and Electus D. Litchfield were Engineers and Architects.

R. Moody Burch

Age: 51

Education: High School

Experience: Over his thirty-seven years experience in construction work Mr. Burch has handled many important projects both in superintendence and job management. He has been Superintendent for W. R. Grimshaw Co. fifteen years in which time he has handled many jobs including schools, churches, office buildings, telephone buildings, court houses, sewage plants, filtration plants, and among the most recent are the following:
$600,000 Municipal Auditorium and City Hall, Emporia, Kansas.
$375,000.00 State Tuberculosis Sanitorium, Norton, Kansas.
$1,560,000.00 Defense Housing Project, Wichita, Kansas. Built 1941.

Charles G. Webb

Age: 42

Education: Civil Engineer graduate of The Rice Institute, Houston, Texas. Two years additional University work (Columbia, University of Oklahoma Extension School and Oklahoma City University). Several courses in trade schools.

Experience: Prior to graduation a year or more in Maintenance of Way Engineering Department of Fort Worth and Denver Railroad and in City Engineering Department, Fort Worth, Texas.
Since Graduation:
1922-1928. With Truscon Steel Co. Designing Estimating, Detailing Steel and Reinforced Concrete.
1928-1929. In business for self, including limited amount of design.
1929-1942. With W. R. Grimshaw Co.
Duties: Estimating, Purchasing, Office Management, Assistant General Manager, limited amount of direct construction superintendence, including $130,000.00 Northeast Sewage Plant for City of Tulsa, Okla.

Arthur Bowen Hungerford

Age: 50

Education: University 4 years. Post Graduate (University) 3 years.
Architecture and Structural Engineering.

Experience: First Lieutenant, Engineers, United States Army.
10 Years As:
Architectural Draftsman, Resident Engineer.
Consulting Engineer, Construction Superintendent.
7 Years As:
Refinery Construction Engineer with White Eagle Oil Corporation, Kansas, in charge Refinery, Power Plants, etc.
6 Years As:
Chief Engineer, Derby Oil Company, Kansas, in charge of all Engineering and Construction.
During above time was in charge of construction, varying from $500,000.00 to $2,000,000.00 per year.

J. J. Korten

Age: 51

Education: Armour Institute, Chicago, Illinois.
Registered Professional Engineer, Oklahoma.

Experience: Thirty years.
General Superintendent for Arnold Construction Company, Chicago, Illinois, on following jobs:
$1,125,000.00 Pullman Shops and Power Plant, St. Louis, Missouri. Built 1916.
$1,750,000.00 C. & O. Railroad Shops and Power Plant, Huntington, West Virginia.
$1,200,000.00 C. & O. Railroad Shops and Power Plant, Clifton Forge, Virginia.
$1,750,000.00 R. F. & P. Railroad Shops, Richmond, Virginia.
General Superintendent for W. R. Grimshaw Co. on the following:
$2,000,000.00 Johnson Canyon Power Plant No. 1 (Hydro-Electric) near Lexington, Nebraska. Major power machinery included in total cost although purchased direct by owner. Receiving, transporting and installation were handled by Mr. Korten under Grimshaw construction contract.
$1,750,000.00 Motor Transport Facilities (Depot), Fort Sill, Oklahoma. Built 1941.

W. R. Grimshaw, Jr.

Age: 24

Education: Dartmouth, University of Texas.
Graduate University of Tulsa.
Studied Medicine, Engineering and Business Administration.

Experience: Two years miscellaneous experience in field and office, including approximately six months of intensive work in cost accounting.

George J. Bowie

Age: 56

Education: High School

Experience: Thirty-five years in all phases of construction.
Trained from apprenticeship to General Superintendent and job management in all branches of the work; consisting of, commercial, educational, monumental and industrial buildings, among many of which are the following:
Superintendent for George A. Fuller Company, New York on following jobs:
$750,000.00 First National Bank Building, Tulsa, Oklahoma. Built 1918.
$1,250,000.00 Federal Reserve Bank, Dallas, Texas.
Superintendent for Shallenberger Construction Company on following jobs:
$750,000.00 Atlas Life Building, Tulsa, Oklahoma.
$900,000.00 Oklahoma Natural Gas Building, Tulsa, Oklahoma.
$750,000.00 Remodelling and Additions to Hotel Tulsa including banquet and ballroom, seating capacity 600. Built under Architects Supervision.
$150,000.00 Municipal Airport, Tulsa, Oklahoma. Built under Architects Supervision.
Works Manager for W. R. Grimshaw Co. on:
$1,750,000 Motor Transport Facilities, (Depot) Fort Sill, Oklahoma.

L. C. Roberts

Age: 56

Education: High School and University of Pennsylvania—
Engineering Training.

Experience: 30 years experience in:
Mechanical installations such as Water Works, Filtration Plants, Sewage Plants, Air Conditioning, Power Plants, special training and experience in Venturi Meters and Guages.
Was in responsible charge of such installations on Camp Funston, Camp Bowie, Camp McArthur and Nitrate Plant No. 1 at Florence, Alabama, during World War 1917-18.
During present War has had responsible job on four different War Projects including Camp Bowie at Brownwood.
Experience covers both office and field.
In one capacity or another has been connected in responsible capacity on 100 to 150 plants of different kinds.
Kinds of work handled include Estimating, Purchasing, Field Supervision, etc., on Water Lines, Sewer Lines, Gas Lines, Steam Plants, Engines, Generators, Ammonia and Freon Piping, Pumps, Compressors, Special Sewage Equipment, Filter Equipment, Meters, etc.

Allan N. Ingle

Age: 38

Education: High School.
Studied Architecture at Kansas State A & M, Manhattan, Kansas.

Experience: 9 Years in:
Architectural Draftsman Architectural Inspection
Interior Decorating
10 Years in:
Estimating Superintendence Contracting
$600,000.00 Concrete Arch Bridge, Assistant Field Engineer.
Assistant Superintendent on following:
$260,000.00 School Dormitories for State of Oklahoma.
$360,000.00 Indian Hospital for Federal Government.
Superintendent on following:
$150,000.00 Grade Schools for City of Tulsa.
$150,000.00 Dormitories Indian School for Federal Government.
$200,000.00 Miscellaneous Commercial Buildings and Schools.

George Heidt

Age: 56

Education: Grade School

Experience: Thirty Years
Superintendent on many jobs including: Filter Plants, Schools, Warehouses, Factories, Churches, one of the largest of which is: $350,000.00 First Methodist Church, Tulsa, Oklahoma.

Representative Projects

OFFICE BUILDINGS

Philcade Building, Tulsa, Oklahoma.

Constructed in 1931.

This $1,200,000.00 Building is one of the largest and most efficiently laid out office buildings in the Southwest.

We have since also air-conditioned this building, together with the Phil-tower Building situated across the street, to which building we have also constructed some important additions.

Genet Building, Tulsa, Oklahoma.

Constructed in 1929.

We originally constructed this $265,000.00 ten story building as a retail furniture store, and have subsequently remodelled it into a modern office building.

Bureau of Mines, Office and Laboratory Building, Bartlesville, Oklahoma.

Constructed in 1937.

This $250,000.00 building is the principal building of the Bartlesville Station of the United States Bureau of Mines and houses the Bureau Office and principal laboratories.

It is of the most modern construction and contains Petroleum Research Laboratories.

Ethyl Gasoline Corporation, Office and Laboratory Building, Tulsa, Okla.

Constructed in 1930.

This building houses the offices and laboratory of the Ethyl Gasoline Corporation for the Tulsa territory.

It was constructed under the supervision of the Argonaut Realty Corporation, General Motors Research Building, Detroit, Michigan.

Waterworks Office Building, City of Pittsburg, Kansas.

Constructed in 1937.

This two story and basement building was constructed for the City of Pittsburg, Kansas, as a part of an extensive Waterworks and Power Plant Development.

Representative Projects

PUBLIC BUILDINGS

Municipal Auditorium and City Hall, Emporia, Kansas.

Constructed in 1939.

This is a $600,000.00 building housing all City Government and Civic Center facilities for the City. It is one of the most outstanding civic buildings in the Mid-Continent Area and of most modern construction in every respect.

It has one of the largest auditoriums in that section.

Pottawatomie County Court House, Shawnee, Oklahoma.

Constructed in 1934.

This $230,000.00 County Court House and Jail Building is of most modern fireproof construction, with luxurious Court Rooms, Lobbies and Offices that would do credit to counties many times the size of that County.

LeFlore County Court House, Poteau, Oklahoma.

Constructed in 1926.

This $200,000.00 Court House was one of the outstanding Court Houses of its time in the Mid-Continent Area, and moreover, even after this length of time ranks as one of the better Court Houses of its area.

Representative Projects

INSTITUTIONAL BUILDINGS

State Tuberculosis Sanitorium, Norton, Kansas.

Constructed in 1938.

This large $400,000.00 three wing building is the principal building for the institution named and is a five story and basement fireproof building of the most modern type.

Owner is State of Kansas.

Administration & Liberal Arts Building, Lamar Union Junior College, Beaumont, Texas.

Constructed in 1941.

This $150,000.00 building is the principal building of a group recently constructed at Lamar College and is of most modern construction for college buildings.

Will Rogers Memorial and Burial Vault.

Constructed in 1939.

This $250,000.00 Building was constructed for the Will Rogers Memorial Commission as a Museum to house the personal collections of Will Rogers. The Burial Vault includes crypts for Will Rogers' family.

Petroleum Engineering Building, University of Tulsa, Oklahoma.

Constructed in 1936.

This $50,000.00 modern fireproof building is one of the most recent improvements to the University of Tulsa, and houses their Petroleum Engineering School.

Public Schools.

Since 1925 we have constructed 11 schools for our Home City, Tulsa, Okla.

They are of various sizes and kinds and were constructed under the supervision of a Board of Education (and Architects) who have set a very rigid standard in the building of a strictly modern school system.

Representative Projects

TELEPHONE BUILDINGS

East Dial Building, Tulsa, Oklahoma.

Constructed in 1929.

This $106,000.00 Building, two stories and basement was constructed for the Southwestern Bell Telephone, under the supervision of Mr. I. R. Timlin, Architect, Telephone Building, St. Louis, Missouri.

It houses their automatic dial exchange equipment for the Eastern side of the City of Tulsa, Oklahoma.

Modern telephone exchange buildings are quite specialized and of the most tedious construction.

Central Office Building, Beaumont, Texas.

Constructed in 1941.

This $160,000.00 two story and part basement was constructed for the Southwestern Bell Telephone Company to accommodate the great expansion in telephone service required largely by the extensive defense developments in the Texas Gulf Coast area.

The foundation involved a difficult piling operation.

Melrose Exchange Building, Houston, Texas.

Constructed in 1941.

This $90,000.00 two story and basement building provides dial exchange service for one of the new highly developing areas of Houston, Texas.

Representative Projects

WAREHOUSE AND FACTORY BUILDINGS

Bleachery Building, Sand Springs, Oklahoma.

Constructed in 1926.

This $95,000.00 building was constructed under the supervision of Robert & Company, Engineers. according to the latest and best practice for Weaving Mill buildings and is still one of the most up to date buildings of like usage.

Floor area 44,000 square feet.

Page Furniture Storage Building, Tulsa, Oklahoma.

Constructed in 1926.

This $165,000.00 five story and basement fireproof furniture storage building is situated in a prominent location in the City between the business district and the better residence districts and is probably one of the outstanding buildings of its use in the country.

Western States (Wholesale) Grocery Warehouse, Tulsa, Oklahoma.

Constructed in 1933.

This $105,000.00 one story and basement warehouse is the distributing center for grocery chain stores in the Tulsa District and houses District Offices. Most modern warehouse construction.

Representative Projects

POWER PLANTS

Johnson Canyon Power Plant No. 1 (Hydro-Electric) located between Lexington and Elwood, Nebraska.

Constructed in 1939-1940.

This $2,000,000.00 project is a Hydro-Electric Plant of 20,000 K.W. capacity constructed for the Central Nebraska Public Power and Irrigation District. Total cost includes Turbines, Generators, Transformers and other Generating Equipment.

The Owner purchased direct the principal items of Generating Equipment but W. R. Grimshaw Co. received them from railroad transported about 13 miles and installed them.

The remainder of the project consisting of Intake Works, Penstocks, By-Pass, Power House construction, Paving, Canal Lining, Switchyard, Substation, etc., were included in W. R. Grimshaw Co. contract.

Tulsa Power Station, Unit No. 5, Tulsa, Oklahoma.

Constructed in 1938.

This 25,000 KW addition to an existing 30,000 KW steam turbo-generating station of Public Service Company of Oklahoma included the extension to the power plant building which was of brick and concrete construction with all necessary reinforced concrete foundations for building extension, turbo-generator and auxiliary equipment.

The project also included the circulating water intake and discharge structure, circulating water booster pump house and approximately 950 feet of 48" cast iron circulating water pipe.

Weleetka Power Station, Unit No. 2, Weleetka, Oklahoma.

Constructed in 1930.

This 15,000 KW addition to an existing 15,000 KW steam turbo-generating station of Public Service Company of Oklahoma included the extension to the power plant building which was of brick and concrete construction with all necessary reinforced concrete foundations for building extension, turbo-generator unit, two 1000 H.P. boilers and auxiliary equipment.

The project also included the foundations for the extension to the 66 KV and 13.2 KV switchyard structure, and transformer and oil circuit breaker foundations. The circulating water system included approximately 103' of 66" and 422' of 90" precast concrete pipe.

Representative Projects

ELECTRIC TRANSMISSION LINES

Underground Distribution System, Tulsa, Oklahoma

Constructed in 1937.

This $625,000.00 project consisted of 143,000 lineal feet of 4½" conduit encased in concrete, and 45 junction manholes, and 22 underground transformer vaults.

Cable raceway, manholes and transformer vaults installed for the Public Service Company of Oklahoma for an A. C. underground network system for the distribution of electric light and power in the downtown commercial area of Tulsa, Oklahoma, all of which was executed with a minimum of inconvenience to heavy downtown traffic.

This project involved the installation of 1.4 miles of concrete encased fibre conduit runs in the streets and alleys of downtown Tulsa under heavy traffic conditions. The project involved 20,079 cubic yards of excavation, and required approximately 3,900 cubic yards of reinforced concrete plus concrete for encasement.

Sand Springs — Bartlesville, Oklahoma, Transmission Line.

Constructed in 1939.

This is a 66,000 volt transmission line costing approximately $220,000.00 and 53 miles in length, extending from Sand Springs, Oklahoma, to Bartlesville, Oklahoma. The line is of H-frame type constructiion built of 50' and 55' creosoted pine poles. Each structure is braced with wood X-braces. The conductor is 266,-800 c.m. aluminum cable steel reinforced. The line includes 426 structures. The greater part of its length was built across exceedingly rough country, many places being inaccessible for hauling in materials by trucks. The rugged contour in many places required special construction which included span lengths from 1400' to 1800' in length with special supporting structure of 4 and 6 poles with wood bracing.

Bartlesville — Copan, Oklahoma, Transmission Line

This was constructed in 1933.

This is a 13,200 volt transmission line 20.26 miles in length, costing approximately $24,000.00, extending from Bartlesville, Oklahoma, to a pipe line pumping station west of Copan, Oklahoma. The line is of a single pole type construction. The conductor is No. 1/0 aluminum cable steel reinforced. It includes 289 structures.

