United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property

historic name CB&Q Denver Shops Powerhouse

other names/site number Chicago, Burlington & Quincy Railroad Denver Shops Powerhouse/ 5DV.47249

2. Location

street & number 5151 Bannock Street | n/a | not for publication

city or town Denver | n/a | vicinity

state Colorado county Denver zip code 80216

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this __X__ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property __X__ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ national ___ statewide __X__ local

Signature of certifying official/Title — Deputy State Historic Preservation Officer — Date 1/28/21

State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official — Date

Title — State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

___ entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:) _____

Signature of the Keeper — Date of Action

CB&Q Denver Shops Powerhouse
Name of Property

Denver, Colorado
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply.)

X	private
	public - Local
	public - State
	public - Federal

Category of Property
(Check only **one** box.)

X	building(s)
	district
	site
	structure
	object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
1		buildings
		sites
2		structures
		objects
3	0	**Total**

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing)

Railroads in Colorado, 1858-1948

Number of contributing resources previously listed in the National Register

n/a

6. Function or Use

Historic Functions
(Enter categories from instructions.)

INDUSTRY/Energy Facility/Powerhouse

Current Functions
(Enter categories from instructions.)

VACANT/NOT IN USE

7. Description

Architectural Classification
(Enter categories from instructions.)

OTHER: Powerhouse

Materials
(Enter categories from instructions.)

foundation: concrete
walls: brick
roof:
other:

Narrative Description

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

Summary Paragraph

The Chicago, Burlington & Quincy Railroad (CB&Q) Denver Shops Powerhouse is a steel-frame and brick powerhouse located at the western edge of the former CB&Q Denver Shops facility, which opened in 1923 as an important node in CB&Q's network of shops dedicated to the repair and rebuilding of its steam locomotive fleet. The Powerhouse provided steam power, heat, and compressed air for the Shops' engine repair facilities. The site, originally 280 acres in size, is located approximately 2.5 miles north of Union Station in Downtown Denver in what is now the northwest quadrant of the intersection of U.S. Interstate Highways 25 and 70. In 1955 the Shops closed and was soon after acquired by Associated Grocers of Colorado, which used the site as grocery warehouses and offices, with the Powerhouse mostly vacant but used for occasional storage. Associated Grocers eventually sold the site in the mid-1980s, and the shop buildings are currently used for various manufacturing and shipping enterprises.

Soon after the Shops closed in the mid-1950s, the machinery and equipment, including the overhead crane system that connected the various buildings, was removed. In the 1960s through the 1970s, the original shop buildings, including the structural clay tile Machine and Erecting Shop, structural clay tile Boiler Shop, and brick Storehouse and Offices, were heavily modified with large additions surrounding the buildings and filling the spaces between them (see Fig. 1 & 2 to compare the historic layout with current site and Fig. 4-7 for current photos of additions and alterations to other buildings). The railroad tracks that ran through the site and around it were largely abandoned and built over or removed. In 2014 and 2018, the remaining historic windows on the Storehouse/Office and brick Blacksmith Shop were replaced. As a result, the overall Shops complex has been substantially altered such that it no longer retains historic integrity associated with its railroad and industrial history. Only the Powerhouse and its associated Chimney and Water Tank have remained nearly untouched with a high degree of historic integrity.

Narrative Description

The Powerhouse measures approximately 130' (north to south) x 90' (east to west) overall; its rectangular footprint is divided into two unequal sections: the Boiler Room to the north (approx. 80' x 90'), and the Engine Room to the south (approx. 50' x 90') (see Fig. 3). The Engine Room is shorter in height than the Boiler Room and has a flat roof. The Boiler Room section is approximately 60' tall, nearly twice as high as the Engine Room, and has a central double-monitor roof that spans the building from east to west. The building has a raised concrete foundation and exterior walls of red brick laid in a common bond with headers every eighth or ninth course. Sparse, contrasting concrete detailing is typically seen at the window sills, roof parapet coping, and tops of regularly-spaced, nearly-full-height brick engaged piers that circle the building. Although currently covered with corrugated metal and fiberglass sheeting, multiple levels of original large steel windows with center-pivot sashes remain in place, though their glazing is heavily damaged in some areas. All doors are historic to the building unless noted otherwise.

The Powerhouse is generally oriented to the east, facing the open space between it and the former Machine and Erecting Shop to the east. A large coal and ash hopper, faced with red brick on top of a steel substructure, is at the building's west side. Railroad tracks would have historically run under this hopper to supply the plant with coal via a conveyor elevator; with the removal of the tracks after 1955, a concrete dock was installed at the base of the hopper's substructure. An approximately 250'-tall concrete Chimney sits about 15' north of the plant. A 30'-diameter metal Water Tank sits approximately 73' away from the plant at its south side.

Powerhouse, 1923, contributing building (Photos 1-3, 5-11, 14-21)

East-facing Side

The east side of the Powerhouse has the double monitor-roofed Boiler Room to the north and the flat-roofed Engine Room to the south. The Boiler Room is visually divided into three bays, framed by four slender brick engaged piers: one at each end and two at either side of the central bay. Each bay and pier corresponds in height to the varying roof height created by the wide double-monitor roof. Each pier is topped by a concrete hipped cap, with a concrete rectangular inset in the brick below. The north and south bays each have an approximately 14'-wide window opening consisting of an inset multi-light steel window topped by a duplicate window above and a narrow brick spandrel between. Each window has a concrete sill; the upper window also has a flat lintel of soldier brick with rectangular concrete detailing at each end. The central bay is taller than the bay to either side. Four smaller openings are stacked two over two within the area corresponding to the first-floor windows on the outer bays. The lower two openings consist of a historic wood paneled personnel door with two lights in the upper half to the north and a square, fixed multi-light steel window to the south; the concrete sill of this window aligns with the sill of the window in the south bay. The door was once accessed from grade by a steel exterior stair with landing that has since been removed (ca. 2005). Above the first-level window and door are two rectangular windows, each multi-light steel with the bottom half a center-pivoting sash. Set between the two windows in the brick is a cast concrete panel that reads "1922."[1] Above these windows is a window that corresponds to the upper windows in the north and south bays, but without the soldier-brick lintel. A narrow brick spandrel and duplicate window is above this one, in turn capped by a shorter window opening of the same width. As with the bay to either side, the top window of the central bay has a soldier-brick lintel with concrete detailing. In the brick above the lintel are three inset concrete squares that create a triangle pattern. The roofline of the Boiler Room section consists of angled and sloping parapet walls with concrete coping that frame the central double-monitor roof that rises above. Further concrete detailing at the roofline corresponds to the engaged piers below and consists of the coping projecting upward with inset squares directly below. Three metal brackets are fixed to the three northernmost piers at the same level as the brick spandrels between the first and second level windows. These brackets once supported water and steam lines from the Powerhouse to the overhead crane runway that ran to the north; the crane system and steam lines were removed after Associated Grocers took over the shops, ca. 1956.

The Engine Room section has two duplicate bays, again framed by brick engaged piers with concrete caps and details. Windows of similar configuration as the Boiler Room are in each bay; the window sills align between the two sections, though the upper windows are about half as high as the upper windows of the Boiler Room. Each has a soldier-brick lintel with concrete detailing. The parapet of the flat roof above has similar concrete detailing as the Boiler Room, with concrete coping that rises a few courses and inset concrete squares that correspond with the brick piers below. Where the Engine Room wall abuts the Boiler Room is a historic fixed metal ladder leading from grade to the northeast corner of the flat roof.

Each of the large windows on this side has a row of three center-pivot sashes; the upper windows' are in the upper portion of the fixed sash, while the lower windows' are in the lower portion. The raised concrete foundation below has regularly spaced fixed steel-sash windows, with two windows per bay of the Engine and Boiler rooms.

South-facing Side

The south side of the Powerhouse corresponds to the Engine Room only. Five bays are framed by regularly spaced piers with hipped concrete caps and concrete detailing. Each bay has the same window, sill, and lintel configuration as the east bays of the Engine Room, with the exception of the central bay. This bay has an inset personnel entrance with wood six-paneled door and soldier-brick flat lintel. Above the entrance is a shorter window that aligns with the tops of the first level windows on either side. The entrance was once accessed by concrete stairs from the east and west that met at a central landing; below where the landing would have been is a window at the basement. These stairs were removed ca. 2005 to better accommodate semi-trailer truck parking in the open area to the south of the building. The roofline of the south side reflects the east roofline of the Engine Room, though with an angled parapet centered over the central entrance bay. The

[1] N.B: The year 1922 corresponds with the date construction for the Powerhouse and shops complex was begun, but not completed, which is 1923, the period of significance for the building.

south wall of the Boiler Room is beyond, which has no openings save for the center-pivot steel sashes of the double-monitor roof above that are currently covered in metal or fiberglass sheeting.

Immediately adjacent to the Powerhouse at the east corner of the south side is a modern transformer mounted on a concrete pad. This transformer was installed ca. 1992 to replace the original steel-framed electrical substation that was historically in this same location.[2]

West-facing Side

The west-facing side of the Powerhouse generally corresponds to the east side with two bays of windows and the same pier and parapet detailing, with some prominent exceptions. The southernmost bay of the Engine Room section has a double-door personnel entrance where the first level window would be at the east; each leaf of the wood door has panels at the lower half and glazing in the upper half. Above the entrance a multi-light steel sash window with concrete sill fills the difference in height between the entrance and the first-level window of the Engine Room's north bay. Though it sits above the raised foundation at approximately 4' above grade, this entrance did not historically have stairs to access the grade below due to the railroad tracks that historically ran along the west side of the building.

The west side of the Boiler Room has the same tripartite organization as the east side, with the same window configuration and detailing in the north and south bays. The central bay, however, is dominated by the nearly full-height brick coal and ash hopper that sits atop a substructure of riveted steel I-beams. The footprint of the hopper and its substructure measures approximately 14' (north to south) x 17' (east to west). The upper brick portion attaches to the face of the west side in correspondence with the higher windows of the east side's central bay. The north and south faces of the brick hopper each has a small square window opening with concrete sill. As with the other windows of the Powerhouse, these windows have been covered, but lack of access to the interior of the hopper makes it difficult to confirm their material and type; they are presumed to be fixed multi-light steel sashes. The west face has a larger opening that accepted coal raised from rail cars below by a conveyor elevator, the ghost of which is seen on the brick below this opening. The conveyor system was removed from the building along with its equipment and machinery ca. 1956. The top of the brick hopper has concrete coping and detailing that correspond with the Powerhouse's overall detailing. The hopper's steel substructure below the brick has an inversed pyramidal steel aperture that emptied ash into rail cars below.

