

Mechanical

Architectural Drawings: Bridges, Tunnels, Grade separations, Turntables, & Misc.

BRIDGES

132.I.5.3

Bridges and tunnels on the NP mainline with supplementary data of important structures, 1929

Minnesota

138.F.8.3

St. Paul. Maryland Avenue bridge, 1909 4p

St. Paul. Third Street bridge, 1926, 1930 2p

Minneapolis. Present and proposed bridges over Mississippi River, 1926 6p

Minneapolis. Pleasant Street bridge over St. Paul & Northern Pacific Railway, 1886, 1887, 1922 6p

St. Paul Division. Mainline. Sketch showing location and cross sections of bridge across the power channel, Little Falls, MN, 1915

132.I.5.3

Duluth-Superior. Plans and profile of draw bridge, St. Louis Bay, 1906, 1908 2p

Montana

138.F.8.3

Belknap. Pneumatic caisson for piers I and II, 2nd crossing bridge, undated 2p

Durant. Rocky Mountain Division, Butte line bridge #14, 1922

Helena. Overhead crossing of Main St., undated, 1920 2p

Rocky Mountain Division. Jocko River bridge #225, 1900

Montana Division. Shields River Branch: 3p

Bridge #10¹ near Chadbourn, 1922

Survey of Shields River bridge #10 near Chadbourn, 1930

Bridge #15 near Clyde Park, 1922

Yellowstone Division. Survey of Big Horn River at bridge #167, 1935

132.I.5.3

Yellowstone Division. Mainline. Map showing type, size, and elevation of bridges as constructed over Beaver Creek, Wibaux, MT, 1931 2p

North Dakota

138.F.8.3

Profile of Dakota Division, 1883 1p

Bismarck Bridge over Missouri River:

Roll 1

Profile of Missouri River at Bismarck bridge for each month of 1893

Sectional sketch of excavation in east bank of Missouri River at Bismarck bridge, 1896

Proposed excavation around pier #1, Bismarck bridge, 1903

Profile of stratification, Bismarck bridge, 1904

Roll 2

General plan for moving pier #1, 1897

Plan of temporary cribbing and bents for support, 1902

Plan showing changes in the location of bearings on piers, 1898

Calculations for moving pier #1, 1897

Bent for supporting 113 ft. span during moving of pier #1, 1897

Sketch plan showing distances between and dimensions of piers and abutments, 1904

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North Dakota (cont.)

138.F.8.3

Roll 2(cont.)

Detail of straight edge for lining up bottom of pier #1, 1898

Plan showing proposed reconstruction of east abutment, 1899

Details for moving pier #1, 1897

Plan of temporary bents for support at pier #1, 1902

Grand Forks Bridge #95:

Roll 1

General plan of bridge across Red River, 1902

Draw span, 1901

73 ft. pony span, 1902

120 ft. Howe Truss span, 1901

Sketch showing turntable for draw span, 1902

Detail of turntable showing cross ties for bearing, undated

Sketch showing end of draw span, 1902

Detail of draw rest, 1901

Timber piers, 1901

Plan of shore pier, undated

Sketch showing present shore piers, 1902

General sketch of falsework, 1902

Plan of bridge, undated

Plan for reinforcement, 1901

Sketch showing diagonal plank nosing of timber piers, 1902

Sketch showing plate washer under bottom chord for end rods on draw span, 1902

Sketch showing reinforcement of levers for end bearings for draw span, 1902

Sketch showing proposed clamps on the braces and counters on the bottom
chord of draw span, undated

Sketch showing proposed rail lift for draw span, 1902

Roll 2

Draw span, 1901

Detail of intermediate brace blocks for top and bottom chords, 1901 3p

Details, 1901

Details for 73 ft. pony span, 1901

Details for brace blocks for 75 ft. pony span, 1901

Details, 1901 2p

Details for 120 ft. Howe Truss span, 1901

Reinforcing 120 ft. span, 1914

Reinforcing 73 ft. span, 1914

Reinforcing draw span, 1914

Plan of proposed reinforcement, rev. 1911

Bismarck Bridge over Red Trail:

Proposed bridge, 1919

Sidewalk brackets and railing, 1922

Details of falsework, 1921

Blueprints of unidentified details 4p

Idaho

138.F.8.3

Rocky Mountain Division. Burke Branch. Sketch showing bridge on Hecla High
Line at Burke, ID, 1924

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Washington

138.F.8.3

Cowlitz River bridge, 1903 13p

Kanaskat. Bridge #MP82, 1946-1947 2p

Seattle Division. Snoqualmie Branch. Renewal of bridge #39 over Raging River, 1911 4p

Seattle Division. Bridges on Monte Cristo Branch. Bridge Nos. 1-62.