Representative Projects

AIR CONDITIONING

Philcade and Philtower Buildings, Tulsa, Oklahoma.

Air conditioning installed in 1937.

This $500,000.00 air conditioning project serves a 13-story and a 23-story building on opposite sides of a street.

400,000 square feet of floor space air conditioned as one system.

Four 250 H.P. motor driven ammonia compressors provide 1000 tons of refrigeration.

Masonic-Empire Building, Bartlesville, Oklahoma.

Air conditioned in 1938.

This $160,000.00 project serves a 9-story building with 80,000 square feet of floor space. Building is occupied by the Empire Companies.

First National Bank Building, Tulsa, Oklahoma.

Air conditioned in 1935.

This $152,000.00 project serves this 10-story building of 72,000 square feet floor space.

Public Service Company Building, Tulsa, Oklahoma.

Air conditioned in 1936.

This $120,000.00 project serves this 6-story building of 48,000 square feet floor space.

Representative Projects

FILTER PLANTS

Filter Plant for Clear Creek Water Project.

Supplies water for City of Fort Smith, Arkansas, constructed in 1936.

This project costing approximately $160,000.00 consists of 8 million gallon per day slow sand filters, Head House, Mixing and Settling Basins, Wash Water Tank and Clear Water Reservoir, and connecting piping. Also includes small Hydro-Electric Generating Plant and Diesel Driven Generating Plant, switchboards, etc.

W. R. Holway, Tulsa, Oklahoma, was Consulting Engineer.

Filtration Plant and Water Works Office Building, Pittsburg, Kansas.

Constructed in 1937.

This $220,000.00 project consists of a Filtration Plant with filters, softeners, and Clear Water Reservoir, all totally enclosed, and Settling Basin, and a separate two story and basement Office Building for the City of Pittsburg, Kansas.

Filtration Plant, Fairfax, Oklahoma.

Constructed in 1938.

This is a small but complete filter plant with clear water reservoir located below the filters and head house. This construction was located just below a newly constructed earth dam with difficult water conditions.

Filtration Plant for Commander Mills, Sand Springs, Oklahoma.

Constructed in 1930.

This is a small filtration and water softening plant furnishing water for the Commander Mills, Bleachery and Weaving Plant.

Representative Projects

SEWAGE DISPOSAL PLANTS

Bartlesville, Oklahoma, Sewage Plant.

Constructed in 1936.

This plant together with several booster sewage pumping stations provides the most up to date sewage facilities for its City.

Process employed is "Activated Sludge".

Southwest Sewage Plant, Springfield, Missouri.

Constructed in 1939.

This $450,000.00 development is a most modern plant with automatic alarm and control system. Six large distributors service the trickling filters, two three-tray Primary Clarifiers and Rotary Secondary Clarifiers, and Shredding and Screening and Grit Removal equipment as well as Areation Tanks and equipment are included. These improvements converted the Southwest Disposal Plant of Springfield, Missouri, into one of the most modern sewage disposal plants in use today and ranks it as one of the largest in the Southwest.

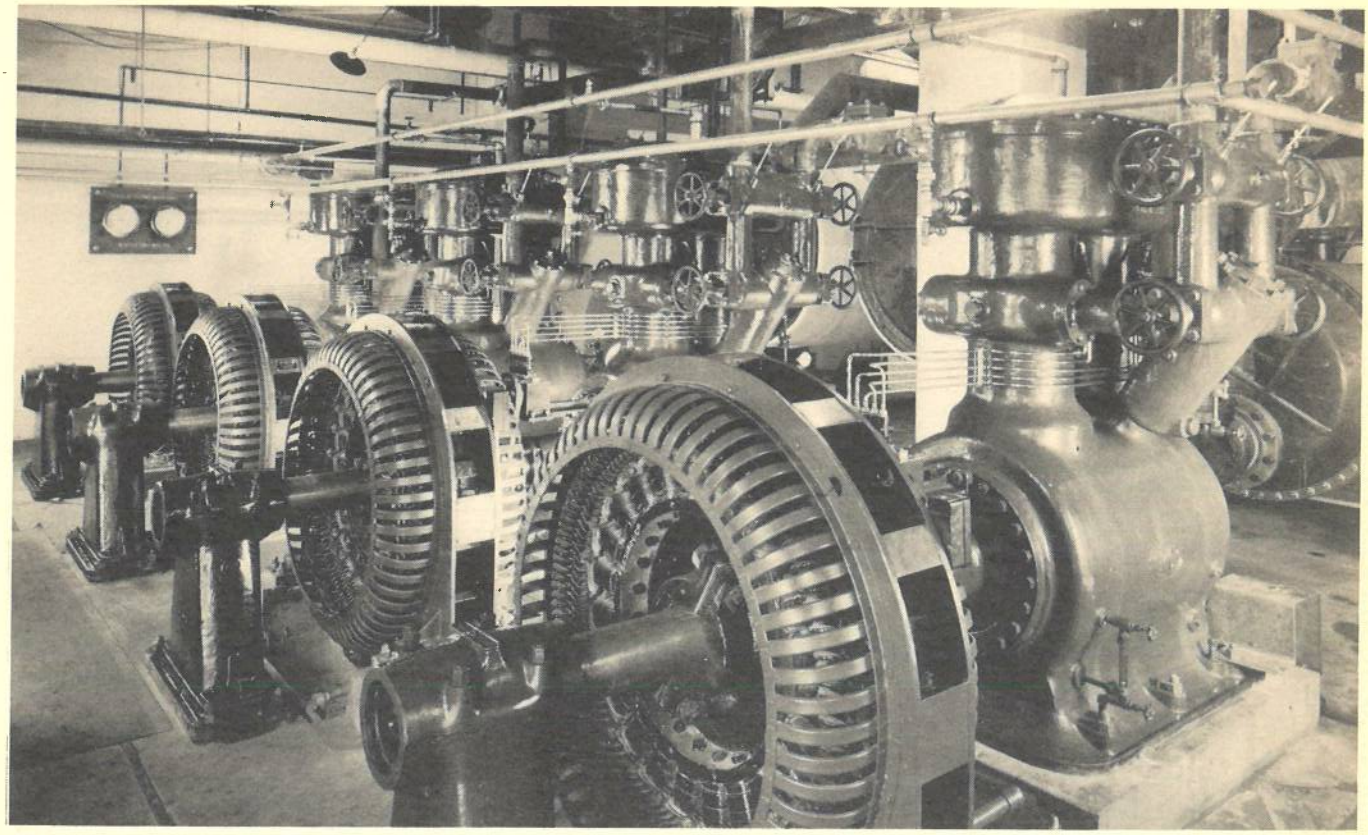
Included are two 180 H.P. Sewage Gas Engine Electric Generating Plants, complete switchboard facilities, two 7,000,000 gallon per day raw sewage pumps, many auxiliary pumps, sewage gas boilers, waste gas water heating equipment and other improvements.

Northeast Sewage Plant, Tulsa, Oklahoma.

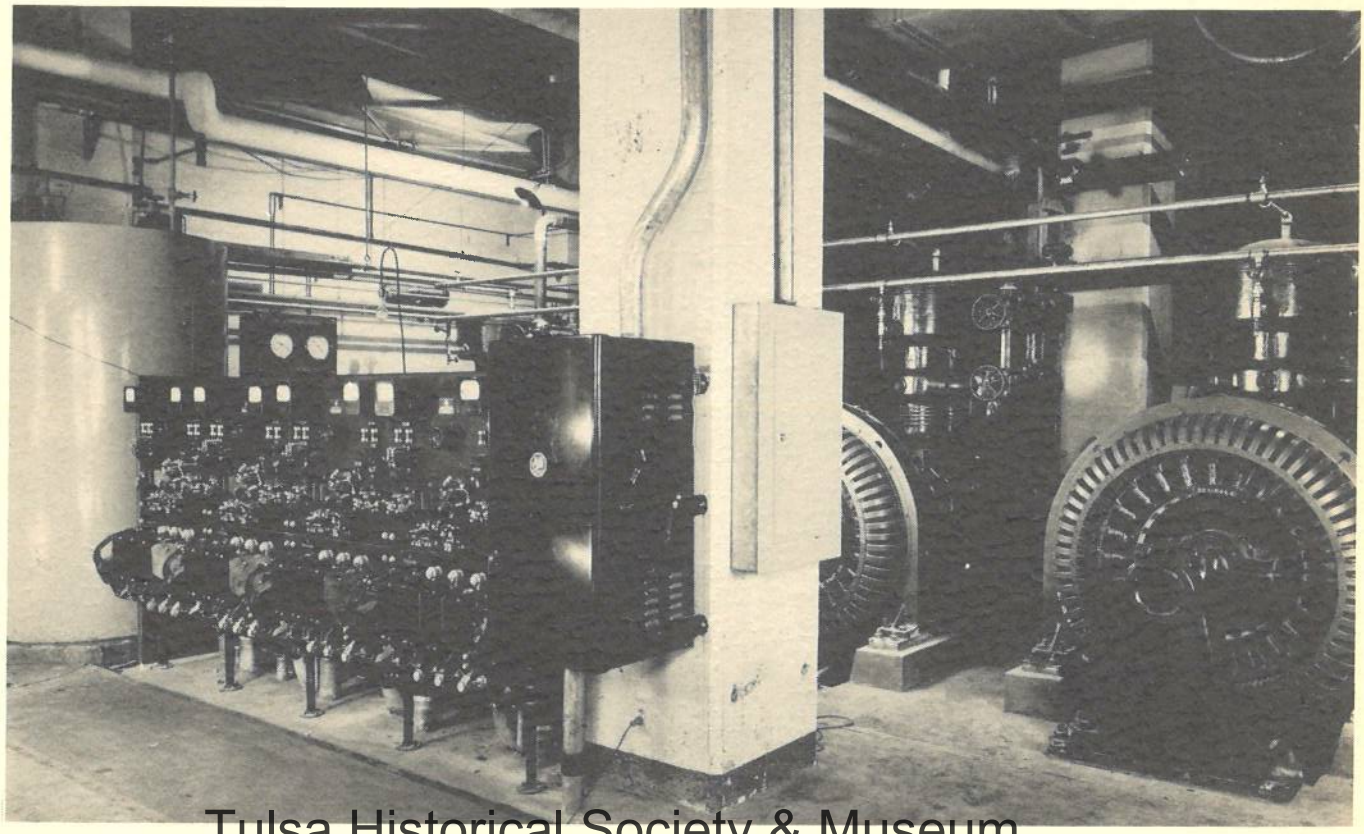
Constructed in 1941.

This plant was built for the City of Tulsa, Oklahoma, exclusively to service the Douglas Bomber Assembly Plant. This 3,000,000 gallon per day plant is a complete but simple and practical plant using twin comminutors, chemical treatment, mixing tank, clarifier, trickling filter, twin digesters and sludge beds. Holway & Cochrane, Tulsa, were Consulting Engineers.