As noted above, a concrete dock was installed between the posts of the hopper's steel substructure and the west wall of the boiler room after the railroad tracks were removed ca. 1956 with the closure of the CB&Q Shops and ownership by Associated Grocers. Opening onto the dock is a double-door personnel entrance that has the same wood paneled doors as the entrance at the Engine Room to the south. A concrete ramp runs southward from the dock along the west wall. Where it terminates at grade, one of the basement windows within the Boiler Room's south bay appears to have been expanded, extending above the raised concrete foundation wall into the brick above. This opening is currently covered with plywood.

North-facing Side

The north side of the Powerhouse has three bays of windows, framed by four brick piers with concrete caps. The bays correspond to the north and south bays of the east side of the Boiler Room section, with a lower and upper large steel window separated by a narrow brick spandrel and topped by a soldier-brick lintel with concrete detailing. The one deviation from this scheme is the upper opening of the central bay, which did not have a window sash but instead allowed a flue to connect with the concrete Chimney to the north. This flue was of an unknown material and configuration, as it is not shown in historic plans or seen in historic photographs, and was removed sometime in the 1950s and the opening bricked in, following the closure of the Shops and the removal of power equipment from the Powerhouse.

[2] As a source of steam power, heating, and compressed air for the shops complex, the Powerhouse did not generate electricity itself; electric power was purchased from the local utility and was converted to the required voltage at the substation.

As found elsewhere on the building, the parapet wall at the north roofline features raised sections that correspond to the piers below, and has concrete coping and detailing. Portions of the double-monitor roof above are visible from certain vantage points, where the rows of center-pivot multi-light steel sash windows are still in place, though currently covered with protective metal sheeting.

Interior

The interior of the plant is defined by its large interior spaces, one for each of the two sections. The Boiler Room's interior rises to its full height, with steel I-beam posts and girders providing interior support (Photos 14-15). A steel staircase at the southwest corner of the room leads up to a catwalk that runs beneath the upper monitor roof and over a suspended concrete coal bunker where coal was stored in multiple compartments and then fed to the no longer extant boiler equipment below (Photo 15). The windows of the lower monitor roof help to illuminate and ventilate the interior (Photo 16).

Steel girders mounted on corbelled brick pilasters along the north and south sides of the Engine Room as well as steel trusses at the ceiling allow this section of the Powerhouse to be open with no structural supports interrupting the space. The Engine Room housed the air compressors, the concrete pads for which are still extant, as is the switchboard area at the southeast corner (Photos 17-18). Lumber wall and ceiling framing surrounds the switchboard area; it is unknown whether this framing is original to the building, and if so, whether at one point it had any further finishing. Vertical conduit at the base of the switchboard leads through the concrete floor to the basement below. All of the interior walls are a light-colored painted brick.

In the basement are brick furnaces and ash storage compartments below the Boiler Room (Photo 20); the section below the Engine Room features thick vaulted concrete supports that were able to withstand the vibration of the air compressors housed above (Photo 19). A former lavatory and shower area is in the southwest corner (Photo 21).

Alterations

Most alterations to the Powerhouse occurred in the 1950s, soon after the Shops closed. The removal of water lines/tanks at the east side and the internal conveyor system, machinery, and equipment were undertaken by CB&Q itself prior to Associated Grocers taking possession in 1956, which was typical practice of railroads to salvage and reuse equipment as much as possible. The installation of the concrete dock and ramp at the west, removal of the flue connecting with the concrete Chimney at the north, and infilling of the flue opening in the Powerhouse's north wall occurred soon after Associated Grocers became the owner, ca. 1956. More recent alterations include the replacement of the original substation structure at the southwest corner with the current transformer in ca. 1992; the removal of stairs at the east and south entrances, ca. 2005; and interior asbestos abatement in the basement in 2020, which consisted of encapsulation of the brick furnaces and removal of asbestos-containing materials from the ash pit below the concrete dock at the west.

Chimney, 1923, contributing structure (Photos 10-13)

The approximately 250'-high Chimney is constructed of stacked rings of cast-in-place concrete which taper in size from a diameter of approximately 18' at the base to 12' at the crown. The crown has a narrow concrete cornice, below which is a ring of concrete detailing that suggests dentils. At the Chimney's south side is a large rectangular opening with flanged concrete edging where a flue connected to the Powerhouse to the south. A metal ladder is mounted on the north side, with the first rung approximately 10' off the ground and extending to the chimney lip. There are no known alterations to the Chimney other than the removal of the flue ca. 1956.

Water Tank, 1923, contributing structure (Photos 1, 3-4)

The Water Tank is approximately 30' in diameter and constructed of riveted alternating steel panels. It sits on a concrete foundation. Historic documentation indicates that the tank has a capacity of 500,000 gallons. No known alterations have occurred other than painting of the exterior repeatedly over time.

Integrity

The CB&Q Denver Shops Powerhouse retains excellent historic integrity, with its design, materials, and workmanship almost completely intact from its completion date of 1923, which is the period of significance. Alterations to the building, such as the removal of the east and south entrance stairs (ca. 2005), the installation of the concrete dock below the coal and ash hopper and removal of the north flue with infilling of the flue opening (ca. 1956), have not substantially compromised these aspects of integrity, especially since its most prominent character-defining features such as the large steel windows, brick piers and concrete detailing, and double-monitor roof remain in place and unchanged. Though the Powerhouse remains in the same location as when it was built as part of the CB&Q Denver Shops complex, its setting has changed over time, with the overhead crane runway and much of the railroad tracks that ran to either side of the building removed and the former open space between the other Shops buildings filled in with large modern additions. However, the ancillary Water Tank and Chimney structures that served the Powerhouse remain intact and are important resources that contribute to its immediate setting. The Chimney is a relatively rare surviving example of its type in Denver; almost all other historic steam powerhouses in the City no longer retain their chimneys. As such, the Powerhouse retains a high degree of feeling and association of a large industrial powerhouse from the 1920s.

CB&Q Denver Shops Powerhouse
Name of Property

Denver, Colorado
County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [ ] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions.)

Architecture

Period of Significance

1923

Significant Dates

Significant Person
(Complete only if Criterion B is marked above.)

n/a

Cultural Affiliation

n/a

Architect/Builder

Chicago, Burlington & Quincy Railroad

Stearns-Roger Manufacturing Company

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, areas of significance, justification for the period of significance, and any applicable criteria considerations.)

The CB&Q Denver Shops Powerhouse is locally significant under Criterion C for Architecture as an excellent example of an industrial powerhouse building from the 1920s. Character-defining features include its separate but conjoined Boiler and Engine room sections; double-monitor roof; brick walls with minimal, but thoughtful, concrete detailing and styled parapet walls; large, unfinished interior spaces; and corresponding large, steel, multi-light windows with center pivot sashes designed to provide natural light and ventilation. Further representations of its industrial function are seen in the attached coal and ash hopper and adjacent Chimney and Water Tank. The Chimney, in particular, remains an important, and increasingly rare, example of the city's industrial history from the early-twentieth century and is a prominent visual landmark along the I-25 corridor.

Although not eligible under Criterion A for Industry or Transportation due to the loss of its surrounding setting as a powerhouse for the Chicago, Burlington & Quincy Railroad Denver Shops, the Powerhouse retains a high degree of historic integrity that supports its individual significance as a representative type and period of industrial construction. Designed by CB&Q engineers, the Powerhouse and ancillary Chimney and Water Tank structures meet the registration requirements of the property subtype "Power House" under the property type "Housing and Maintenance Structures" as established in the *Railroads in Colorado, 1858-1948* National Register of Historic Places Multiple Property Documentation Form (MPDF).[3] As a highly intact representation of an architectural type, a 1920s industrial powerhouse, the Powerhouse's period of significance is 1923, the year it was completed and put into operation for the larger CB&Q Denver Shops complex.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

As an excellent example of an industrial powerhouse from the 1920s, the CB&Q Denver Shops Powerhouse is locally significant under Criterion C for Architecture for the year 1923, when it was completed and put into service. In its form, layout, materials, and applied architectural styling, the Powerhouse clearly demonstrates character-defining features of its type and era. In features such as its large multi-light steel windows with center-pivot sashes and double-monitor roof that maximized natural light and ventilation, the Powerhouse represents the era of industrial architecture just before the advent in the early 1930s of what has been called the "controlled conditions plant," where complete control of light and ventilation was achieved through artificial systems. In addition to its functional character-defining features, the Powerhouse also clearly displays a deliberate but sparing application of architectural styling that some architectural historians have referred to as "Industrial Gothic" or "American Industrial Style," which rose in popularity in the 1910s and '20s.

Architectural historian Betsy Hunter Bradley explains that an outsized influence in the location and design of industrial powerhouses was the threat of steam boiler explosions, necessitating that powerhouses were their own freestanding buildings isolated from the rest of the industrial plant they served and that natural lighting in the building aided in the crucial maintenance and inspection of the steam boilers. Bradley goes on to note typical functional features of industrial powerhouses that are readily identifiable in the CB&Q Denver Shops Powerhouse:

> …[T]wo-part facilities with separate rooms for boilers and engines, and perhaps a third area for coal storage. This division of space kept the coal dust produced by the stoking of boiler fires away from the machinery and gauges in the engine room…

[3] Clayton B. Fraser and Jennifer H. Strand, "Railroads in Colorado, 1858-1948," National Register of Historic Places Multiple Property Documentation Form (accepted 1998). On file with History Colorado Office of Archaeology and Historic Preservation, Denver; 171, 178-79.

> In some large powerhouses, coal bunkers were positioned above the boilers, and conveyor systems both delivered coal and removed ashes. This arrangement made the boiler house taller than the adjacent engine room…
>
> [w]hite enamel brick on the walls reflected daylight and thereby maximized lighting conditions in a room where the visual inspection of equipment was an important safety factor.[4]

The Powerhouse also demonstrates the use of fireproof materials, primarily brick and concrete, but also steel-sash windows, which additionally allowed for improved daylighting by means of larger expanses of windows as well as thinner framing members. The center-pivot sashes provided ventilation through natural air circulation while keeping precipitation out. The double-monitor roof admitted sunlight from above through the lower, wider monitor, while also drawing hot air from the boilers up and out through the narrower, higher monitor.