Includes sketches and building data for each bridge, after 1914 46p

Steilacoom. Wilkes Street crossing, 1912 2p

Tacoma Division. Pt. Defiance Line. Overhead crossing at Sta. 1707, 1912

100/OV5 Drawer 3

Ainsworth. Snake River bridge, 1883, 1926, 1933 22p

MISCELLANEOUS BRIDGES

138.F.8.3

Roll 1

Pile bridging, 1883

Floating draw bridge, 1882

Roll 2

Pile trestles, 1883-1884 7p

Roll 3

Standard trestles, 1883-1886 5p

Roll 4

300 ft. combination deck span, 1884 2p

Hook bolt for Perma Bridge, undated

TUNNELS

138.F.8.4

Cascade Division. Stampede tunnel, 1899 (3 rolls)

Montana Division. Bozeman tunnel, 1884, 1897, 1929

Pacific Division. Tunnel #6, 1895

Rocky Mountain Division: Iron Ridge tunnel, 1891 (redrawn 1951)

Mullan tunnel, 1895, 1913

St. Paul Division. St. Paul Terminal tunnel, 1916

Tacoma Division. Point Defiance tunnel, 1912

Yellowstone Division. Big Horn tunnel, 1898

GRADE SEPARATIONS

138.F.8.4

Idaho Division. 2nd District, main line. Grade separation, Spokane, Washington. Permanent lighting system, 1916-1917 5p

St. Paul Division. Line B. Grade separation NE Minneapolis, 1926

TURNABLES

138.F.8.4

Half through turntable. Philadelphia Bridge Works, 1904, 1907 3p

Turntable details. Philadelphia Bridge Works, 1898-1926 8p

60 ft. turntable, 1905 3p

54 and 56 ft. turntable, 1881, 1923 7p

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TURNTABLES (Cont.)

138.F.8.4

52 and 54 ft. turntable, 1882-1888 6p
Pasco, Washington turntable, 1889-1900 5p
White Bear, Minnesota turntable, 1915, 1919 5p
Tacoma, Washington turntable, 1901-1902 2p
60-61 ft. deck turntable, 1891-1909 3p
56 ft. turntable, 1917 3p
60 ft. ball bearing turntable, 1891
Standard NP turntable, 1892-1893 2p
Type H turntable, 1917, 1921 6p

MISCELLANEOUS DRAWINGS

138.F.8.4

Tacoma, Washington. Coal bunkers, 1882-1908 (1 roll)
Tacoma, Washington. Shops: window detail, trenches, sewers, man-holes,
undated (1 roll)
Seattle piers. Air tanks for precast cylinders; column forms and construction, 1917 (1 roll)
Seattle Coal & Iron Company coal bunkers, undated
Bozeman, Montana coal dock. Hopper track trestle, 1918
Stampede, Washington ventilating plant; flume and ditch, 1918-1919
Superior, Wisconsin. Pile trestle for Daisy Mill Company, 1892
Northern Pacific coaling station, 1929, 1940
St. Paul, Minnesota. St. Paul Union Stockyards loading chute, undated
Moose Lake, Minnesota. Gravel pit, 1922-1924

BRANCH LINES AND/OR OTHER LINES

138.F.8.5

Bellingham Bay and Eastern Railroad coal bunkers, 1892
Chicago, Minneapolis & St. Paul Railway. Nettstrom signal for double track, 1899

100/OV5 Drawer 3

Duluth Transfer Railway. Rice Point bridge, 1893-1894 F1

138.F.8.5

Missoula & Bitter Root Valley Railroad. Bridge #8, undated
Montana. U & N Railway. Anaconda mine to Walkerville. Main St. bridge, 1886
Montana Central Railway. Boulder tunnel, 1888
Puget Sound Shore Railroad Company. Pile trestle, 1883
St. Paul & Duluth Railroad. E. 7th St. retaining wall; transfer table for shops; Miller to quarries, bridge #168, 1887, 1891
St. Paul & Northern Pacific Railway:

Roll 1

Bridge over Bassetts Creek, Minneapolis, 1883

Roll 2

Progress profile, lower Mississippi River bridge, 1885 [?]
Seattle, Lake Shore & Eastern Railway. Trestles, 1888-1890 9p