PHILCADE BUILDING
TULSA, OKLAHOMA — 1931



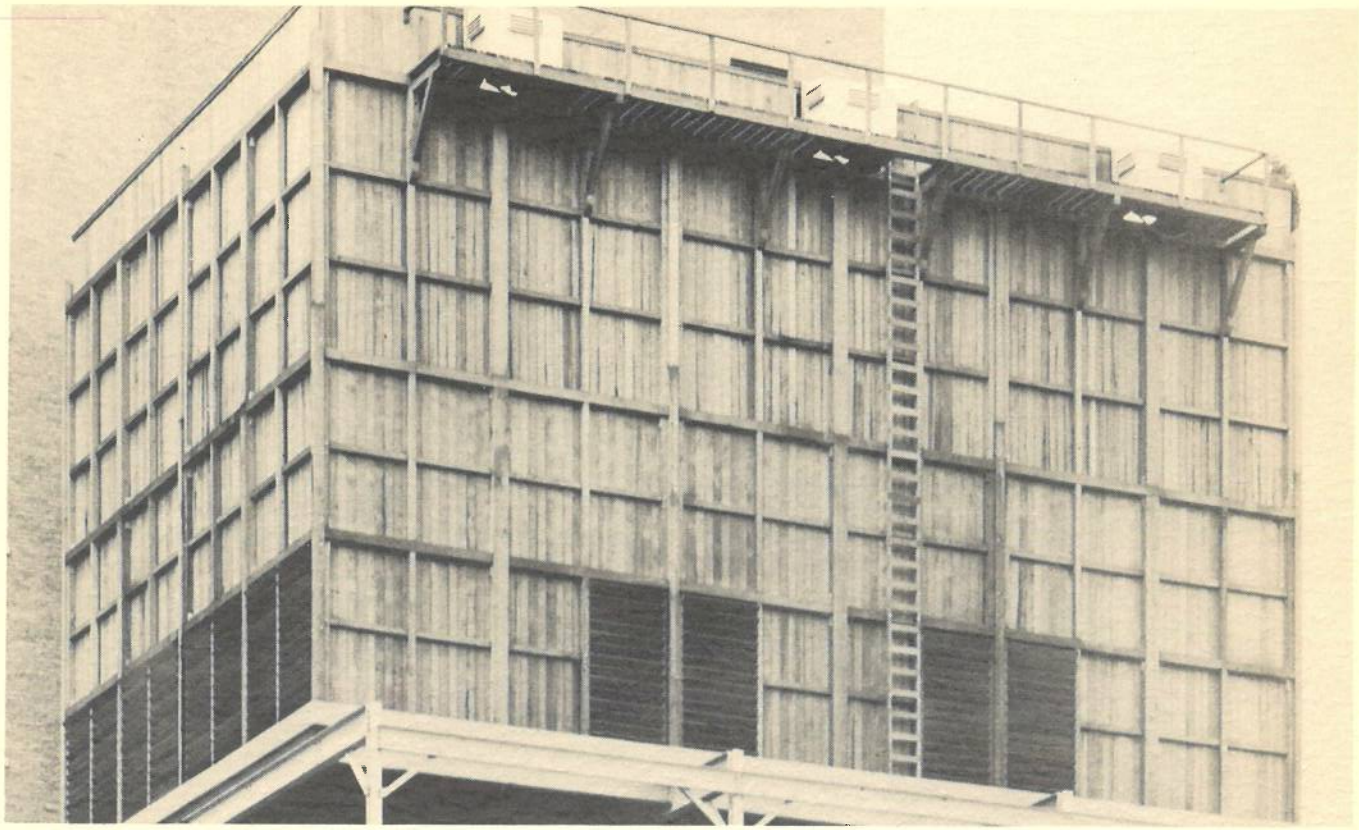
1000 TON BATTERY AMMONIA COMPRESSORS



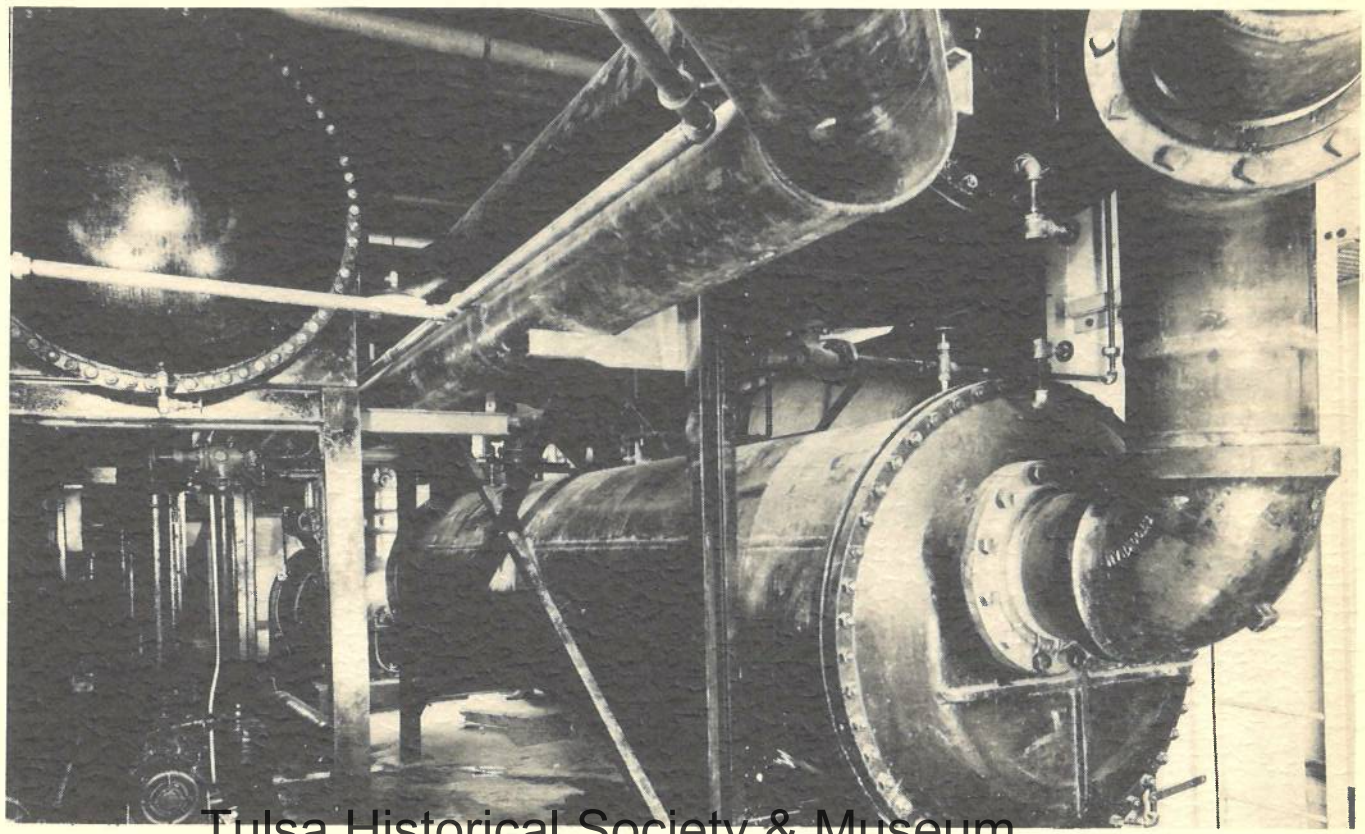
STARTING PANEL FOR COMPRESSOR MOTORS
1000 TON REFRIGERATING PLANT

PHILCADE — PHILTOWER AIR CONDITIONING

TULSA, OKLAHOMA — 1937



INDUCED DRAFT COOLING TOWER



COOLERS, CONDENSERS, AMMONIA & WATER PIPING

PHILCADE — PHILTOWER AIR CONDITIONING

TULSA, OKLAHOMA — 1937

AIRPLANE VIEW UNDER CONSTRUCTION

END OF STREET AT MIDSTAGE OF CONSTRUCTION

WICHITA DEFENSE HOUSING PROJECT

KANS. 14022-X

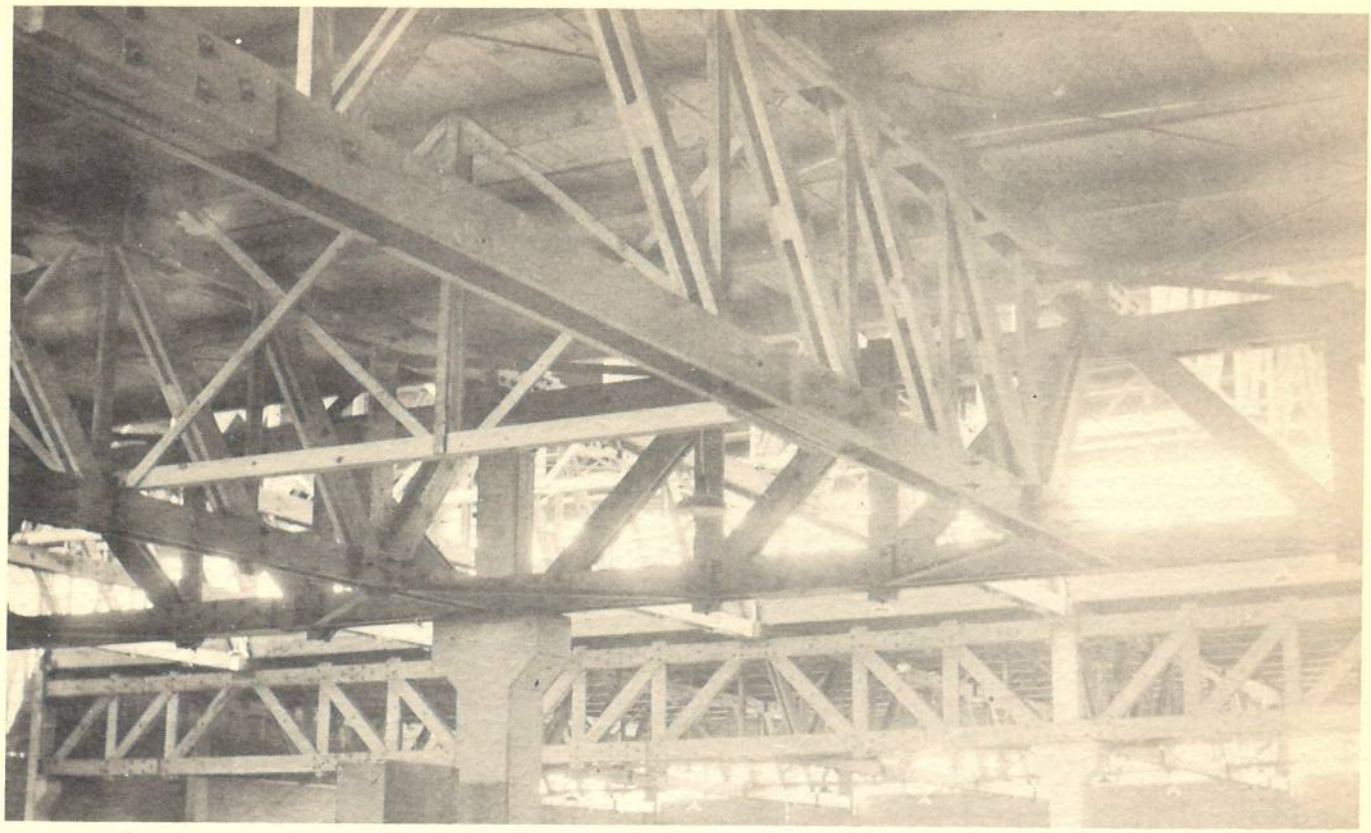
WICHITA, KANSAS — 1941

ONE OF WAREHOUSES

TYPICAL WAREHOUSE

MOTOR TRANSPORT FACILITIES

FORT SILL, OKLAHOMA — 1941

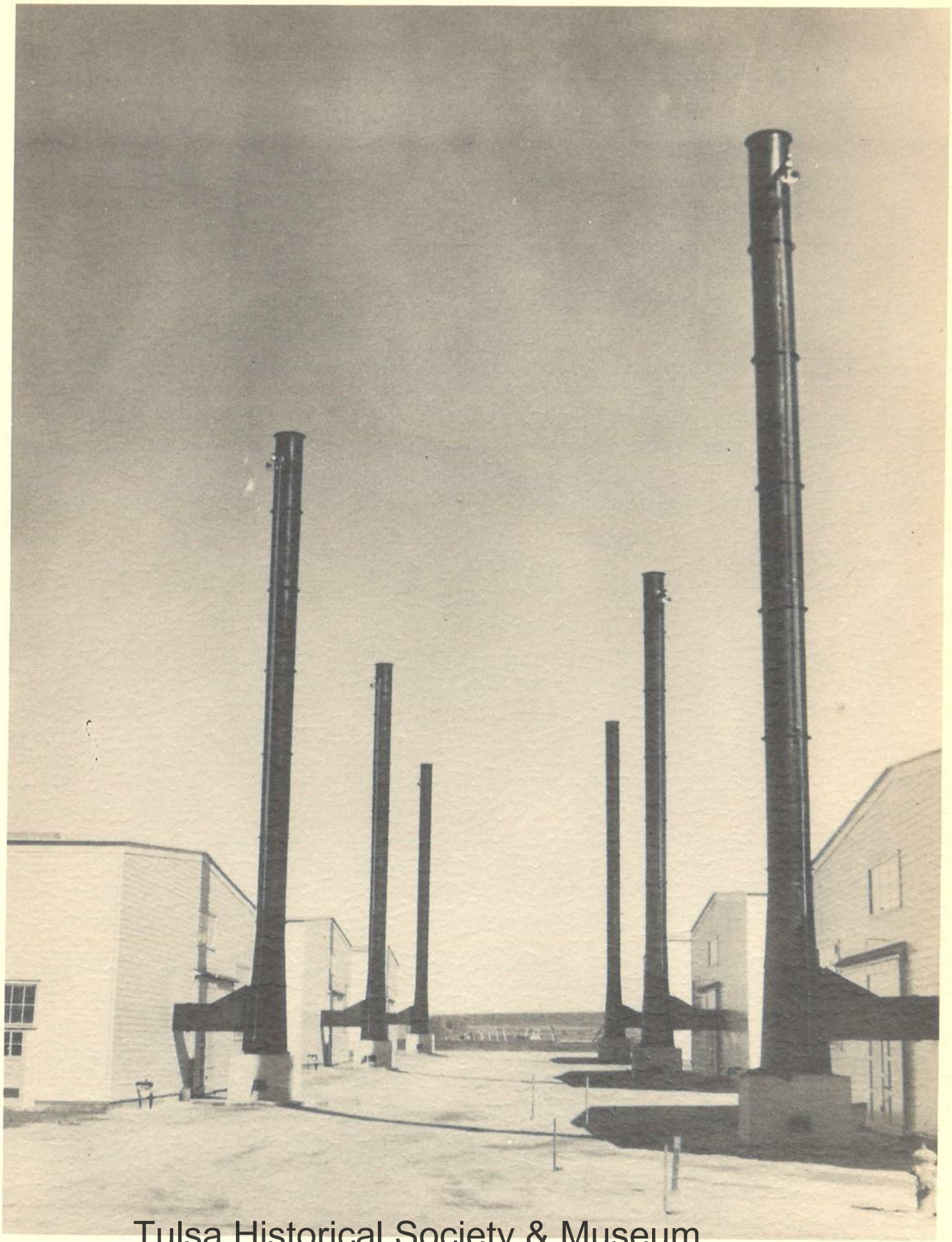


WOOD TRUSS CONSTRUCTION SUBSTITUTES FOR STEEL WHEN STEEL NOT AVAILABLE

AIRPLANE VIEW

MOTOR TRANSPORT FACILITIES

FORT SILL, OKLAHOMA — 1941

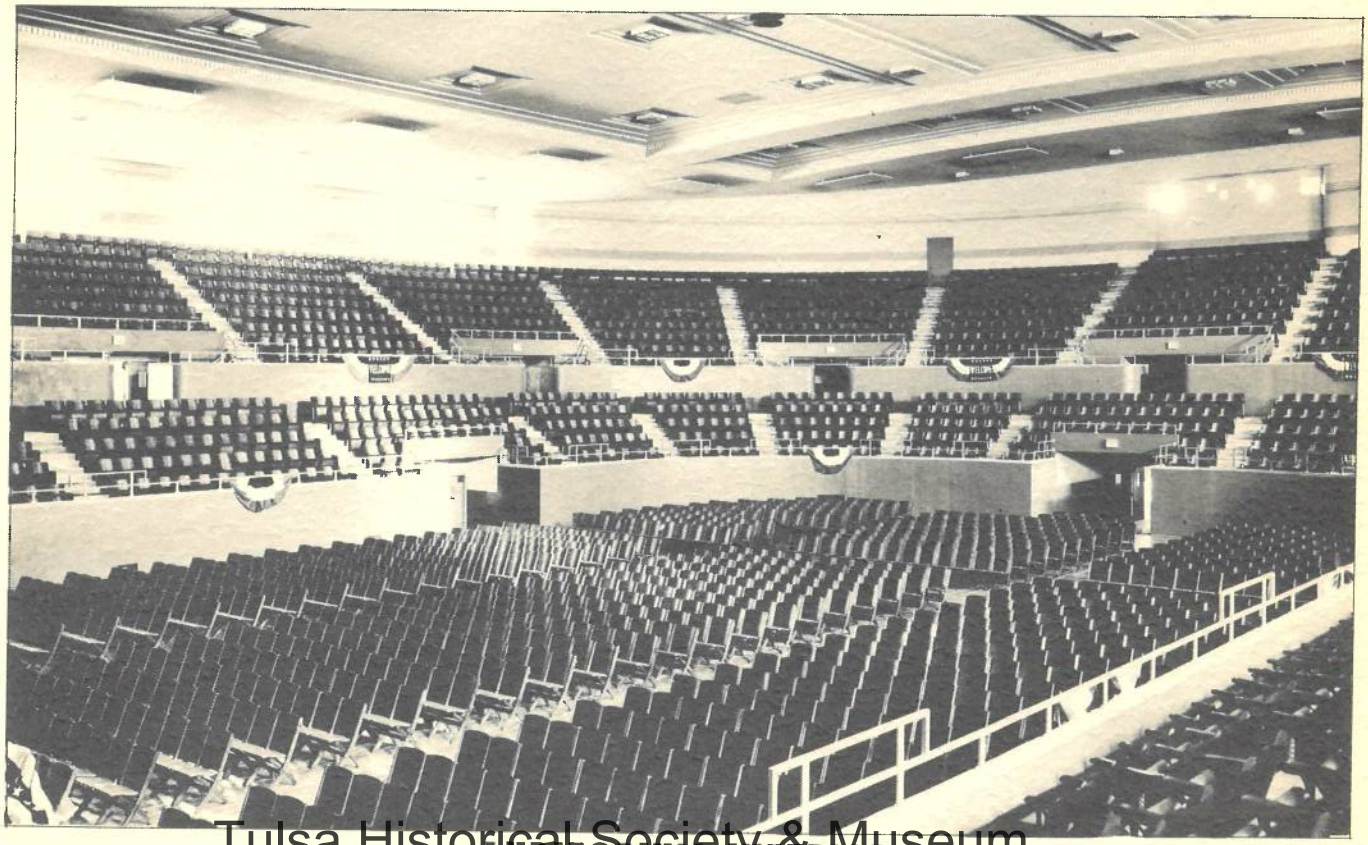


REAR VIEW, MACHINE SHOP GROUP

MOTOR TRANSPORT FACILITIES

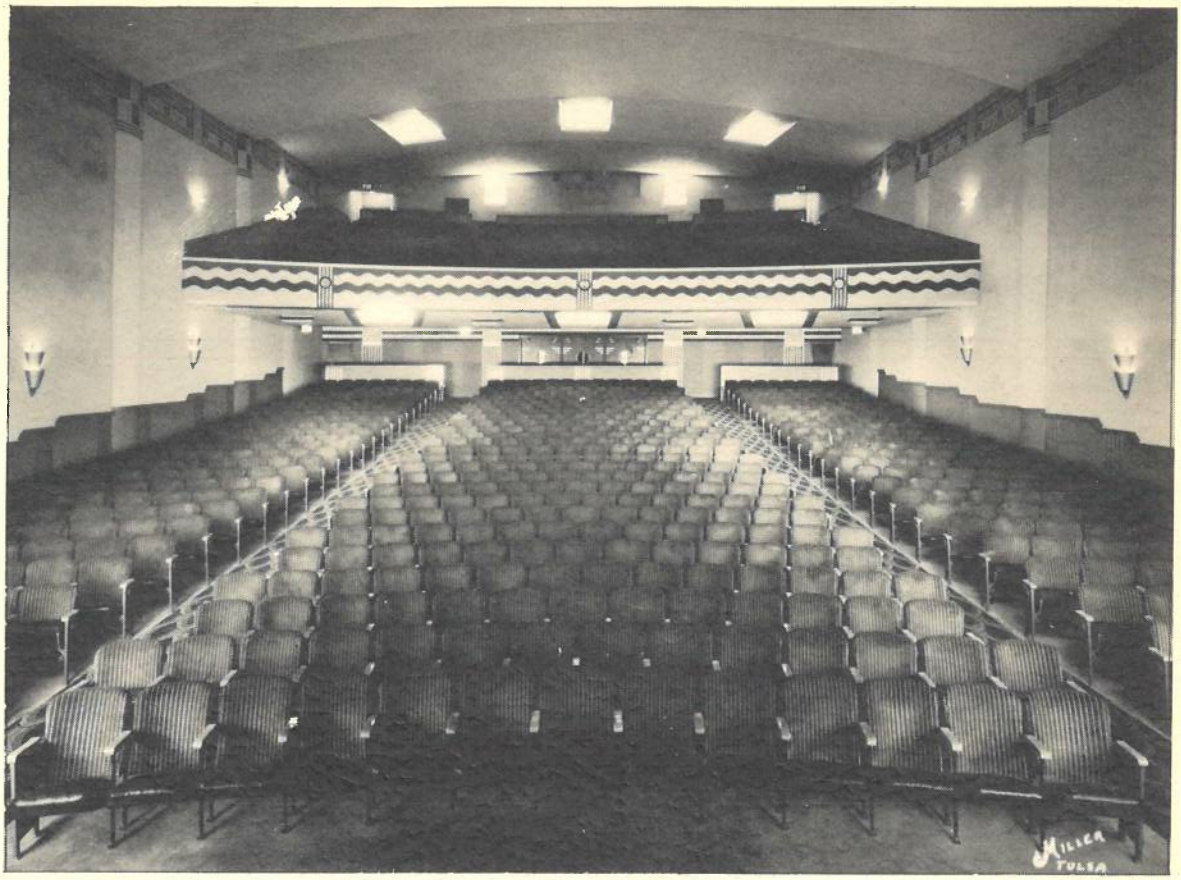
FORT SILL, OKLAHOMA — 1941

EXTERIOR



AUDITORIUM INTERIOR

CITY AUDITORIUM AND MUNICIPAL BUILDING
EMPORIA, KANSAS — 1940



AUDITORIUM INTERIOR

LOBBY INTERIOR

DELMAN THEATRE