Regarding the application of architectural styling and ornamentation on the Powerhouse, Bradley also notes that engineers "have often employed a limited number of [architectural] elements to stand in for, or evoke, architectural style and thereby relate industrial buildings to the preferred expression of the day."[5] While the nineteenth century witnessed a growing tension between the engineering and architectural professions when it came to the proper "expression" of an industrial building, the early twentieth century saw an embrace by architects of the functional aspects of industrial buildings and their ability to convey "beauty" without traditional styling. Nevertheless, many designers of industrial buildings sought to marry the two. Chicago architect George C. Nimmons, known for his industrial building designs, wrote in 1919 in a "Discussion of an Architectural Style for Industrial Plants and Landscape Treatment of Their Surroundings" that:

> The design [of an industrial building] must grow out of what is essential to the objects of the plant. The designers generally seem to have adhered to this requirement faithfully, because the majority of successful designs receive their character from the architectural treatment of base courses, window sills and lintels, cornices, copings, piers… and all such features as are essential constructive elements of inclosing [sic] walls and roofs.
>
> In fact, a close analysis of what a proper architectural treatment is for a factory building would clearly show that it is simply making beautiful and attractive what has to be there for utilitarian purposes…
>
> The characteristics of the style of treatment of industrial buildings that is mostly in favor now are Gothic in character and consist usually of piers marked on the exterior of buildings, carried up only to the point where the concentrated loads disappear, similar to buttresses, and also walls continued up without projecting cornices and terminated with ornamental copings…
>
> While such designs are Gothic in character they are more and more exhibiting a freedom and originality that promise in time to develop into a well-defined architectural style for American industrial buildings.[6]

Its design and construction overseen by CB&Q's longtime Engineer of Buildings, architect and engineer W.T. Krausch, the Powerhouse's use of exterior engaged piers and spare concrete ornamentation found at the parapet copings, window sills and lintels, and pier caps exhibits this trend of applying modest Gothic-style treatments to otherwise utilitarian buildings of

[4] Betsy Hunter Bradley, 49-51. Note that while the CB&Q Powerhouse does not have white enamel brick on the interior, the light-colored paint still extant on the interior walls and believed to be original likely served the same purpose of helping to reflect natural light.
[5] Bradley, 202.
[6] George C. Nimmons, "Modern Industrial Plants, Part IV," *Architectural Record*, (February, 1919; Vol. XLV, No. 2): 163-68.

the 1910s and '20s.[7] Of the other Denver Shops buildings, only the Storehouse and Office building apparently received the same stylistic treatment of concrete detailing contrasting with the primary brick (now substantially altered); all others were structural clay tile (Machine and Boiler shops) or unadorned brick (Blacksmith Shop).

Furthermore, the CB&Q Denver Shops Powerhouse also meets the registration requirements for the property subtype "Power House" under the property type "Housing and Maintenance Structures" as outlined in the *Railroads in Colorado, 1858-1948* MPDF. As required for significance under Criterion C, the Powerhouse embodies the work of the CB&Q Engineering department in its design as a powerhouse for a railroad maintenance shops facility.[8] Longtime CB&Q Engineer of Buildings W.T. Krausch supervised the Powerhouse's (and the larger Shops complex) design, development, and construction.

Of the five historic powerhouses in Denver identified in the Colorado Office of Archaeology and Historic Preservation's online database, Compass, none display the character-defining features or level of integrity of the CB&Q Denver Shops Powerhouse. Two of these powerhouses date to an earlier era, do not display the same steel-frame construction or features such as the double-monitor roof or architectural styling of the CB&Q Powerhouse, and have had their chimneys (also called smokestacks) removed: Clayton College Powerhouse (5DV.310.5, built 1911) and Denver Tramway Powerhouse (5DV.541, built 1904, National Register listed 8 September 2001, NRIS.01000940). The Denver Steam Plant at 1900 19th Street (5DV.1945) was first built in 1879 to provide steam power to downtown buildings, but extensively altered in 1972, resulting in a complete loss of its historic integrity. Another, the Lowry Air Force Base Electric Power Station (5DV.5022) dates to 1960, was not a steam power plant, and is believed to have been demolished with the redevelopment of Lowry into a residential neighborhood. The fifth, Lacombe Electric Company (now Xcel Energy Zuni Power Plant, 5DV.8237) is a large facility that has developed over time from its establishment in 1903 through the 1950s; its two large chimneys remain, but the plant buildings from the 1920s have been substantially altered, with features such as windows and monitor roofs removed.

Developmental history/additional historic context information (if appropriate)

Chicago, Burlington & Quincy Railroad in Colorado

The Chicago, Burlington & Quincy Railroad (CB&Q, also commonly referred to as the Burlington or Q) began as the Aurora Branch Railroad in Illinois in 1849, eventually taking on the CB&Q name in 1855. CB&Q rapidly expanded its trackage through the Midwest and into the Intermountain states following the Civil War. The railroad reached Colorado in 1882 through its subsidiary the Burlington & Missouri River Railroad, headquartered in Plattsmouth, Nebraska. In 1908, CB&Q acquired a controlling interest in the Colorado & Southern Railway (C&S) and outright ownership of the Burlington & Colorado Railroad, headquartered in Omaha, Nebraska.[9] The C&S had emerged from the consolidation of several existing lines, with its main line extending from Wyoming to Texas, and had taken joint control of the Colorado Midland Railroad with the Denver & Rio Grande Western Railway (D&RGW), gaining access into the mountains of Colorado. At the turn of the twentieth century, C&S had become a primary carrier of freight and passengers between the Rocky Mountains and the Gulf of Mexico, making it particularly valuable to the CB&Q. As CB&Q continued to aggressively expand in the early twentieth century, Denver became one of the railroad's primary connections between the Midwestern, Intermountain, and Gulf states.[10]

During World War I, railroads in the U.S. were placed under federal government control in order to consolidate industry and transportation activities with the war effort. When CB&Q emerged from this control in February 1920, it faced "the twin

[7] Though the CB&Q Powerhouse's styling is more subdued in comparison, see for example Nimmons' 1913 design for the Sears, Roebuck and Company Warehouse Building in North Kansas City, Missouri (National Register listed 1997, NRIS.97000411).
[8] Fraser and Strand, 179.
[9] Ibid., 93
[10] Richard C. Overton, *The Burlington Route: A History of the Burlington Lines* (New York: Alfred A. Knopf, 1965), 271.

problems of undermaintenance [sic] and dissatisfaction of shippers," leading to a ramp up of improving the railroad's physical plant: yards, shops, and rolling stock, i.e., locomotives and cars.[11] As Burlington historian Richard C. Overton has noted, CB&Q subsequently spent the 1920s focusing on its internal plants rather than increasing its track mileage as it had in previous decades.[12]

Steam locomotives required constant repair and improvements. At the beginning of the 1920s, the entirety of CB&Q's fleet of approximately 2,200 steam locomotives was serviced (or "shopped") at only four shop facilities: West Burlington, Iowa (for Lines East); Havelock, Nebraska (for Lines West); the 7th Street Shops in Denver (for the C&S lines); and Childress, Texas for engines on the Fort Worth & Denver City Railway, a subsidiary of C&S. As it planned to expand its fleet, the Burlington soon realized that its existing facilities would not be able to meet the needs of maintaining the new engines and that an additional facility that could handle 200 classified repairs and 50 running repairs a year was required.[13]

The best location for the new shops was carefully studied; though the eastern lines carried the bulk of the CB&Q fleet, the West Burlington shops had been modernized in 1916-17 and considered capable of handling those engines, while the Havelock, Denver, and Childress shops were much smaller and older (1895/1911, 1900, and 1905 respectively). Ultimately, Denver was considered the best location to build a new facility to service the CB&Q's western lines as well as that of the Colorado & Southern.

Construction of CB&Q Denver Shops

In early 1921, CB&Q began assembling a 280-acre site a few miles north of downtown Denver and its Union Station in an area called Utah Junction, named after the nearby railroad junction where many of the railroads that came into Denver from the north, west, and east ran through, and where, accordingly, other industrial facilities such as the Argo and Globe smelters sprang up in the late-nineteenth century. The C&S main line and CB&Q's Lyons branch ran to the immediate west of the site, and C&S's electrified streetcar line, the Denver & Interurban (D&I), had tracks that passed directly through and which had to be relocated prior to construction.[14] A July 1921 article in *The Denver Times* reported on CB&Q's intention for the site, announcing that in addition to the new shops estimated to cost $1-million, CB&Q's plans included "a model village for the housing of the shop employees and their families;" however, no other mention of employee housing has been found in historic documentation, and the workers' village was never constructed.[15]

Designed by CB&Q's building engineering department, as overseen by Engineer of Buildings W.T. Krausch, the Denver Shops facility was intended to be as efficient as possible in its layout while providing for future expansion of individual buildings within the complex. The facility included five main buildings: the Machine and Erecting Shop, capable of accommodating thirty-five locomotives at a time for conversion and upgrade work; the Boiler Shop, which handled engine boiler and tank work; the Blacksmith Shop, with furnaces, forges, and drop-hammers for locomotive forgings; the Storehouse and Office building, which included space for a classroom, meetings, and the shop surgeon; and the Powerhouse, which supplied steam power, heat, and compressed air to the entire facility, along with transformed electric power for the overhead crane systems within and between the buildings (see Fig. 1). Auxiliary structures included the Powerhouse's Water Tank and Chimney, Acetylene Generator House, and Oil Storage/Distribution House.[16] The Powerhouse and Erecting Shop were specifically designed to be able to accommodate future additions, as seen in a plan from a 1924 *Railway Review* article.[17]

[11] Overton, 320-21.
[12] Ibid., 337.
[13] F. Hol Wagner, Jr., "Denver Locomotive Shops," *Burlington Bulletin*, Burlington Route Historical Society, No. 5, July 1982, 4.
[14] Ibid., 5.
[15] *The Denver Times*, "Denver to Get Railway Shops," (5 July 1921), 4.
[16] Wagner, 7.
[17] *Railway Review*, "Burlington's New Shops Greatly Increase Facilities," Monthly Extension Issue, Vol. 2, No. 2 (February 1924): 104.

Construction of the Denver Shops was undertaken by the Stearns-Roger Manufacturing Company of Denver and begun in June 1922. CB&Q's end-of-year 1922 annual stockholders' report noted that the project was estimated to cost approximately $2.3 million, with expenditures of over $300,000 spent that year. Although the shops were originally hoped to be completed by the end of 1922, Stearns-Roger was given the deadline to complete construction by September 1923; in the end, construction was complete and equipment installed by late summer 1923, with the first locomotives entering the shops in September.[18]

Opening ceremonies for the Denver Shops were held on 5 December 1923, with several railroad and local dignitaries in attendance among the crowd of 625 people, including CB&Q Vice Presidents W.W. Baldwin and E.P. Bracken, C&S Vice President and General Manager Robert Rice, Colorado Governor William E. Sweet, Mayor Benjamin F. Stapleton, former Governor E.M. Ammons as President of the Denver Civic and Commercial Association, and Thomas B. Stearns of Stearns-Roger Manufacturing.[19] CB&Q President Hale Holden, unable to attend, sent remarks that were read aloud by Bracken, including the following sentiments:

> Following the War, conditions have been far from satisfactory, but I feel that the skies are clearing; much more favorable sentiment towards the railroads seems to be prevailing in the West and we are looking forward courageously to the continued improvement and expansion of our great transportation system as one of the important factors in the steady growth of the great territory it serves.[20]