TULSA, OKLAHOMA — 1937

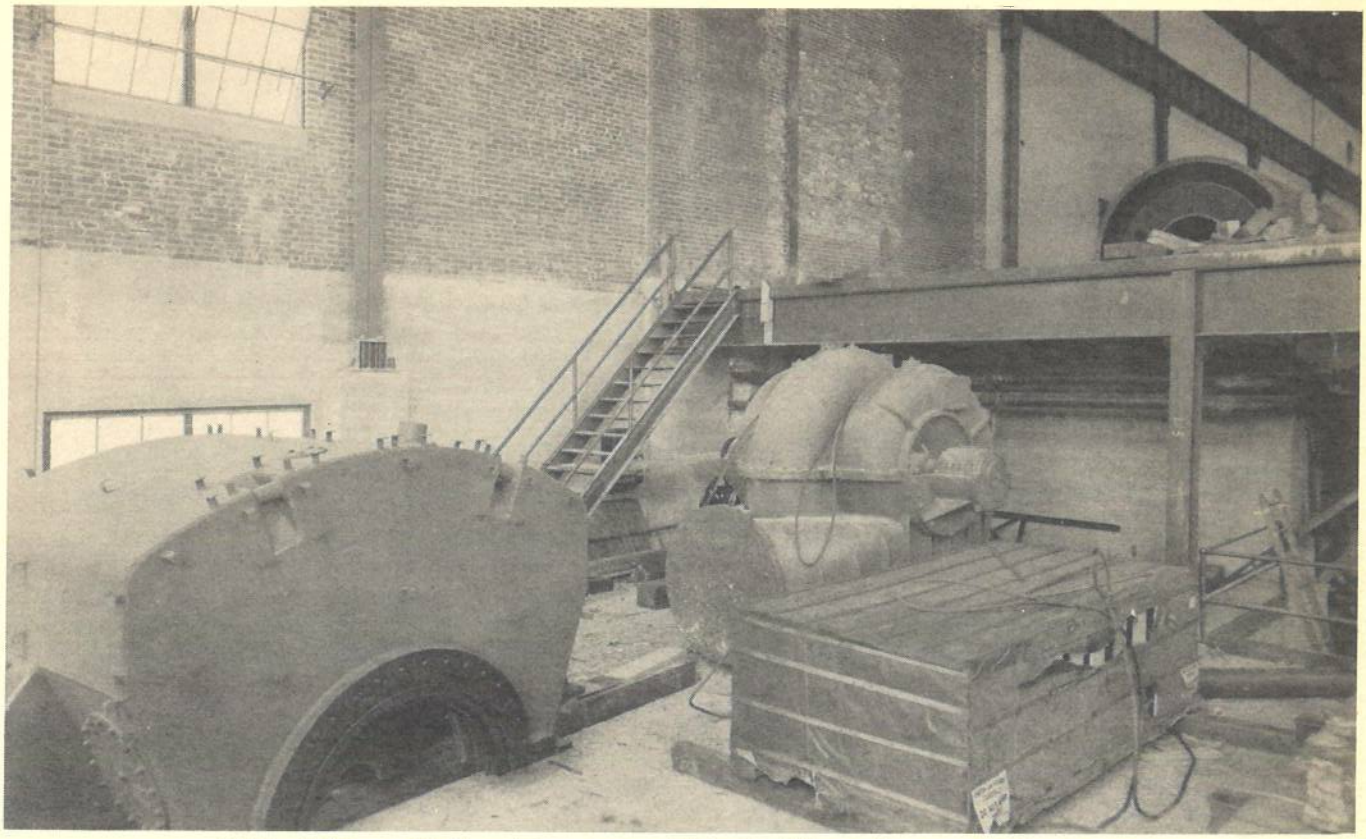
PAGE MEMORIAL LIBRARY

SAND SPRINGS, OKLAHOMA — 1929

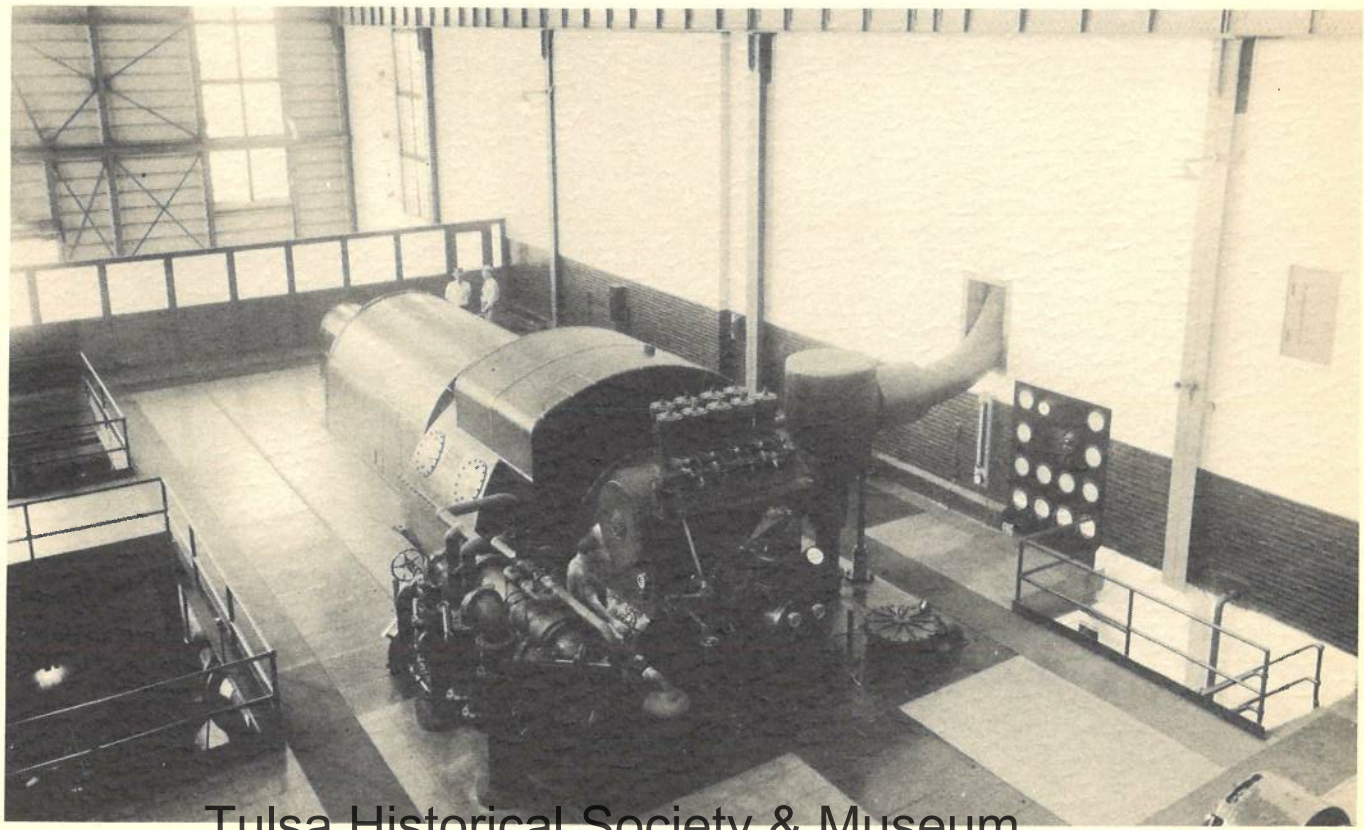
EDUCATIONAL BUILDING

FIRST CHRISTIAN CHURCH

TULSA, OKLAHOMA — 1940



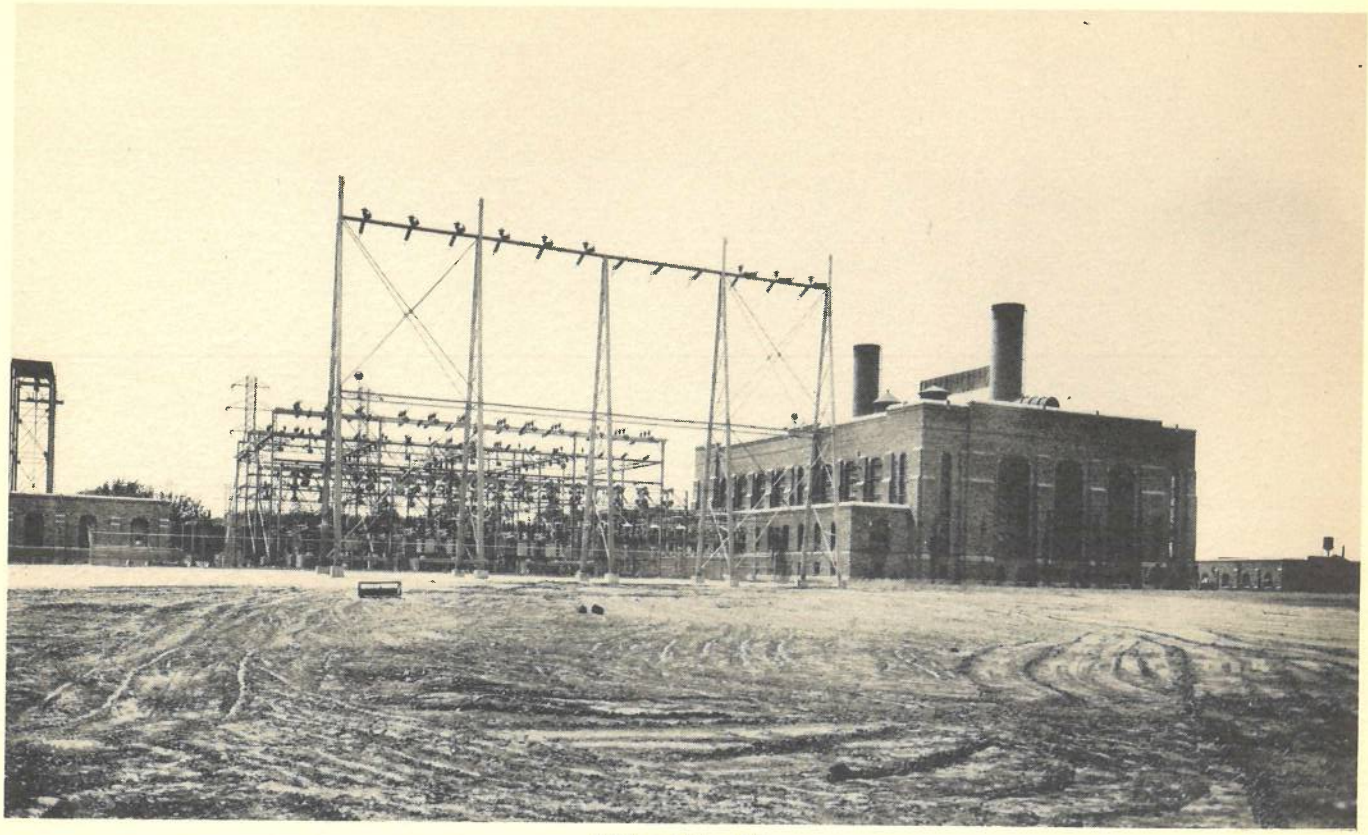
ONE PUMP OF A BATTERY TOTALLING 100 MILLION GALLONS PER DAY



25,000 KVA TURBO-GENERATOR

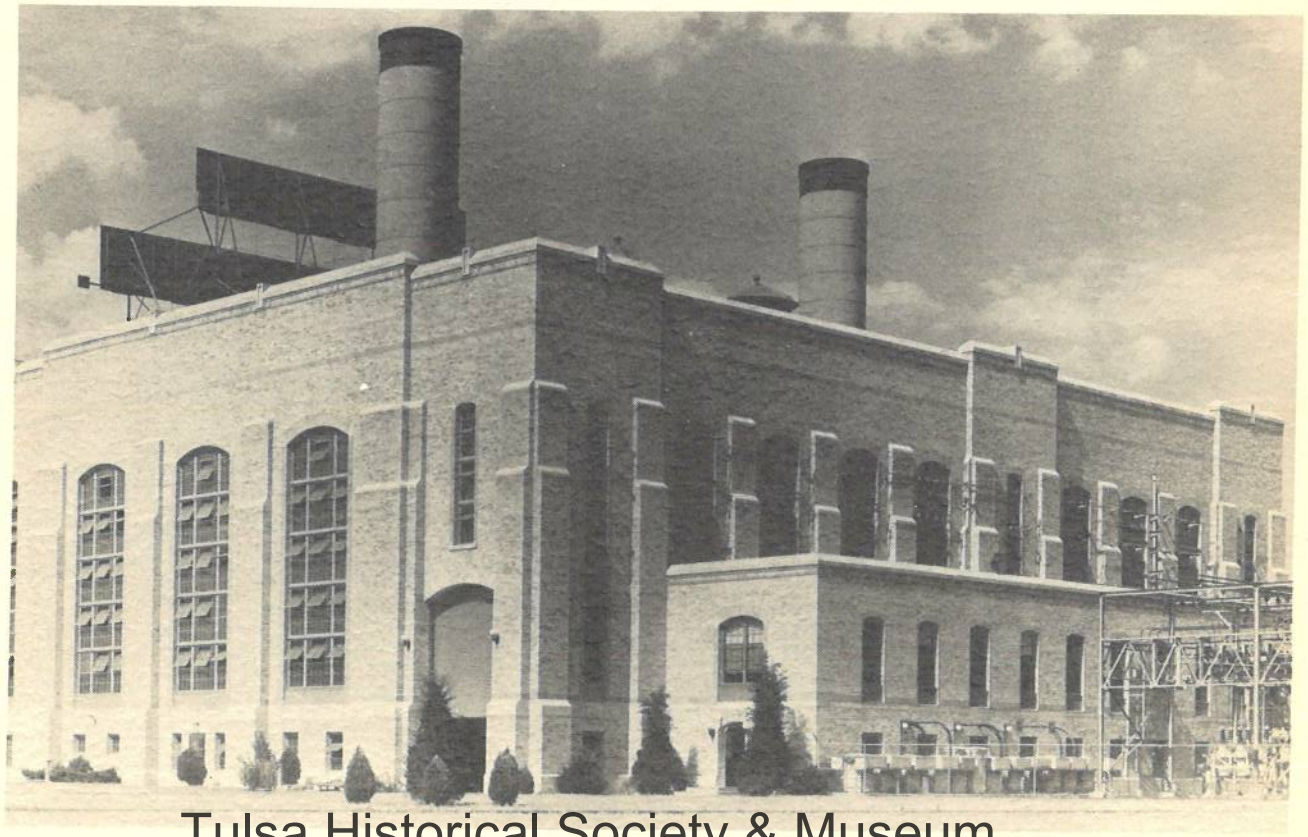
WEST TULSA POWER STATION UNIT NO. 5

TULSA, OKLAHOMA — 1938

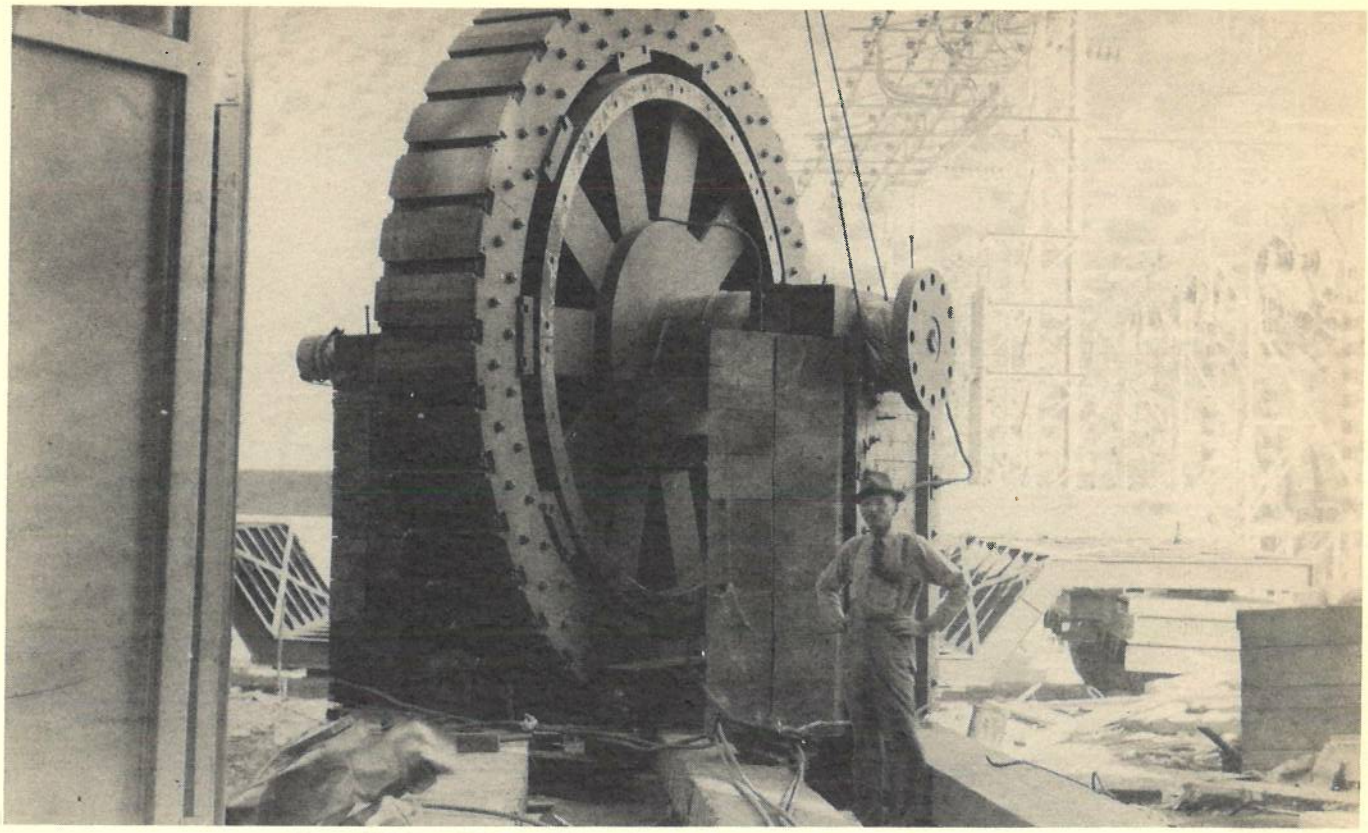


SWITCHYARD

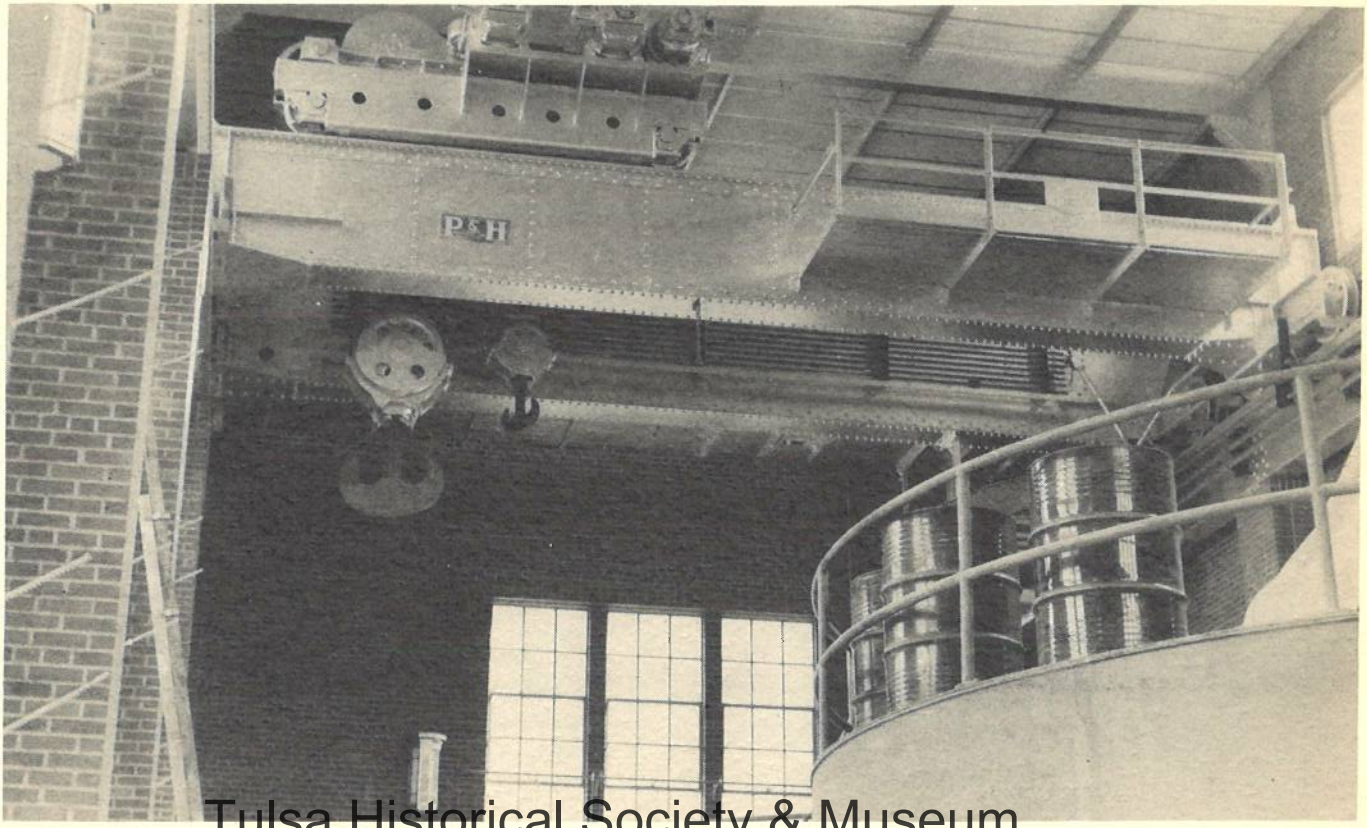
WELEETKA POWER STATION UNIT NO. 2
WELEETKA, OKLAHOMA — 1930



40,000 KVA TURBO-GENERATOR POWER PLANT
WELEETKA, OKLAHOMA — 1930



50 TON ROTOR AT END OF 13 MILE CROSS COUNTRY HAUL

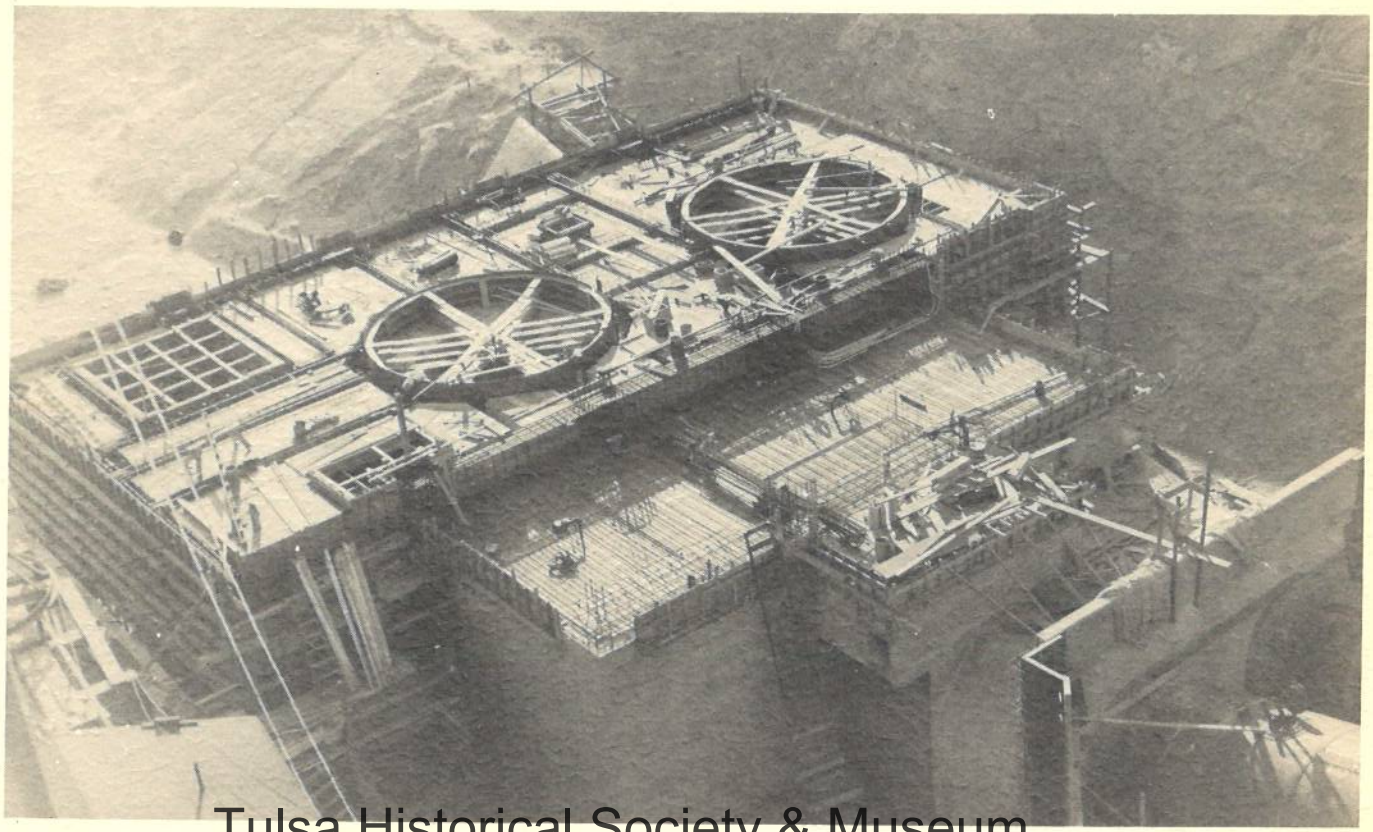


165 TON CRANE AND 10,000 KVA GENERATOR

JOHNSON CANYON POWER PLANT NO. 1

NEAR LEXINGTON, NEBRASKA — 1939-1940

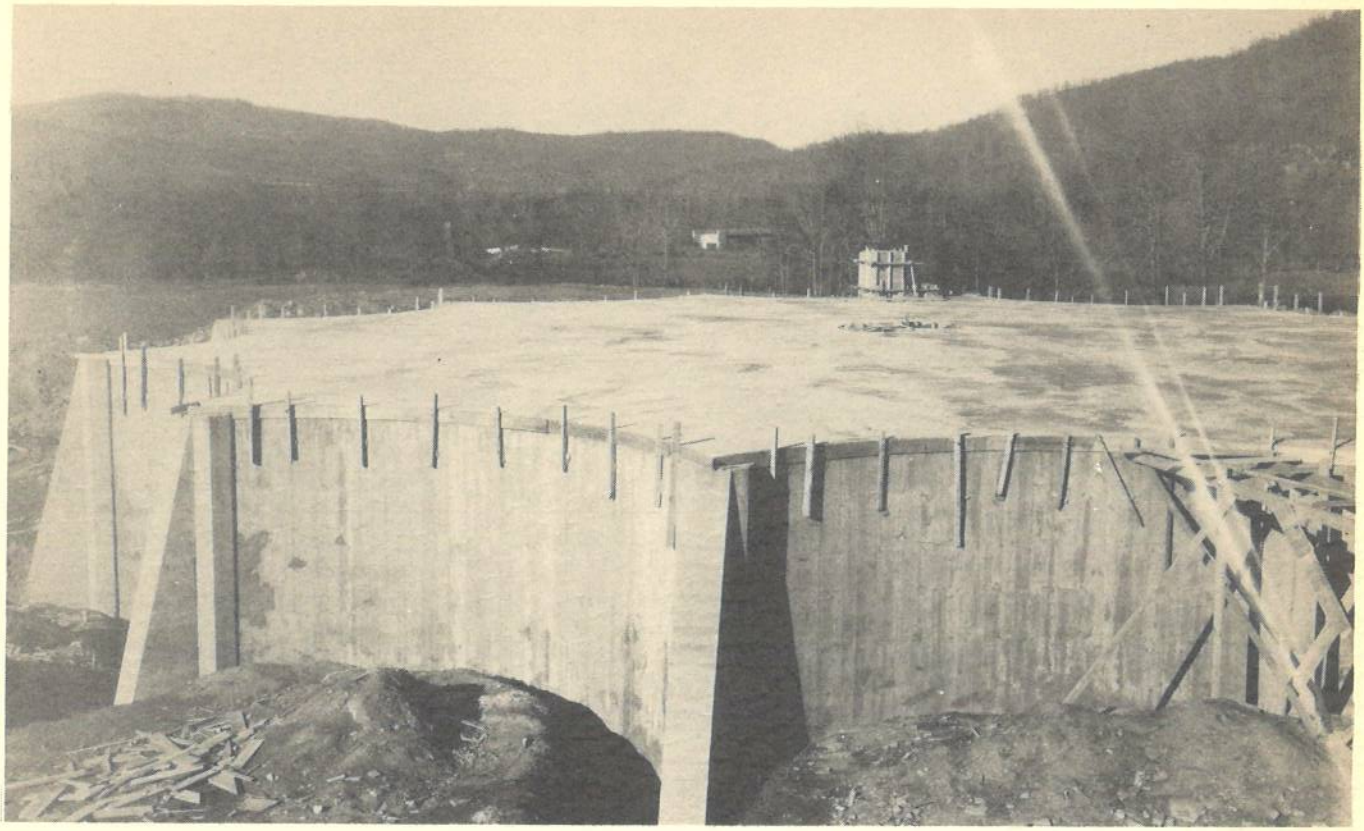
HYDRO-ELECTRIC POWER PLANT



HYDRO-ELECTRIC PLANT IN PROCESS OF CONSTRUCTION

JOHNSON CANYON POWER PLANT NO. 1

NEAR LEXINGTON, NEBRASKA — 1939-1940

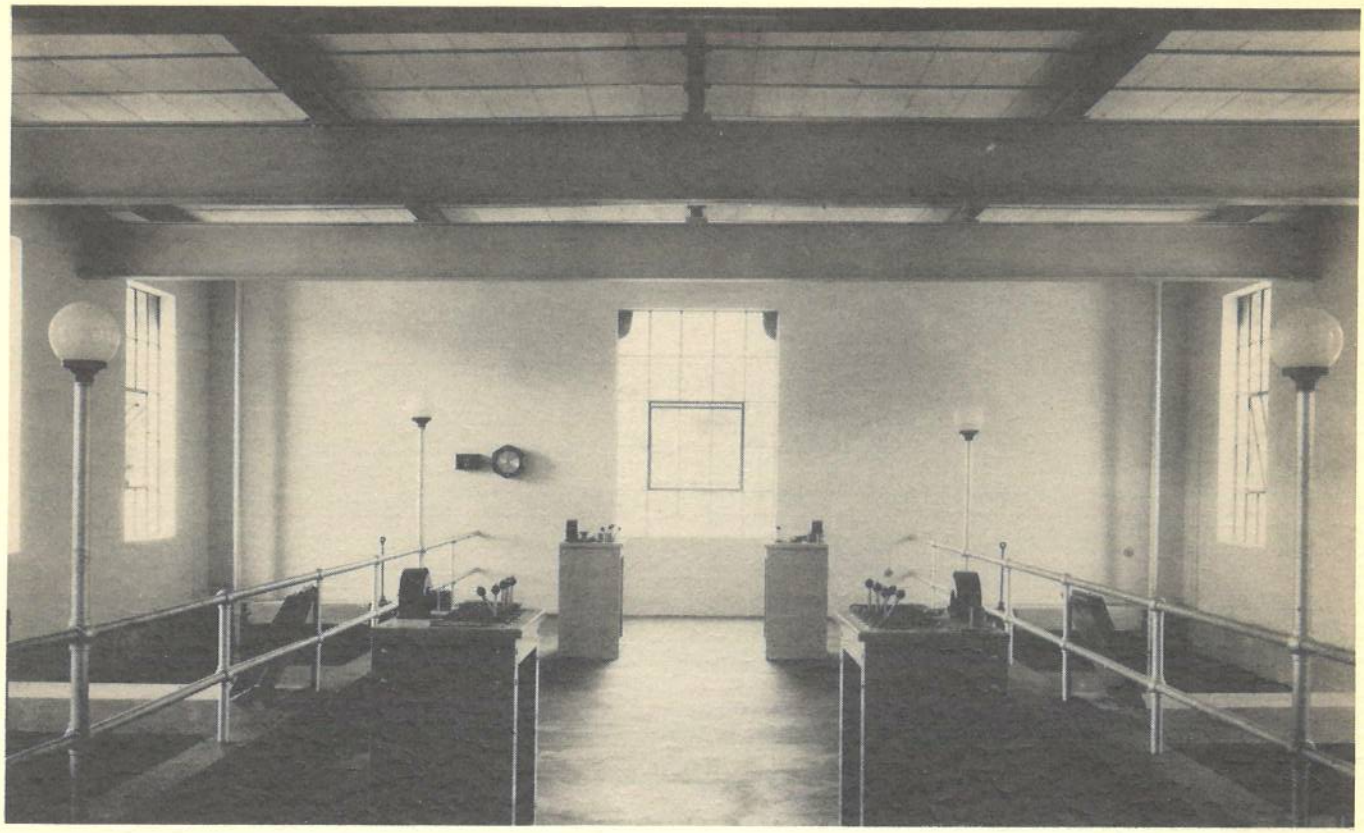


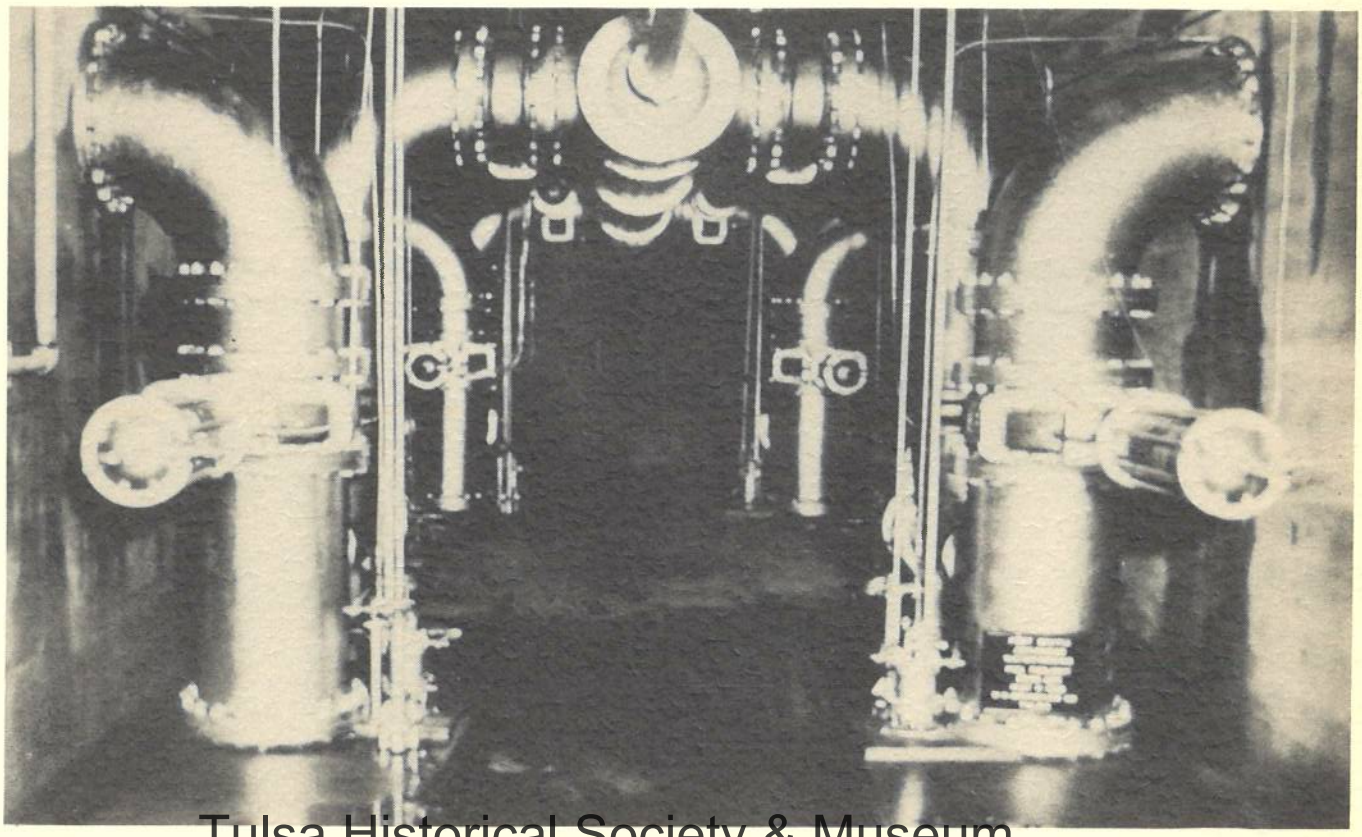
FILTERED WATER RESERVOIR—FILTRATION PLANT