The local press reported extensively on the event, lauding CB&Q's investment in Denver and the projected economic impact of the Shops, such as the expected employment of 1,000 people with a predicted future increase of 200 to 500 more, the "huge expenditures annually for [local] materials," and the subsequent "coming of new manufacturers to the city."[21] Furthermore, the CB&Q Shops were also seen as both confirmation and predictor that Denver would become the "Railroad Center of [the] Entire West," with the press speculating heavily that choosing Denver as the location of its new shops proved the Burlington's ambition to acquire the Denver & Salt Lake Railway (also known as the Moffat Road) in order to gain access west from Denver through the Continental Divide by means of the much-anticipated Moffat Tunnel.[22]

Once opened, the Denver Shops were also described in great detail by the railroad trade press, which took interest in the complex's design and the current technology it employed. As *Railway Review* reported in 1924, the shops were "[w]ithout question the largest railroad shop building project completed during the year 1923… This modern plant, erected at an estimated cost of $3,000,000 on the outskirts of Denver, represents the last word in efficiency."[23]

Officials from the Baldwin Locomotive Works in Eddystone, Pennsylvania, at the time considered the largest manufacturer of steam engines, had toured the facilities before the opening ceremonies, and, according to railroad historian F. Hol Wagner, Jr., described the Denver Shops as "more modern and better equipped than Baldwin's own Eddystone plant and consequently capable of building a complete locomotive faster than Baldwin could."[24]

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[18] Wagner, 5.
[19] *Rocky Mountain News*, "Huge Crowd Sees Opening of New Burlington Shops," (6 December 1923): 9.
[20] *Chicago, Burlington & Quincy Railroad Company* "The Denver Shops of the Chicago, Burlington & Quincy and Colorado and Southern: Opening Exercises at Denver." (5 December 1923): 5; in Denver Public Library Western History Collection, call number C385.314097 B193de.
[21] Joseph A. M'Meel, "Opening of $3,000,000 C.B.&Q. Shops Heralds City of 500,000 in 1930," *The Denver Post* (5 December 1923): 3. Ultimately, according to Wagner, peak employment at the Shops was 750 (Wagner, 5).
[22] Ibid. An expensive and laborious undertaking, the Moffat Tunnel would not be completed until 1928. CB&Q never acquired the road, which was eventually bought by D&RGW in 1947.
[23] *Railway Review*, (February 1924): 103.
[24] Wagner, 5. Despite the Baldwin officials' assessment of the Shops, they were never used to build new steam locomotives.

CB&Q Powerhouse Operation

As described above, the Powerhouse was one of five main buildings that made up the original CB&Q Denver Shops complex. In a description of the entire shops complex soon after it opened, *Railway Review* called the building an "unusually modern power plant equipped to take care of every emergency."[25] *Railway Age*, a rail industry trade journal, published an article in 1924 devoted solely to the Powerhouse entitled "C.B.&Q.'s Model Coal Burning Power Plant." The article provides an in-depth account of the Powerhouse's systems and equipment, including: arrival and distribution of coal by rail and through the building by a conveyor system, which also allowed for removal of ash; supply of water from two wells into a two-part cistern, and storage of water in the 500,000 gallon Water Tank; specifications of the four water tube boilers (with room for four more); the engine room's two steam-driven air compressors and switchboard; the electric power supply and distribution to the shop buildings by lead cables run through underground clay tile duct; and supply of live steam, water, and compressed air to the shop buildings by means of lines carried by the 100'-long overhead craneway that ran east-to-west between the shop buildings.

W.T. Krausch

Walter Theodore Krausch (1867-1930) was an architect, engineer, and inventor who worked for the CB&Q, based out of Chicago, beginning in 1888, working his way up from draftsman to architect in 1901, and appointed Engineer of Buildings in 1912.[26] Born in Philadelphia, Krausch attended a technical school in Buffalo, New York, where he apparently began his career by working for his father's architecture and engineering firm, Theodore Krausch & Company. Although his complete duties in the role of CB&Q's Engineer of Buildings are unknown, Krausch appears to have been responsible for the railroad's buildings generally, such as investigating and reporting on the cause and effects of a fire on the company's fifteen-story office building in Chicago.[27] He also planned and oversaw the construction of new facilities for the railroad, including numerous depots and roundhouses throughout towns in Illinois, Iowa, Nebraska, and Missouri where CB&Q ran. Buildings attributed to Krausch vary widely in their design and function, but examples are provided in the table below:

Property Name	City, State	Year of Construction	Architectural Style	National Register listing
Burlington Passenger Station	Beatrice, NE	1906	Classical Revival	Listed 1975
Plum Street CB&Q Station	Grand Island, NE	1911	Prairie Style	Listed 2014
CB&Q Roundhouse	Rock Island, IL	1922	No style	n/a
Burlington Mail Terminal	Omaha, NE	1926	No style	Contributing to Omaha Rail and Commerce Historic District, listed 1996
Burlington Depot	Lincoln, NE	1927	Classical Revival	n/a

Krausch is also known to have patented a number of rail-related inventions, such as track work machines that laid and drilled rail and sawed ties, along with CB&Q's assistant engineer E.F. Weber.[28] From 1921-22, Krausch served on the Shops and Locomotive Terminals Committee of the American Railway Engineering Association, reporting on the successes and failures of contemporaneous shop and terminal facilities.[29] This experience may have directed his work on the CB&Q Denver Shops, which would have been in the planning and design stages during that same period. According

[25] *Railway Review*, 110-11.
[26] *The Iron Trade Review*, Cleveland: The Penton Publishing Company, Vol. L (1 January to 30 June 1912): 662.
[27] *Engineering News-Record*, "Fireproof Office Building Gutted by Severe Exposure Fire." Vol.88, No.12 (23 March 1923), pp. 495-98.
[28] *Railway Maintenance Engineer*. "Three New Machines for Track Work." Vol. 14, No. 1 (January 1918): 129-30.
[29] *Proceedings of the Twenty-Second Annual Convention of the American Railway Engineering Association*, Chicago: American Railway Engineering Association (March 1921), p. 585.

to the Nebraska State Historical Society's webpage on Krausch, a CB&Q official was quoted in the *Lincoln State Journal* as stating that previous CB&Q railroad shops:

> …were designed by expert engineers of national reputation from the outside. But when this improvement [CB&Q Denver Shops] was under consideration, Mr. Holden, the president, said that he knew there was expert talent in the Burlington family entirely competent to design and execute work of this importance, and accordingly every feature of the plan and design of these Denver shops is the product of the brains and skill of Burlington's own engineers. W.T. Krausch, who has been in the Burlington service for thirty-five years, was the engineer in charge for the company...[30]

Beyond descriptions of the efficient layout of the complex and the functionality of the five main buildings, no further description, commentary, or critique of the buildings' designs that speak to their innovation or architectural styling have been found in historic documentation of the complex. The CB&Q Denver Shops is the only property in Colorado attributed to Krausch to date.

Stearns-Roger Manufacturing Company

Founded in 1885 in Leadville, Colorado, Stearns-Roger Manufacturing began as a partnership between Thomas B. Stearns and John Roger to provide equipment to the mining industry. The company soon moved their manufacturing shops to Pueblo, where it remained until the 1921 Arkansas River flood nearly destroyed the facility; the firm then relocated to Englewood. Stearns-Roger would later add to its portfolio by developing a means of using the fossil fuels that were often a by-product of mining activities to power mining operations. The company also constructed industrial facilities. Through the 1920s, Stearns-Roger's construction projects were mostly small-scale ventures for railroads, mines, utility companies, and various manufacturing and shipping companies in Colorado and surrounding states. One of the company's biggest projects by far that decade was the CB&Q Denver Shops, which accounted for $1.1 million of 1922's $1.8 million in total labor contracts.[31] Eventually the company grew in size and expertise such that it was involved in uranium extraction and petroleum and chemical production. In the 1950s, the company employed between 600 and 800 workers; by 1982, when Stearns-Roger was acquired by Air Products & Chemical of Pennsylvania, it had 3,300 employees.

Closure of the Denver Shops

Although CB&Q had made future expansion an important consideration in its design of the Denver Shops, in the end it could not predict two major upheavals to the railroad industry that would mean such expansion was never realized: the Great Depression and dieselization of locomotives. With significant reduction in train travel because of the Depression's economic fallout, "[b]y 1931, the Q found itself with considerable excess shop capacity," resulting in consolidation of CB&Q facilities: the West Burlington Shops, previously used for both locomotive and freight car repair, was devoted to locomotives only, while the Havelock Shops took over freight car services and ceased shopping locomotives, with all of its locomotive responsibilities transferred to the Denver Shops.[32] Meanwhile, the CB&Q stopped purchasing new steam locomotives altogether in 1930. The C&S Shops at 7th and Osage streets in Denver originally shared locomotive work with the CB&Q shops for the C&S lines, but were eventually phased out for such work and closed by 1944.[33] Wagner explains that there was "never a rigid Lines East/Lines West division of work between West Burlington and Denver. If Denver's workload was light, some Lines East power would be sent there for shopping, and the opposite held true if West

[30] Nebraska State Historical Society, "Walter Theodore Krausch (1867-1930), Architect and Engineer" Biographical Sketch (n.d.); online at http://www.e-nebraskahistory.org/index.php?title=Walter_Theodore_Krausch_(1867-1930),_Architect_%26_Engineer#References (accessed 15 September 2020).
[31] Stearns-Roger Manufacturing Company Collection, MSS.606, History Colorado, Denver, Colorado: Box 2, FF10.
[32] Wagner, 11.
[33] After closing, the C&S Denver Shops fell into disrepair, with much of the buildings, including the roundhouse, now in ruins or removed completely. A portion of the facility's machine shop still stands (5DV.2037.7). A powerhouse is presumed to have been part of the facility, but if so, was no longer extant when the site was first surveyed in the 1980s.

Burlington had a light load."[34] Though CB&Q's consolidation meant more work between the two shops, Denver never fully realized its initial capacity of 200 classified repairs, often providing just half of that.

In 1934, CB&Q debuted its Burlington Zephyr locomotive, the first diesel-powered streamliner (high-speed) train in the U.S. In May of that year the Zephyr set a speed record, travelling from Denver to Chicago non-stop in just over thirteen hours, with an average speed of seventy-eight miles per hour.[35] With the advent of this new era of train travel, CB&Q officials determined that a single location for diesel locomotive repair and improvements would be the most efficient and economical, and the decision was made to invest in the West Burlington Shops as this center. Through the 1940s and '50s, West Burlington was converted to diesel repairs and overhauls, with Denver taking on the declining number of steam locomotives. In 1949 CB&Q made a land swap with the City of Denver, who traded 308 acres northeast of downtown for a 40-acre strip along the east side of the Denver Shops property for construction of the Valley Highway (today known as Interstate 25). By 1954, the decision was made to close the Denver Shops. CB&Q approached the Denver & Rio Grande Western Railway, which had yards and shops to the immediate west, to see if it had interest in the facility, but D&RGW declined.[36] Though no buyer had yet been located, the Denver Shops closed for good in September 1955 and CB&Q began removing all machinery from the buildings six months later in April 1956.[37]

Associated Grocers of Colorado and Later Owners

On 4 October 1956, CB&Q finally sold off the Denver Shops to Associated Grocers of Colorado, Inc., a wholesale buying organization for independent grocers formed in 1935. Associated Grocers used the complex as grocery warehouses and offices, doubling the square footage of the former railroad shop buildings by the 1980s (see Fig. 2). In 1983, Associated Grocers relocated, and the property went through a series of owners until the current owner acquired it in 2015.

[34] Wagner, 11.
[35] Chicago, Burlington and Quincy Railway Company Collection, MSS.794, History Colorado, Denver, Colorado: Promotional Materials, FF35.
[36] D&RGW's yards and shops west of the CB&Q Denver Shops were removed at an unknown date and are no longer extant.
[37] "Award No. 3004, Docket No. 2833, 2-CB&Q-EW-'58," Awards of the Second Division National Railroad Adjustment Board, Chicago: Champlin-Shealy Company Law Printers, Vol. 29, 16; in collection of the Library of the New York State School of Industrial and Labor Relations at Cornell University.

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

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Railway Review. "Burlington's New Shops Greatly Increase Facilities." Monthly Extension Issue, Vol. 2, No. 2 (February 1924): 103-13.

Rocky Mountain News. "Burlington's New Shops Demonstrate Road's Faith in Denver, Says Baldwin." (6 December 1923): 1.

_____. "Huge Crowd Sees Opening of New Burlington Shops." (6 December 1923): 9.

Stearns-Roger Manufacturing Company Collection, MSS.606, History Colorado, Denver, Colorado.

Wagner, F. Hol, Jr. "Denver Locomotive Shops." *Burlington Bulletin*, Burlington Route Historical Society, No. 5 (July 1982): 4-24.

Previous documentation on file (NPS):

____preliminary determination of individual listing (36 CFR 67 has been requested)
____previously listed in the National Register
____previously determined eligible by the National Register
____designated a National Historic Landmark
____recorded by Historic American Buildings Survey #_____
____recorded by Historic American Engineering Record # _____
____recorded by Historic American Landscape Survey # _____

Primary location of additional data:

____State Historic Preservation Office
____Other State agency
____Federal agency
____Local government
____University
____Other
Name of repository: _____

Historic Resources Survey Number (if assigned): 5DV.47249

10. Geographical Data

Acreage of Property Less than one
(Do not include previously listed resource acreage.)

UTM References
Datum:
NAD 1927 _____ or **NAD 1983** X
(Insert additional UTM references as needed.)

	Zone	Easting	Northing
1	13	500601	4404423

Verbal Boundary Description (Describe the boundaries of the property.)

The boundary of the National Register nomination encompasses the Powerhouse building and its contributing ancillary Chimney and Water Tank in a rectangular polygon (see Map 1). The boundary to the west is the legal property line, just east of the existing railroad tracks and approximately 38' west of the Powerhouse's west side; the north boundary runs west-to-east 20' north of the Chimney; the east boundary runs north-to-south 20' east of the Powerhouse's east side; and the south boundary line runs east-to-west 4' south of the Water Tank, just north of the non-historic ca. 1980s warehouse building.

Boundary Justification (Explain why the boundaries were selected.)

The boundary encompasses all resources associated with the CB&Q Denver Shops Powerhouse that retain historic integrity and convey its significance, including the contributing Chimney and Water Tank. The rest of the land and resources that make up the former CB&Q Denver Shops complex have been excluded due to their lack of historic integrity and inability to convey their historic associations.

11. Form Prepared By

name/title Erika Warzel (for property owner)
organization Clerestory Preservation LLC date September 2020
street & number 1822 S. Ivanhoe Street telephone 303.847.5108

CB&Q Denver Shops Powerhouse
Name of Property

Denver, Colorado
County and State

city or town Denver state CO zip code 80224

e-mail erika@clerepres.com

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) or **Google Earth** map indicating the property's location.

  A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.

- **Additional items:** (Check with the SHPO or FPO for any additional items.)

Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

Name of Property: CB&Q Denver Shops Powerhouse
City or Vicinity: Denver
County: Denver State: Colorado
Photographer: E. Warzel
Date Photographed: 30 July 2020

Description of Photograph(s) and number:

1 of 21. East- and north-facing sides of CB&Q Denver Shops Powerhouse, with concrete Chimney at north and Water Tank to south. Camera facing southwest.

2 of 21. East-facing side of Powerhouse, with Chimney at north. Camera facing west.

3 of 21. Detail of south end of east-facing side of Powerhouse, with Water Tank at south. Camera facing southwest.

4 of 21. East side of Water Tank. Camera facing west.

5 of 21. South- and east-facing sides of Powerhouse, with Chimney in background. Camera facing northwest.

6 of 21. Southwest corner of Powerhouse, showing entrances at west and south sides. Camera facing northeast.

7 of 21. South end of west-facing side of Powerhouse. Camera facing northeast.

8 of 21. Detail of coal hopper, steel substructure, and concrete dock below at west side of Powerhouse. Camera facing northeast.

9 of 21. Looking up at brick coal hopper and top of north bay of Boiler Room. Camera facing east.

10 of 21. North side of concrete Chimney, with north-facing side of Powerhouse beyond. Camera facing south.

11 of 21. East side of concrete Chimney, with northeast corner of Powerhouse to south. Camera facing west.

12 of 21. Detail of crown of concrete Chimney. Camera facing west.

13 of 21. Detail of flue opening near Chimney base at south side. Camera facing east.

14 of 21. Interior of Boiler Room showing interior steel framing. Camera facing east.

15 of 21. Interior of Boiler Room, showing concrete coal bunker suspended above west entrance. Camera facing northwest.

16 of 21. Detail of clerestory windows of lower monitor roof of Boiler Room. Stair at southwest corner leading to coal bunker and catwalk below. Camera facing west.

17 of 21. Interior of Engine Room, with lumber framing around switchboard at southeast corner. Concrete pads for former air compressors in foreground. Camera facing east.

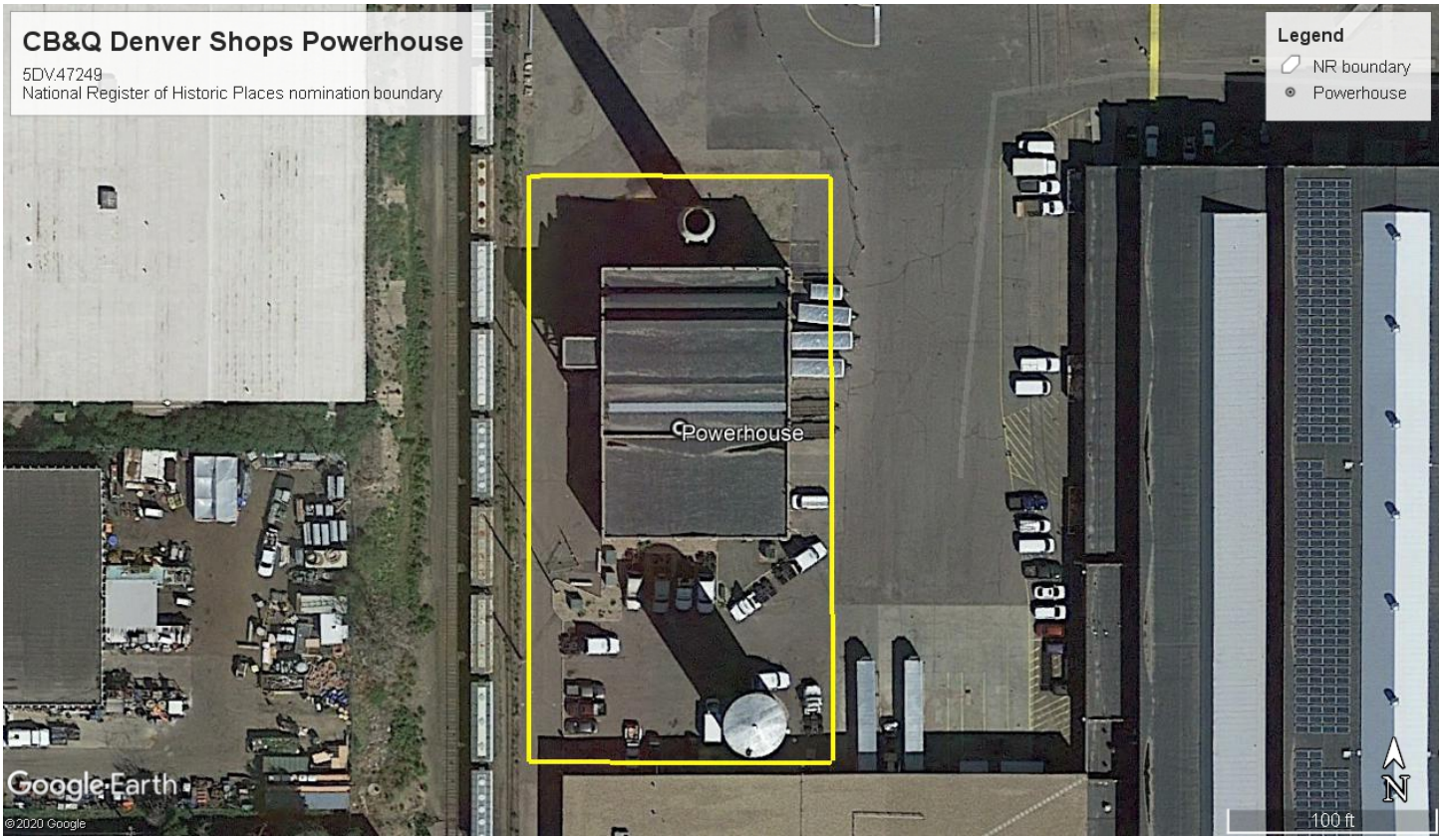
18 of 21. Detail of switchboard area, with conduits to basement along floor. Camera facing east.

19 of 21. Detail of concrete vaults below Engine Room in basement. Camera facing southeast.

20 of 21. Representative detail of brick and concrete furnaces below Boiler Room. Camera facing southwest.

21 of 21. Detail of lavatory and shower area in southwest corner of basement below Engine Room. Camera facing southwest.

Maps



Map 1. Google Earth map showing nomination boundary of Powerhouse.

Map. 2. Google Earth Map showing overview of former CB&Q Denver Shops site with boundary for Powerhouse nomination in solid yellow polygon. Approximate extent of the Shops complex historically is shown in dashed red lines; note the extensive warehouse additions constructed at the south and north.