HEAD HOUSE & FILTERS—FILTRATION PLANT

CLEAR CREEK WATER PROJECT

FT. SMITH, ARKANSAS — 1936

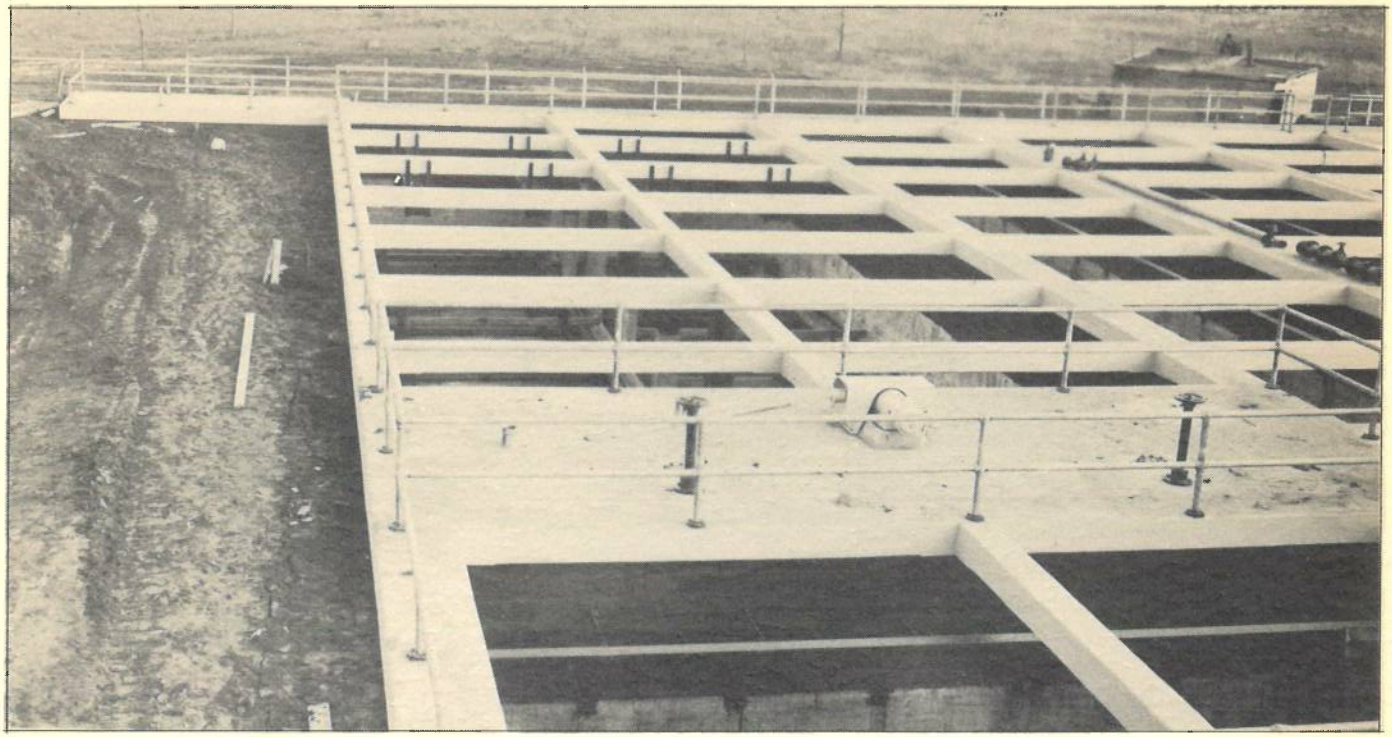




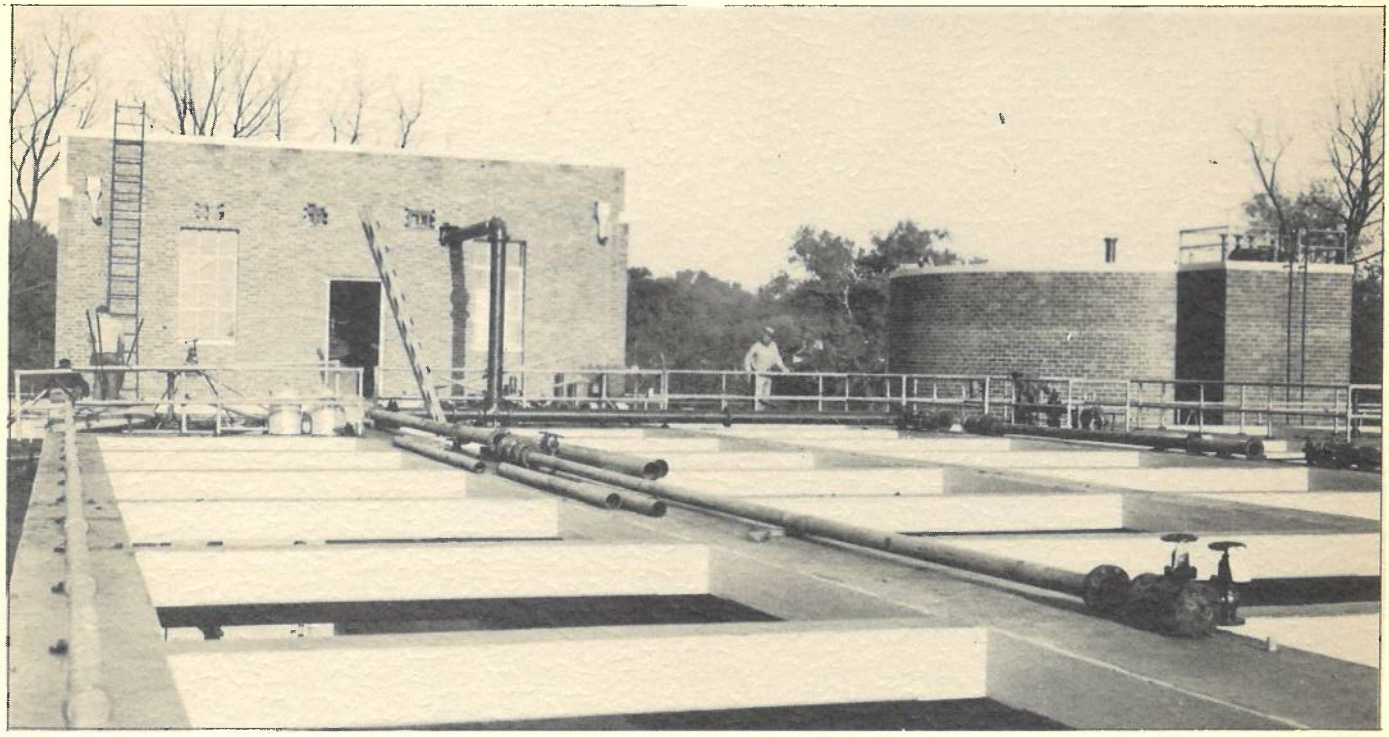
PIPE GALLERY—FILTRATION PLANT

CLEAR CREEK WATER PROJECT

FT. SMITH, ARKANSAS — 1936



AERATION & FINAL SETTLING TANKS

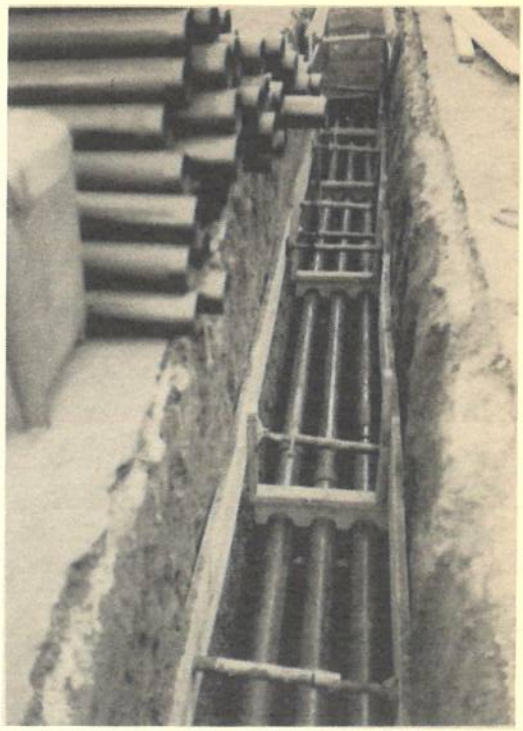


PRIMARY SETTLING TANKS, CONTROL BUILDING AND DIGESTER

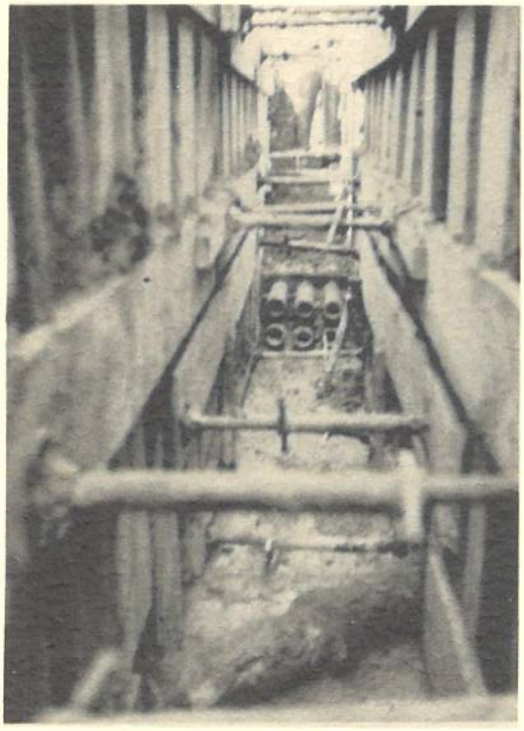
PORTIONS OF

BARTLESVILLE, OKLAHOMA, SEWAGE PLANT

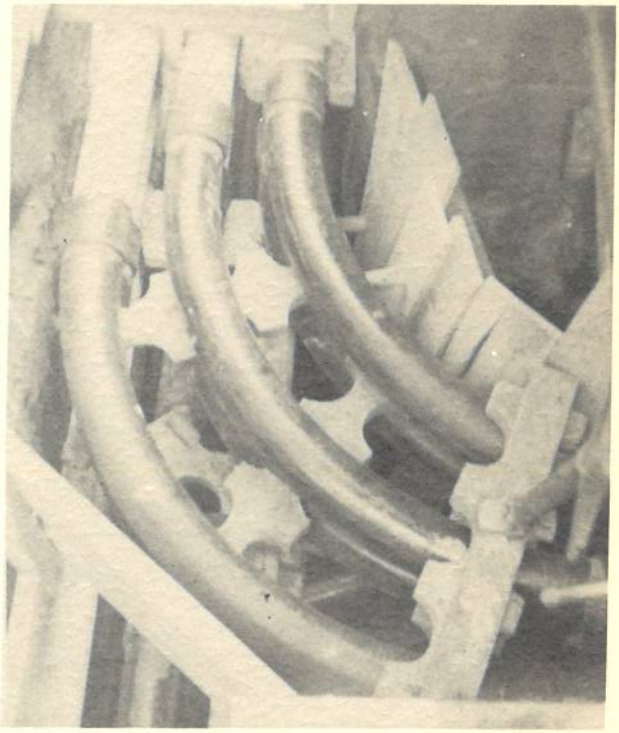
ACTIVATED SLUDGE PROCESS — 1935



DUCT RUNS READY FOR CONCRETING



DUCT RUNS BEING CONCRETED IN DANGEROUS EARTH UNDER PAVEMENT



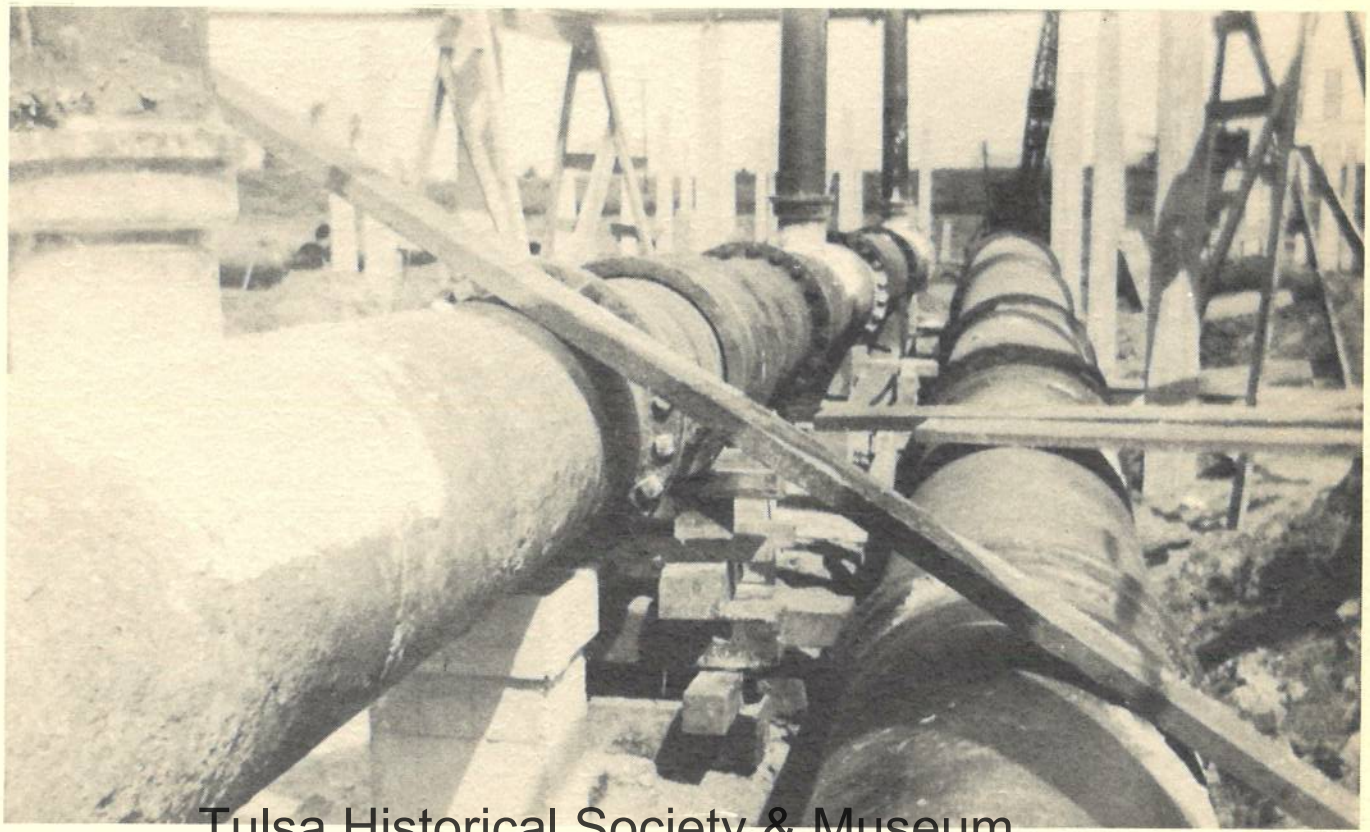
COMPLICATED CONDUIT TIE-IN

UNDERGROUND ELECTRICAL DISTRIBUTION SYSTEM

DOWNTOWN COMMERCIAL AREA

TULSA, OKLAHOMA — 1937

TYPICAL CIRCULATING WATER PIPING



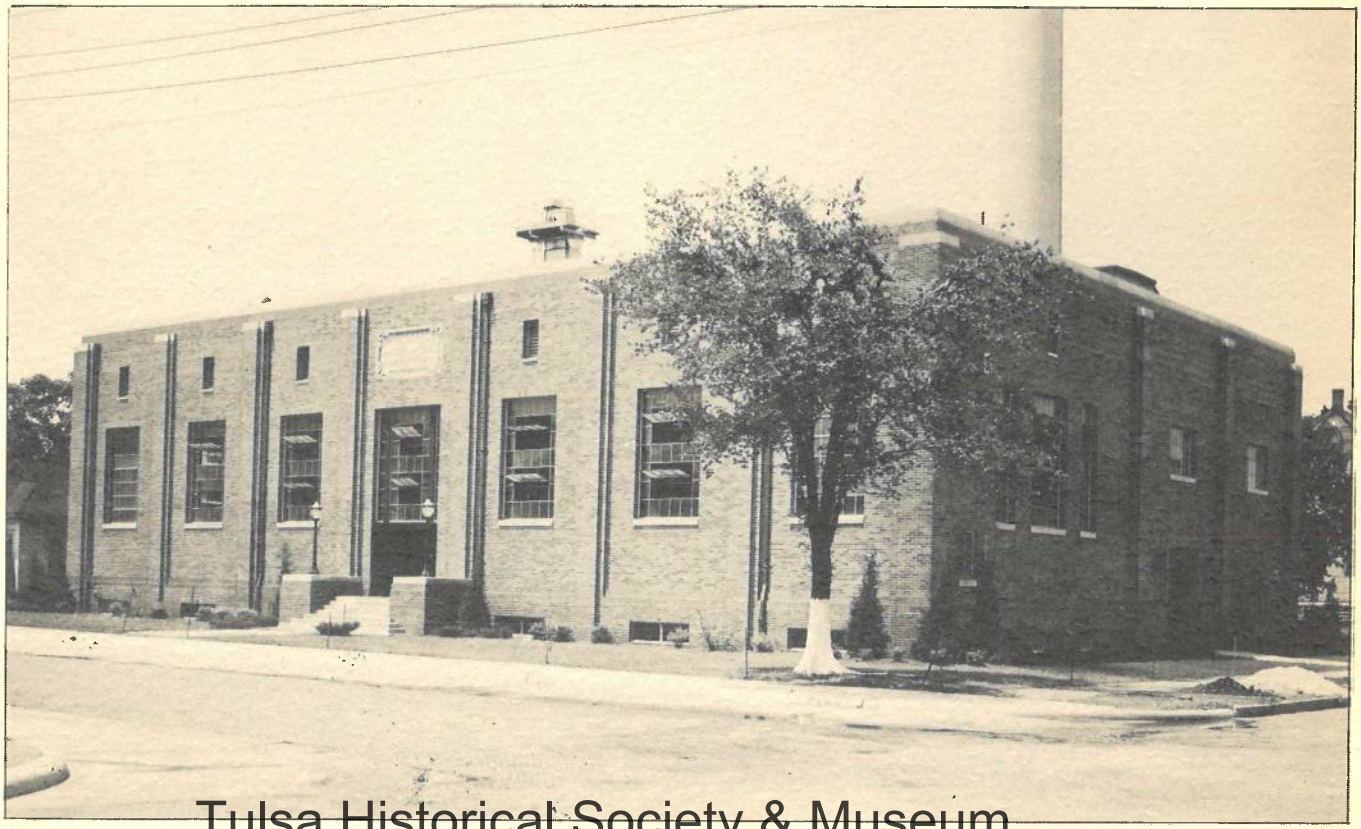
TYPICAL CIRCULATING WATER PIPING

WEST TULSA POWER STATION UNIT NO. 5

TULSA, OKLAHOMA — 1938

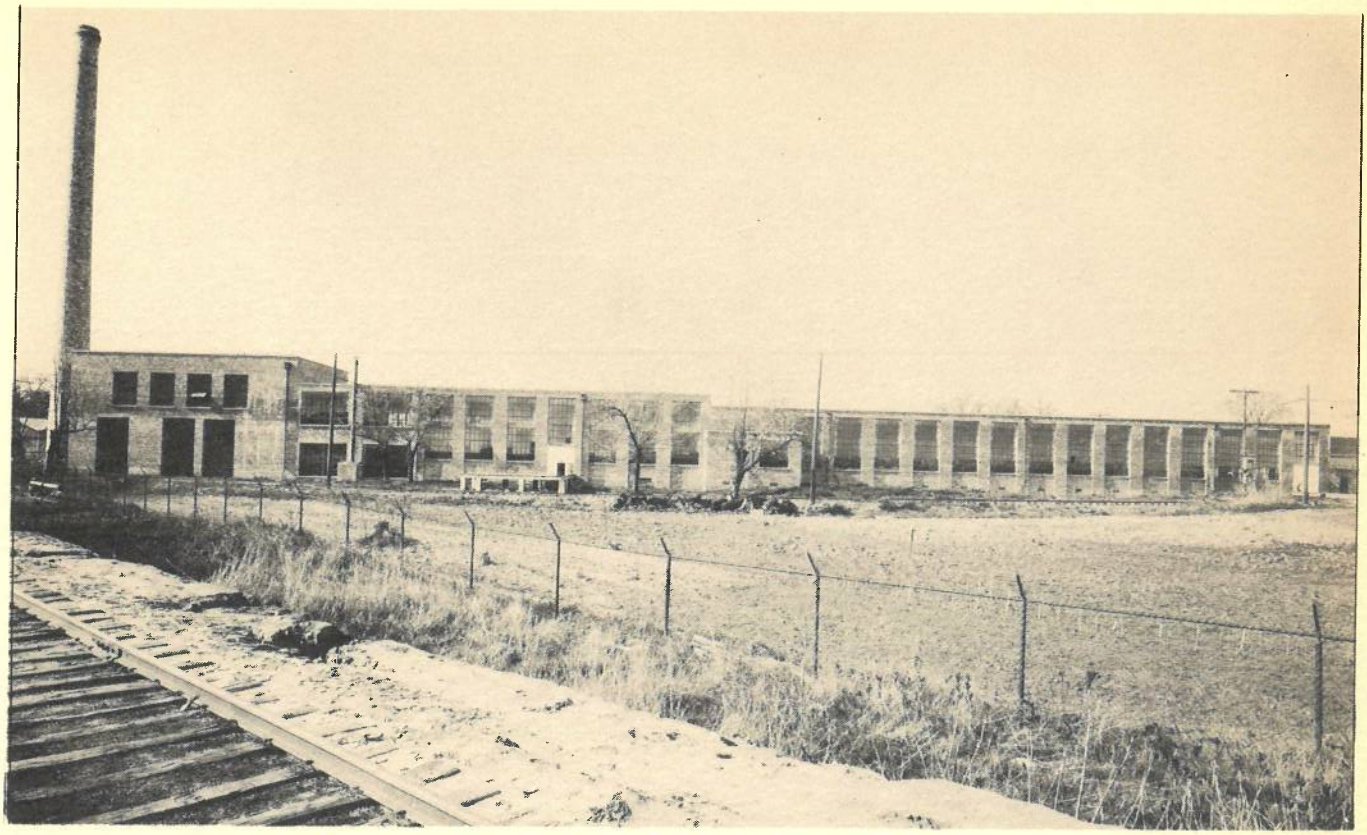
TULSA POWER STATION, UNIT NO. 5

TULSA, OKLAHOMA — 1938



POWER PLANT & PUMPING STATION

PITTSBURG, KANSAS, WATER PROJECT — 1937



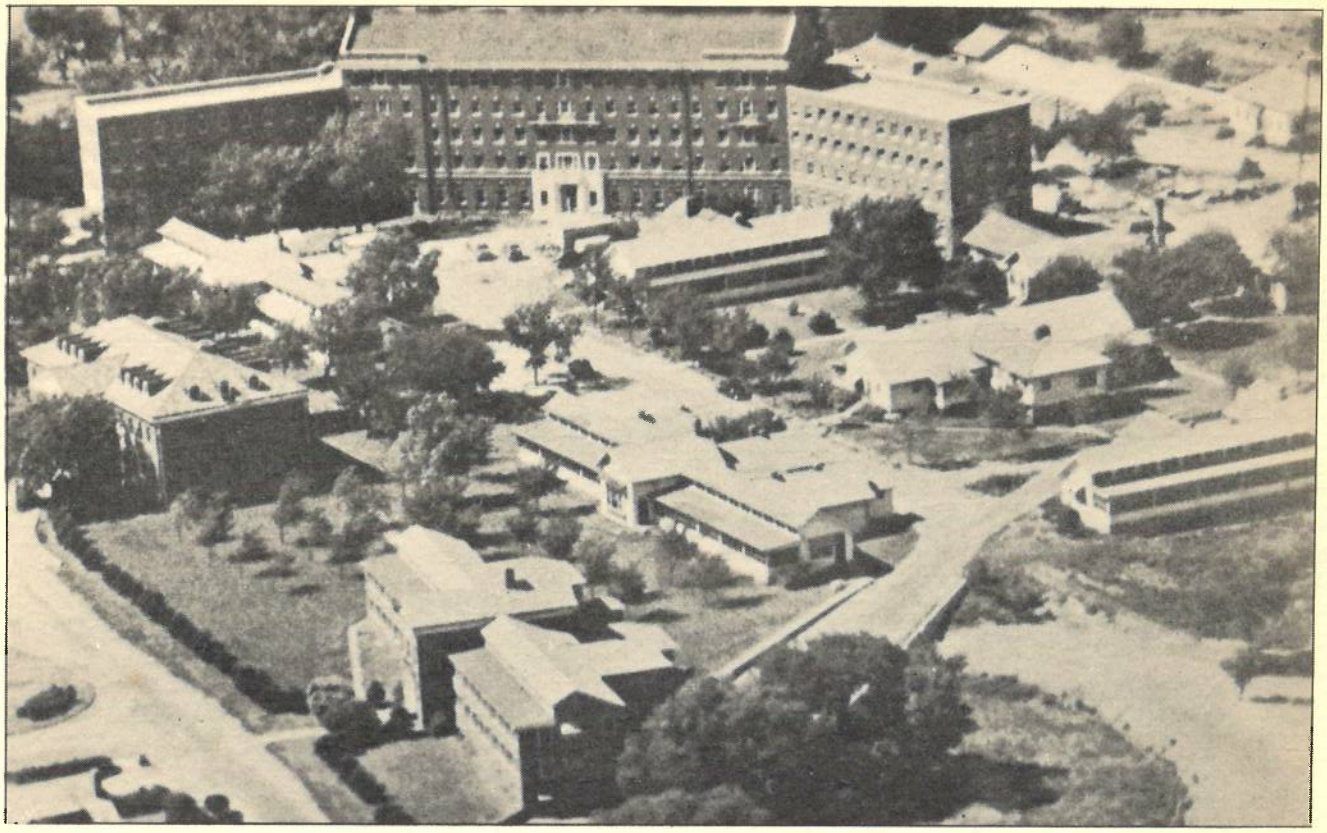