Historic Photos and Figures

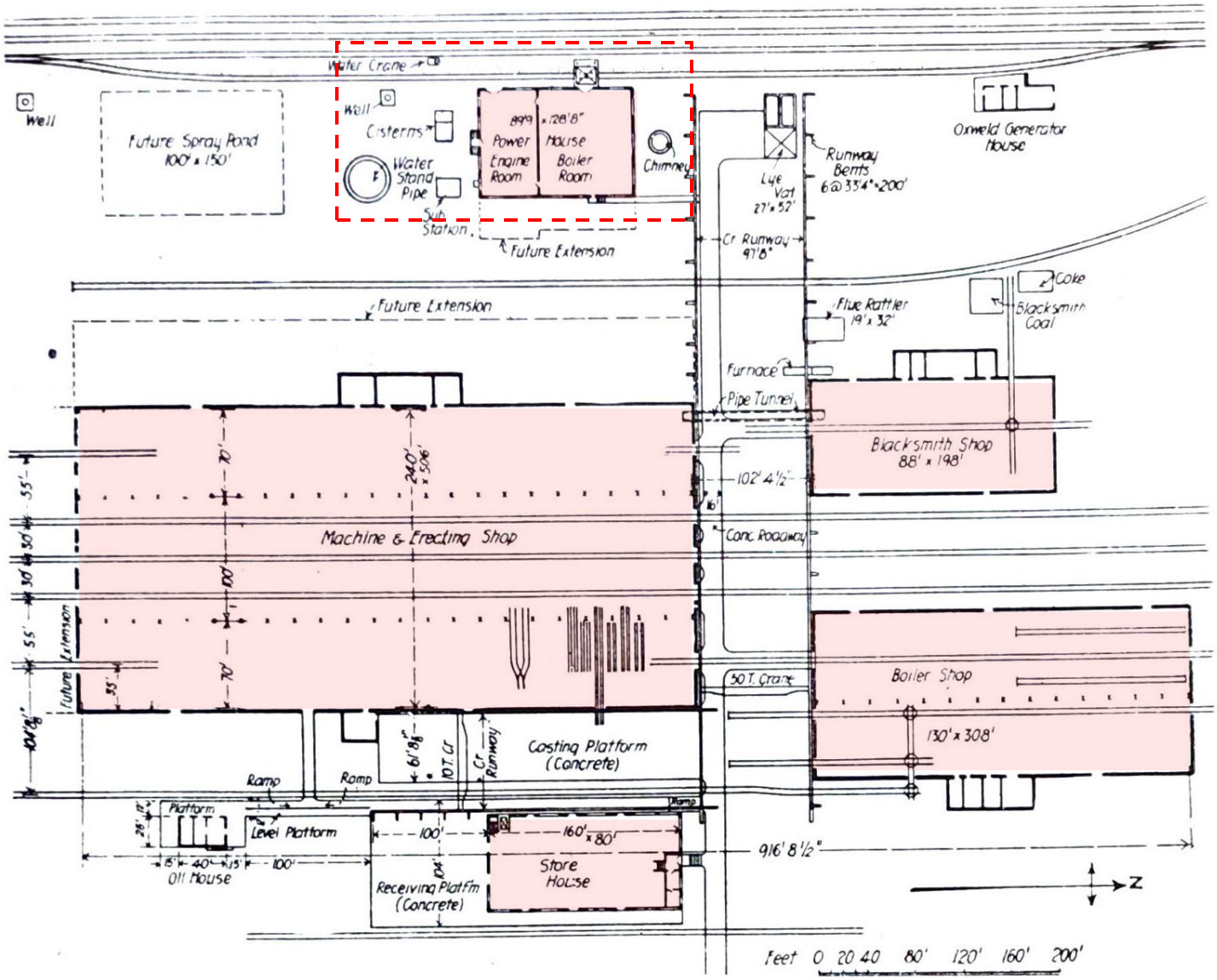


Figure 1. Historic Layout of CB&Q Denver Shops, from *Railway Review*, (February. 1924): 104 (shading added to extant buildings for legibility). Powerhouse is at center top of image; nomination boundary is indicated by red dashed line.

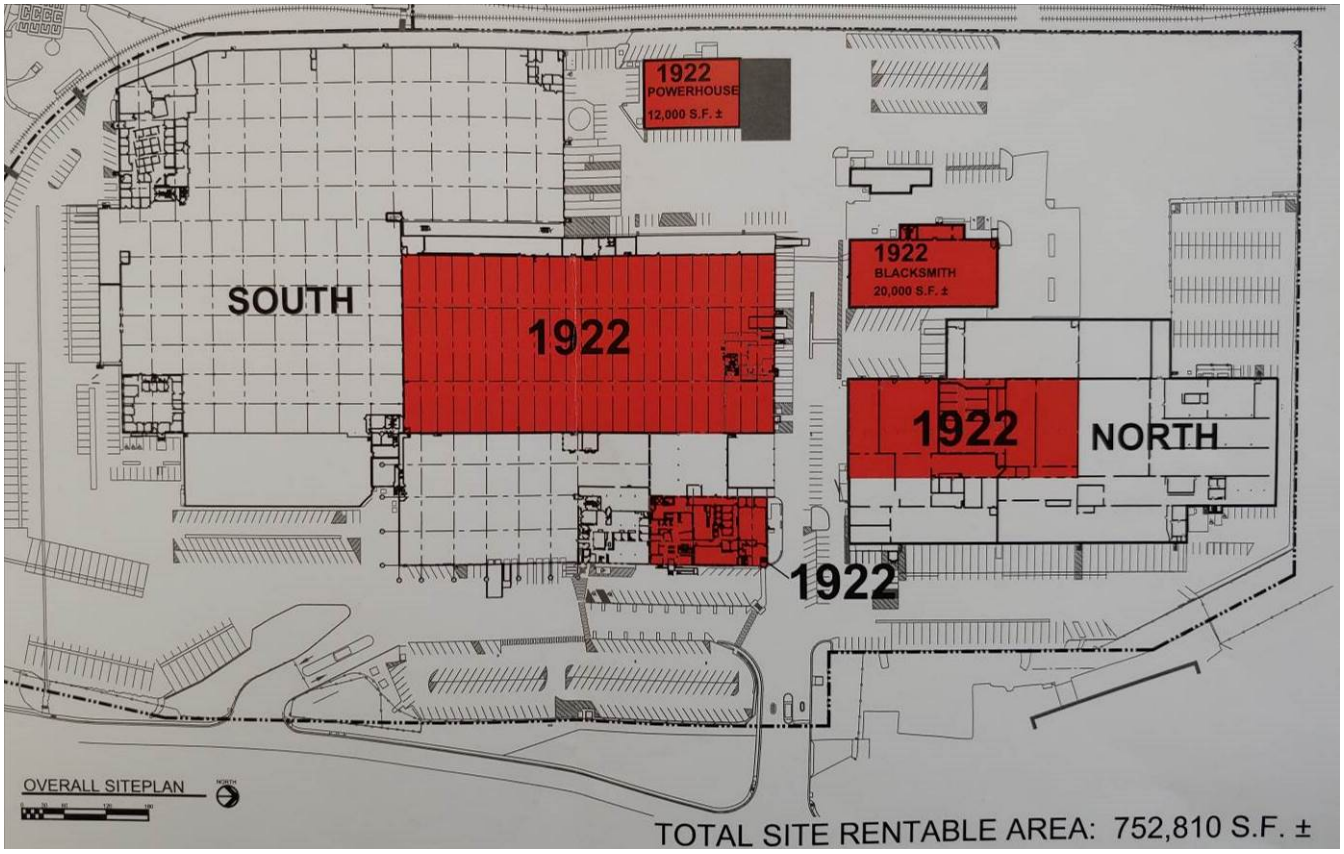


Figure 2. Current site plan, courtesy of owner. 1922-23 original shop buildings still extant are shaded; note extensive additions surrounding Machine and Erecting Shop and Storehouse/Office (center) and Boiler Shop (lower center right). Powerhouse is at center top of image; Chimney to north not depicted.

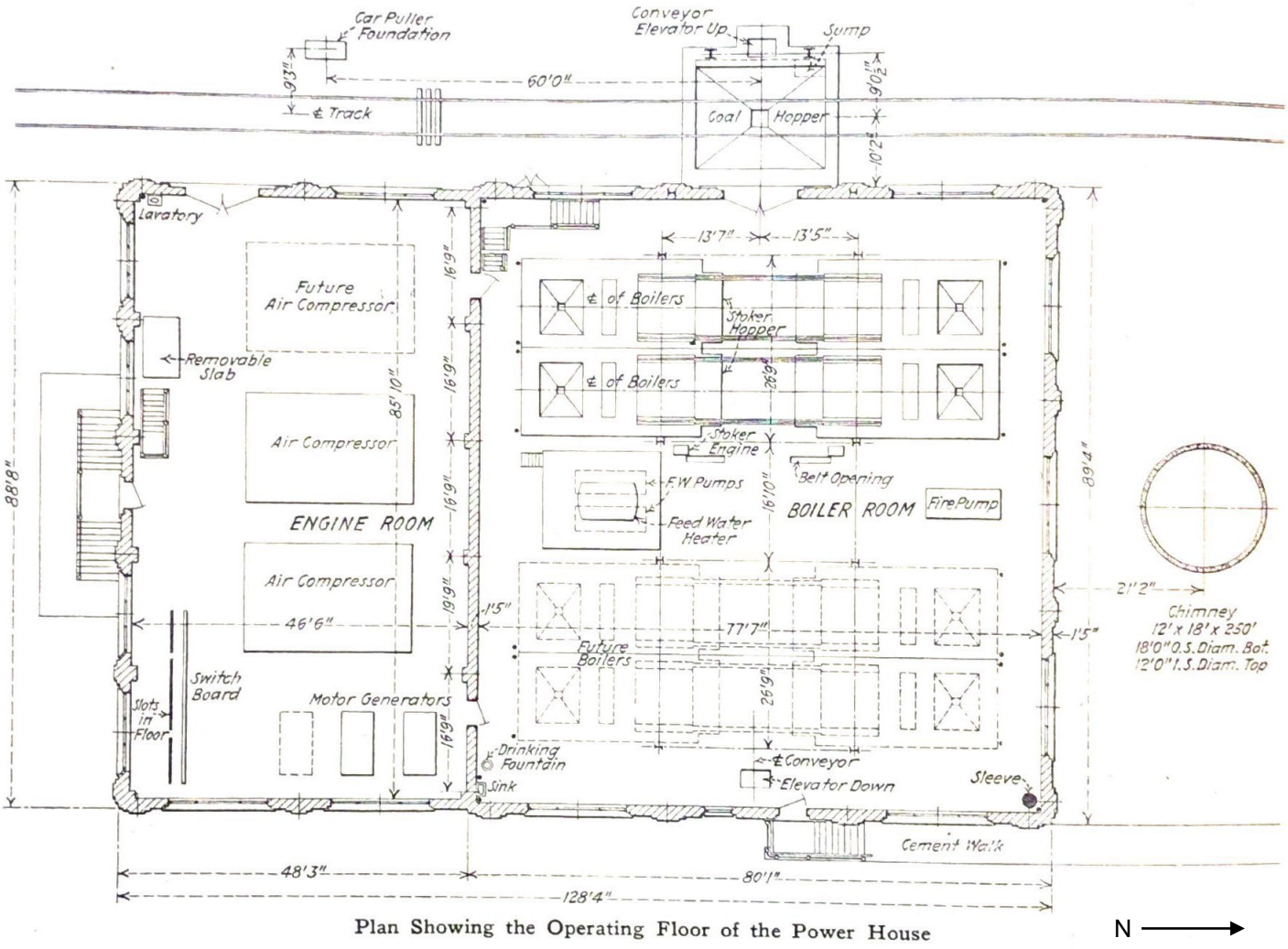


Figure 3. Floor plan of main floor of Powerhouse from *Railway Age*, (29 November 1924): 990. Water Tank to south not shown.

Figure 4. Photograph (February 2020) showing southeast corner of warehouse additions to CB&Q Shops office and machine shop buildings. Note concrete Chimney of Powerhouse beyond. Camera facing north/northwest.

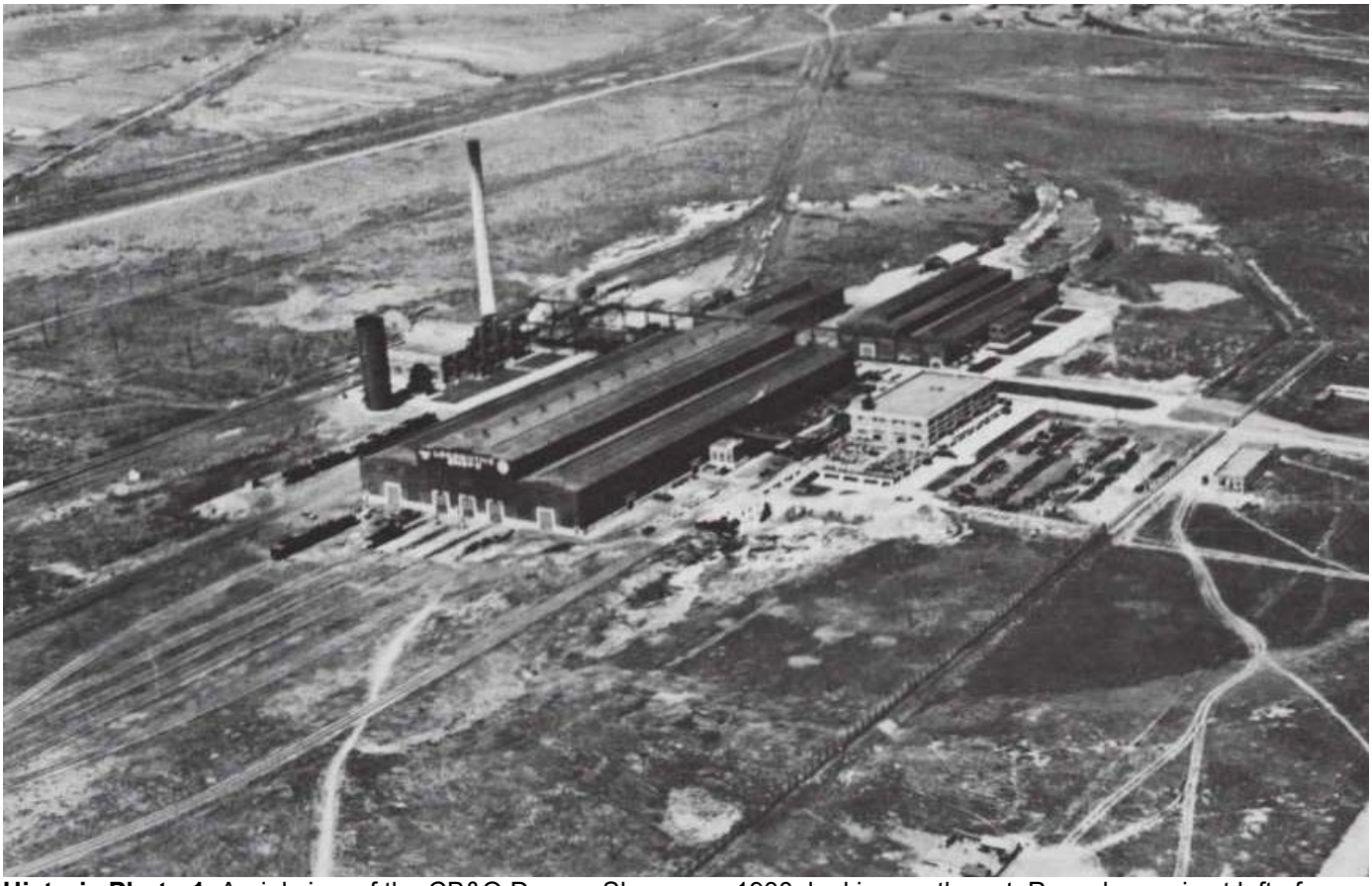
Figure 5. Photograph (February 2020) showing southwest corner of warehouse additions to CB&Q Shops machine shop building. Camera facing northwest.

Figure 6. Photograph (February 2020) showing former Machine Shop (at right) and Blacksmith building (at left). East additions to Boiler Shop beyond (center background). Camera facing northeast.

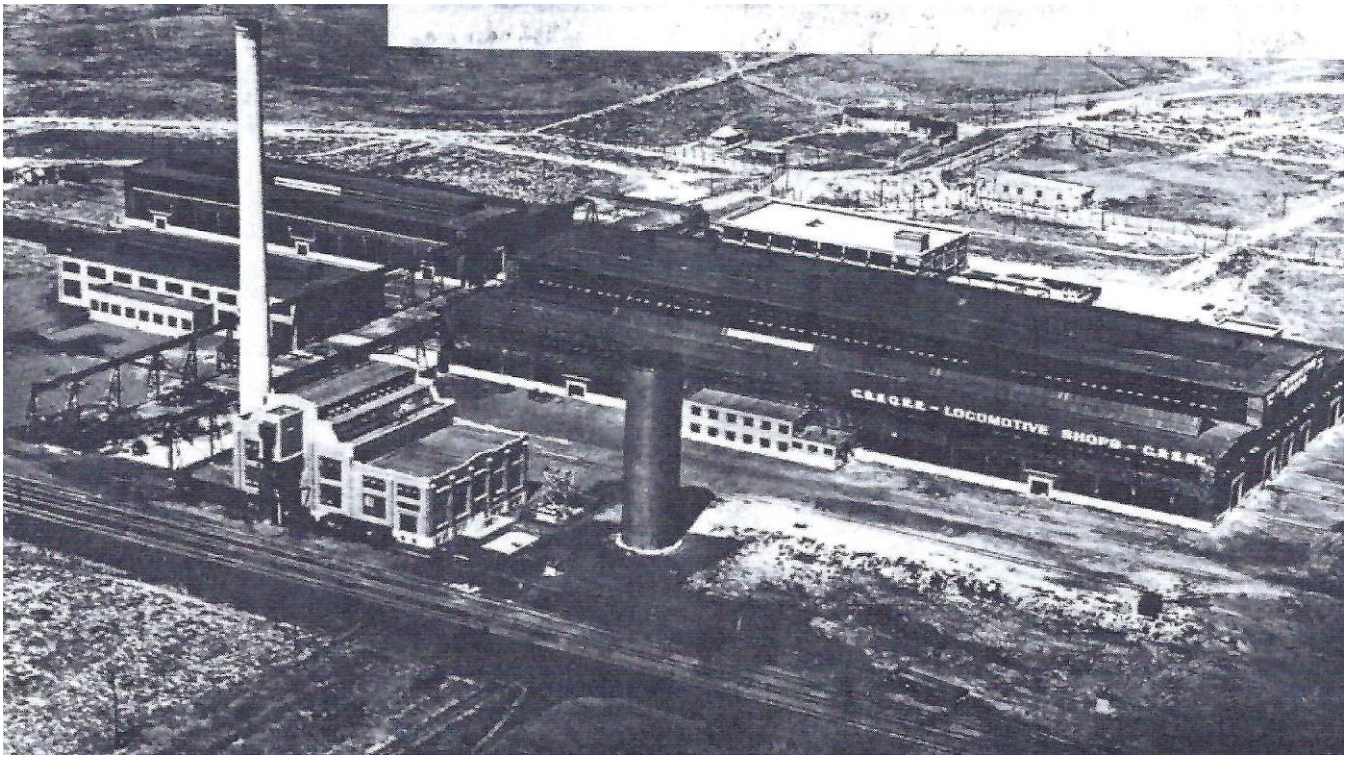
Figure 7. Photograph (February 2020) showing former Office and Storehouse (at left) and addition connecting to Machine Shop (at right). Camera facing south/southeast.

Historic Photos

Historic photos are presented in an order that shows the overall Shops complex followed by those of the Powerhouse specifically rather than in chronological order.



Historic Photo 1. Aerial view of the CB&Q Denver Shops, ca. 1930, looking northwest. Powerhouse is at left of complex. Reproduced in "Denver Locomotive Shops" *Burlington Bulletin* (July 1982) by F. Hol Wagner, Jr. with credit given to Denver Public Library Western History Department (unable to confirm call number).



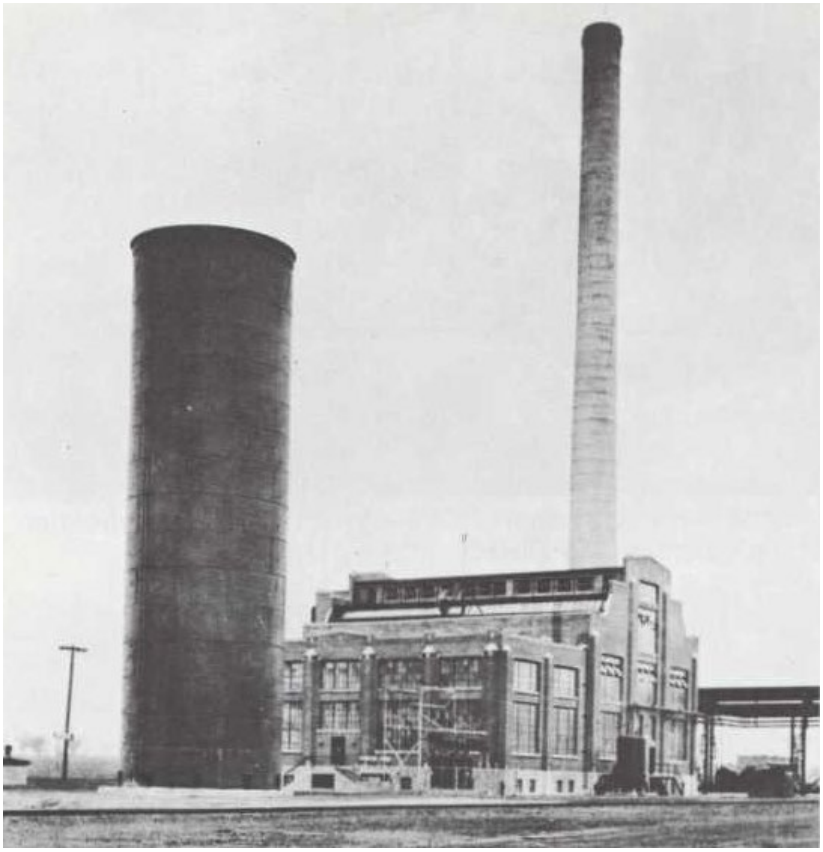
Historic Photo 2. Aerial of CB&Q Denver Shops, ca. 1924, looking northeast. Powerhouse with Chimney and Water Tank in left foreground. Reproduced in “Denver Locomotive Shops” *Burlington Bulletin* (July 1982) by F. Hol Wagner, Jr., with credit given to Stearns-Roger Engineering Corp. Collection (unable to confirm repository).