BLEACHERY BUILDING, COMMANDER TEXTILE MILLS

SAND SPRINGS, OKLAHOMA — 1926

FACTORY BUILDING

SPARTAN AIRCRAFT COMPANY

TULSA, OKLAHOMA — 1940



STATE TUBERCULOSIS SANITORIUM

NORTON, KANSAS — 1938

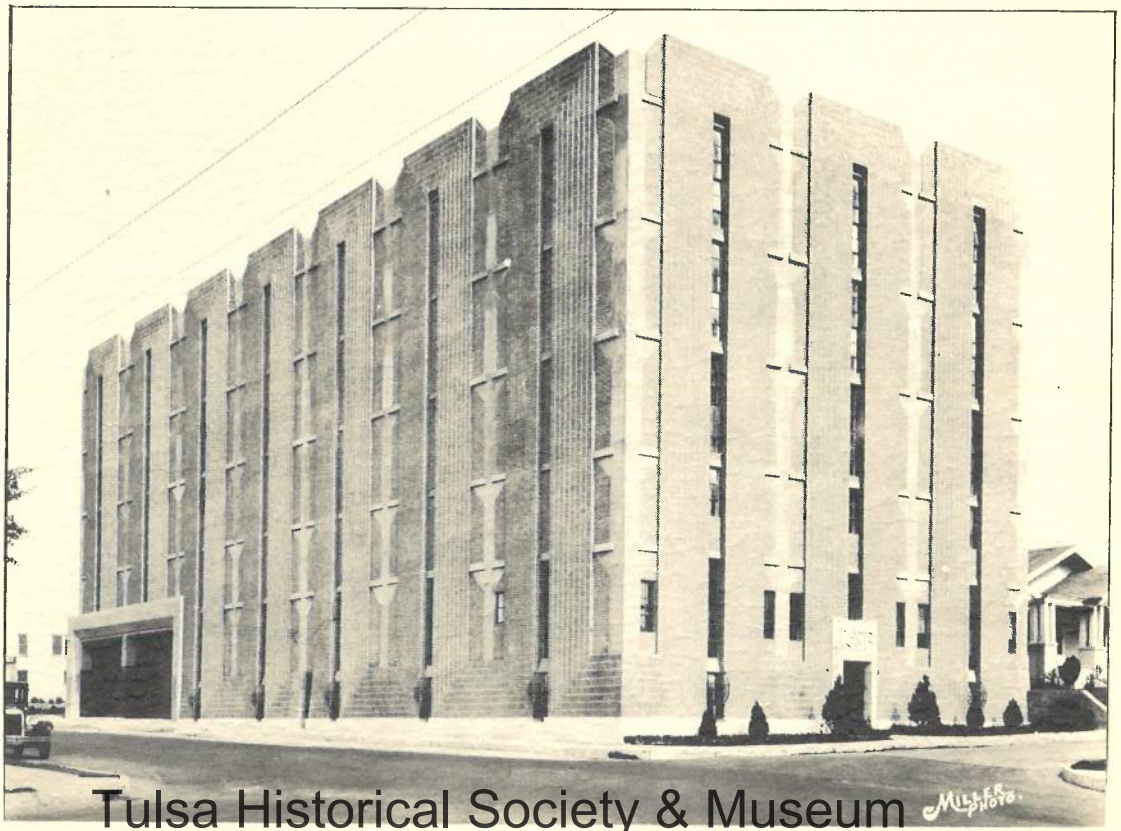
OFFICE AND LABORATORY BUILDING

U. S. BUREAU OF MINES

BARTLESVILLE, OKLAHOMA — 1937

WHOLESALE GROCERY WAREHOUSE

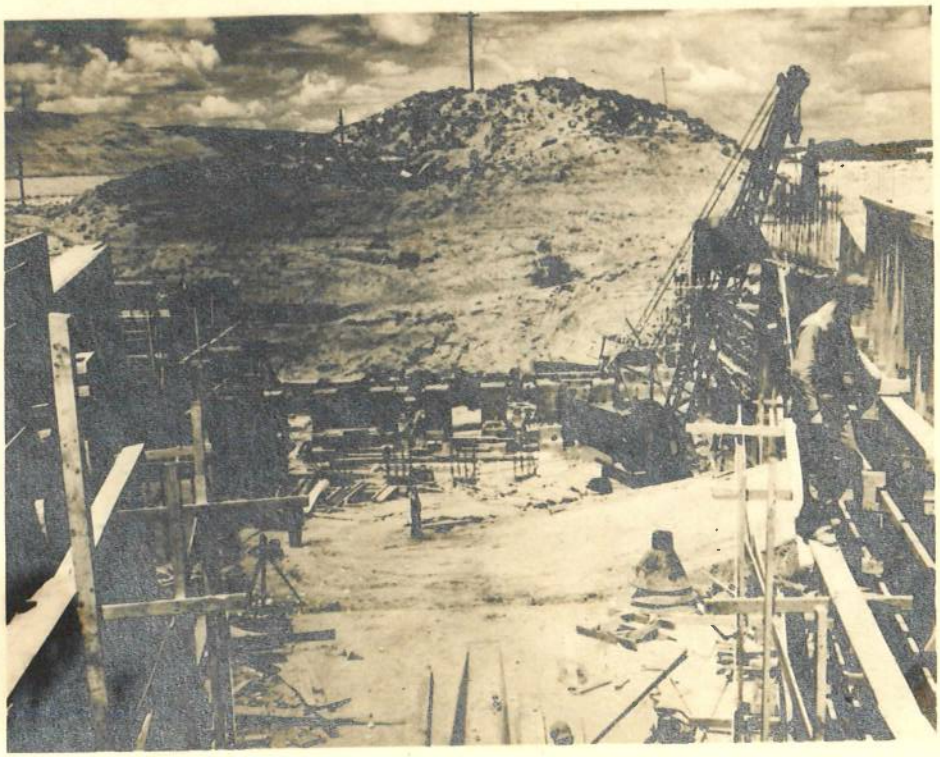
TULSA, OKLAHOMA — 1935



PAGE FURNITURE STORAGE BUILDING

TULSA, OKLAHOMA — 1926

Outlet Tunnel
Fort Supply Outlet Works
Fort Supply, Oklahoma
1940



Fort Supply Outlet Works
Fort Supply, Oklahoma
1940

THE CITY OF EMPORIA

EMPORIA, KANSAS

Office of City Clerk

April 30, 1940.

The W. R. Grimshaw Company,
310 Philtower Building,
Tulsa, Oklahoma.

Dear Mr. Grimshaw:

The Governing Body of the City of Emporia, Kansas desires you to know that it appreciates the skill, good workmanship and co-operation of yourself, R.M. Burch, your foremen, and your entire organization, in the construction of our new Civic Auditorium.

We are grateful for the care that no workman was injured, your co-operation of the work so that the various contracts could proceed to the satisfaction of the Public Works Agency, the Architects, also the City within the scheduled time.