Historic Photo 3. Construction of Machine and Erecting Shop (center) and Powerhouse (left), late 1922, looking north. Reproduced in "Denver Locomotive Shops" *Burlington Bulletin* (July 1982) by F. Hol Wagner, Jr., with credit given to Denver Public Library Western History Department (unable to confirm call number).

Historic Photo 4. Machine and Erecting Shop (right) and Powerhouse (left), ca. 1925, looking northeast. Reproduced in "Denver Locomotive Shops" *Burlington Bulletin* (July 1982) by F. Hol Wagner, Jr., with credit given to Denver Public Library Western History Department (unable to confirm call number).

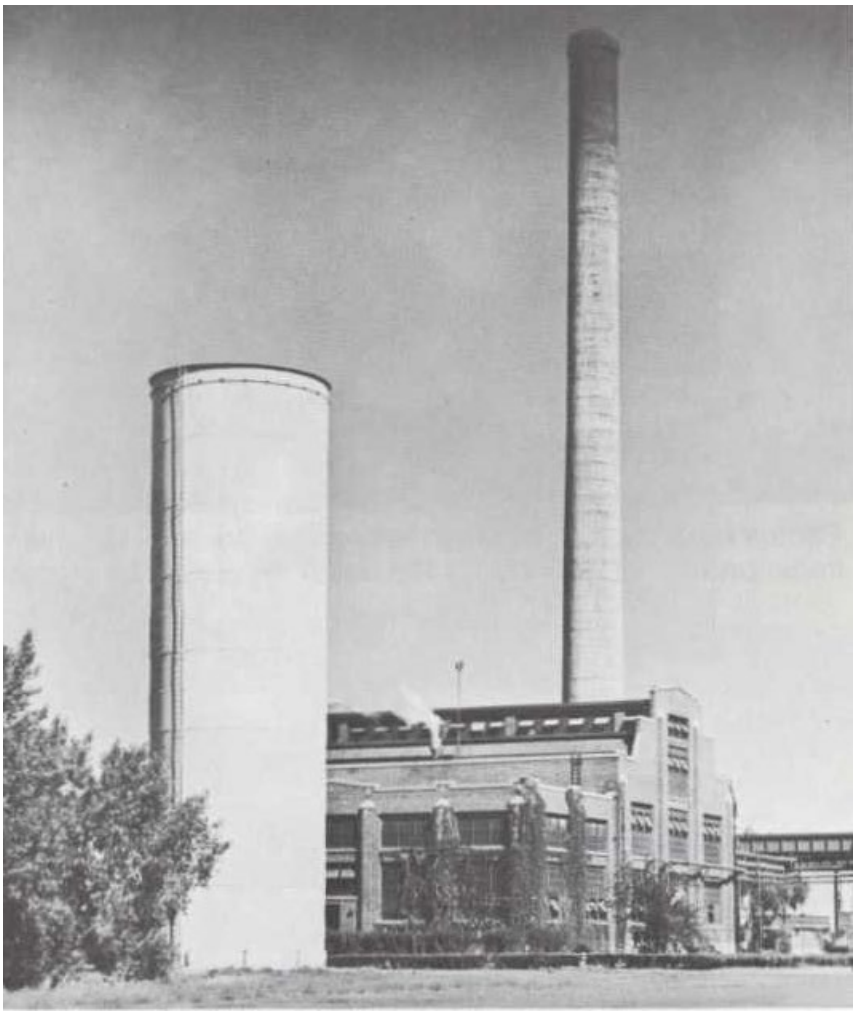
Historic Photo 5. View of south side of upper story of Machine and Erecting Shop, taken from roof of ca. 1960s warehouse addition, 1976, looking northeast. Courtesy of History Colorado: Stearns-Roger Manufacturing Company Collection, MSS.606, History Colorado, Denver, Colorado (Ph.00396, Box 4, FF59).

Historic Photo 6. CB&Q Denver Shops Powerhouse, looking northwest, ca. 1923, by Mile High Photo Company. Courtesy Denver Public Library Western History and Genealogy Department (call number Z-6016).

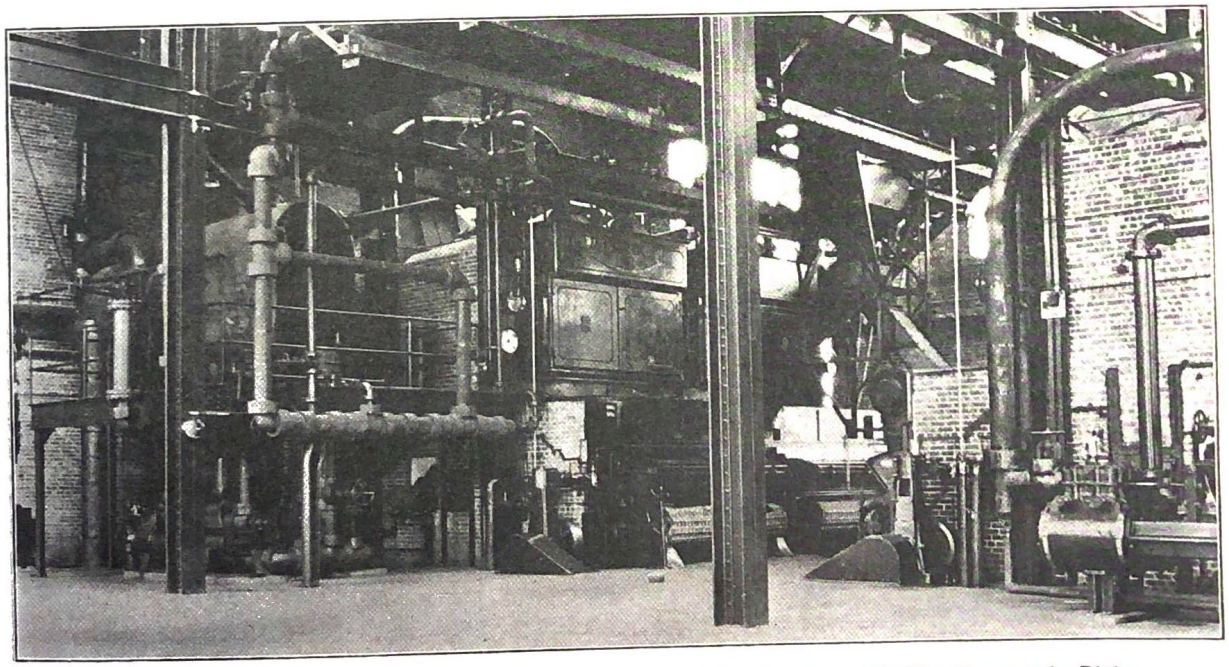


Historic Photo 7. Powerhouse with Water Tank and Chimney, ca. 1924. Reproduced in “Denver Locomotive Shops” *Burlington Bulletin* (July 1982) by F. Hol Wagner, Jr., with credit given to Bob Jensen collection.

Historic Photo 8. CB&Q steam engine No. 5513 in front of Denver Shops Powerhouse, looking northwest, 1931, by Otto Perry. Courtesy Denver Public Library Western History and Genealogy Department (call number OP-3946).

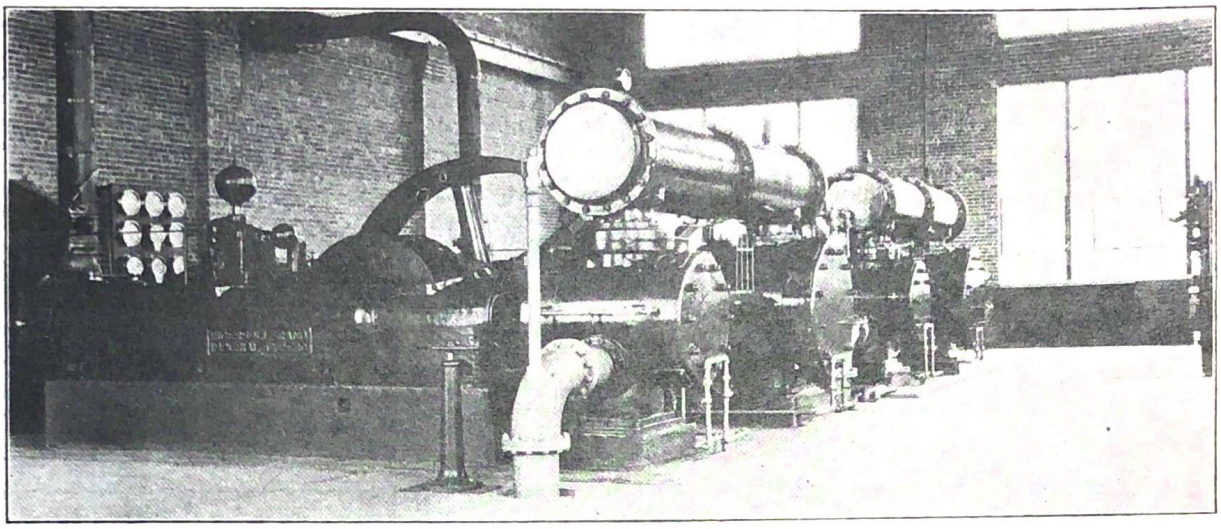


Historic Photo 9. Powerhouse with Water Tank and Chimney, 1946, looking northwest. Reproduced in “Denver Locomotive Shops” *Burlington Bulletin* (July 1982) by F. Hol Wagner, Jr., with credit given to Don Fancher, MPS collection.



The Boiler Room. Feed Pumps and Heater Are Shown at the Left and a Part of the Fire Pump at the Right

Historic Photo 10. Interior of Boiler Room, ca. 1924, looking southwest. From *Railway Age*. "C.B. & Q.'s Model Coal Burning Power Plant." Vol. 77, No. 22 (29 November 1924): 991.



The Engine Room of the Chicago, Burlington & Quincy Power Plant at Denver, Colo.

Historic Photo 11. Interior of Engine Room, ca. 1924, looking northeast. From *Railway Age*. "C.B. & Q.'s Model Coal Burning Power Plant." Vol. 77, No. 22 (29 November 1924): 991.