That in itself is the best testimonial of all these things, a 1940 land mark, to serve this and future generations of Lyon and surrounding counties.

For your friendly fairness, skill and co-operation in satisfactorily completing this building, the City of Emporia extends its thanks.

Cordially yours,

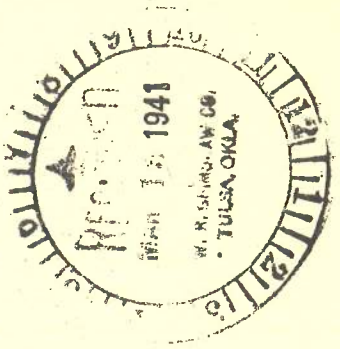
Frank Lostutter
Mayor

L. H. Kufahl
Commissioner of Finance

J. W. Jenkins
Commissioner of Public Utilities

ADDRESS ALL COMMUNICATIONS TO
THE DIRECTOR, U. S. BUREAU OF MINES
WASHINGTON, D. C.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON March 12, 1941.



Mr. W. R. Grimshaw
309 Philtower Building
Tulsa, Oklahoma

Dear Mr. Grimshaw:

Your letter of March 6 concerning the report that the Bureau contemplates expansion of the helium plant at Amarillo has reached my desk. Therefore you are going to receive a reply from somebody you know rather than one who would be only a name to you.

There is an appropriation now before Congress for some additional work relating to helium and additional facilities at Amarillo. The wording of the appropriation item might suggest that building construction will be involved but actually the only work that will be required on buildings is a little modification of existing structures. This in total will not amount to more than a few thousand dollars.

A part of the item is for some surveys and research, another portion is for the drilling of a well and laying of a gathering line and virtually all of the rest is for mechanical equipment of a rather highly specialized nature.

We have not forgotten the excellent work you did on the building at Bartlesville and certainly will have you in mind as a contractor to whom bids should be sent whenever we have funds for construction of buildings in the Mid-Continent region. Although as I have indicated no building construction of any significance is included in the program now contemplated, I am sending a copy of your letter and this reply to Dr. C. W. Seibel, our supervising engineer at Amarillo for reference at any time in the future when we may have construction work of a character in which you would be interested. Also just to let him know that I have heard from you I am sending a copy of the correspondence to Mr. N. A. C. Smith at Bartlesville.

Very truly yours,

R. A. Cattell

R. A. CATTELL, Chief Engineer,
Petroleum and Natural Gas Division.