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NPS Form 10-900
(Oct.1990)

OMB No. 10024-0018

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 instruction in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classifications, materials and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Union Street Railroad Bridge and Trestle

other names/site number SFC&W Railroad Willamette River Bridge, Salem Railroad Bridge

2. Location

street & number Intersection of Union Street NE and Water Street NE ☐ not for publication

city or town Salem ☐ vicinity

state Oregon code OR county Marion and Polk code 47 and 53 zip code 97301

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 ____ nationally ____ statewide X locally.

James Hamrick 28 Nov 2005

Signature of certifying official/Title - Deputy SHPO Date

Oregon State Historic Preservation Office

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is: Signature of the Keeper Date of Action

✓ entered in the National Register
___ See continuation sheet.

Edson H. Beall 1.11.06

___ determined eligible for the National Register
___ See continuation sheet.

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain):

5. Classification

Ownership of Property
(check as many as apply)

___ private
_X_ public - local
___ public - state
___ public - Federal

Category of Property
(check only one box)

____ building(s)
____district
____ site
_X_ structure
____ object

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

Contributing	Noncontributing	
		buildings
		sites
1		structures
		objects
		Total

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

Number of contributing resources previously listed in the National Register

6. Function or Use

Historic Functions
(enter categories from instructions)

Transportation, rail and water related

Current Functions
(Enter categories from instructions)

not in use

7. Description

Architectural Classification
(Enter categories from instructions)

other: Pratt through truss

Materials
(Enter categories from instructions)

foundation: concrete
walls:
roof:
Other: trestle: timber
truss: steel

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets)

See continuation sheets.

Summary

The Union Street Railroad Bridge and Trestle (hereinafter Union Street Bridge) exhibits a high degree of physical integrity. It stands where constructed in 1912, in a context, which, because the river itself remains unchanged and its western shore is in parkland, is substantially similar to the historic milieu. The design, materials, and mechanisms of the property are all substantially intact, and they clearly convey their original function and workmanship. Removal of a small bridge operator's house that stood centered on the top of the lift span, and the fixing in place of the lift span itself, are the principle losses of historic fabric and function. As one would expect, the wooden trestle members have been replaced over time, with one wholesale reconstruction taking place in 1939- 40, just within the period of significance. The preparers do not view these interventions as a loss to historic integrity because in-kind replacement was clearly anticipated in the design of the trestle and has been practiced, without significant disruption of service, throughout its life. Owing to its high degree of physical integrity, it is the preparers' opinion that the property also possesses solid integrity of feeling and association.

Location and Setting

The Union Street Bridge crosses the Willamette River and the adjacent bottomlands to the west, near downtown Salem, Oregon. The five-span steel bridge structure includes one vertical lift section, and carries a single track. Beginning from its east end, the bridge essentially continues the line of the right of way of Union Street, resting first on a substantial concrete abutment and then successively on five tall in-stream concrete piers. The metal structure extends in a straight line for 722 feet, bearing roughly west-by-northwest, after which point it gives way to the timber trestle and extends for another 850 feet, first continuing the straight line and then in a gentle arc toward the south. The bridge is essentially over water and the trestle is over the floodplain.

Beyond the end of the trestle, the rail line, at this point bearing roughly southwest, runs onto a broad earthen embankment that, at the transition, rises about ten feet above the surrounding landscape. After crossing Wallace Road (State Highway 221), the now abandoned railroad right-of-way continues into the core of old West Salem. At the time of writing, in the fall of 2005, ties and tracks are still in place from the wye with the Burlington Northern Santa Fe Railroad's main line, lying just east of the downtown end of the bridge, to Murlark Street in West Salem, which intersects the line approximately four-tenths of a mile southwest of the end of the trestle.

As one would expect for a railroad facility, the bridge and trestle are mostly level, sloping landward at a 2% grade for only the length of the easternmost truss. On this, the downtown side of the river the rails originally occupied the center of Union Street for eight blocks and then, curving south after crossing Capitol Street, joined the main eastside Southern Pacific Railroad line just north of the intersection of Twelfth and Marion Streets. This curve and junction, about a half mile north of the Salem Depot, is still evident today in the curving pattern of Union and Twelfth Streets. To the west of the river the line originally ran above the floodplain (now Wallace Marine Park), through open farm fields, past several sawmills, and then down the center of Second Street through West Salem. Beyond West Salem the line originally extended to Dallas, Falls City, and Black Rock (an unincorporated logging community), in Polk County. Although the ties and rails have been removed west of Murlark Street, the West Salem section of the rail right of way is still intact enough for an observer to gain a clear sense of the original configuration.

Piers and Abutment

The concrete piers, numbered 1 through 5 from west to east on the original drawings, were designed to rise approximately 35' above mean low water, with the intention of holding the rails at least 5' above the highest possible flood waters. Design drawings depict the piers as all being similar, but as constructed, the stepped bases of piers 1 and 3 are considerably lower than those of piers 2, 4, and 5. In normal water conditions the bases of piers 1 and 3 are below the water surface.

The bases and columns of the piers appear to have been poured integrally, in a series of lifts, each footing being sunk below the river bed to a depth at which it could bear on highly compacted gravels. The drawings show these depths as follows: Pier 1 - 16', Pier 2 - 18', Pier 3 - 16', Pier 4 - 22', and Pier 5 - 16'. Also based on the drawings, it is assumed that the excavations were undertaken within crib-constructed wooden cofferdams, which then served as forms for the concrete. These are shown as being built up out of 10" x 12" sawn timbers lapped and keyed at the corners and spiked together. On the drawings these structures are dimensioned at 35' by 15' to the outside, with the long dimension aligning to river flow, and including two sets of integrated timber cross bracing at the third points and an external covering of vertical 2" x 12" boards. Above the bases, which step inward once at their tops, the pier columns become racetrack shaped in horizontal section, and stepping in another 12" from the edge of the base, batter inward at a rate of ½" per vertical foot. They are topped with substantial flat, racetrack-shaped capitals, 2' deep and overhanging the column by 6", and with axes of 28'-0" and 8'-6".

On the steeper east bank a battered concrete abutment structure was required rather than a trestle, and two versions are shown on the extant drawings. The earlier version, dated March 1, 1912, is shown as dug 19' deep into the top of the bank, with a later, "revised" version, dated only May 1912, shown at 42' deep and resting substantially below the mean low water level. To all appearances the original plan is the one that was executed, although it is possible that the lower face of a larger structure is obscured by back filling.

Truss and Lift System

The bridge structure is composed of five riveted, steel, Pratt type, through-truss spans, numbered 1 through 5 from west to east for purposes of this discussion. Lateral stiffening is provided by "X" bracing tying together the tops and bottoms of the side trusses and by triangulated transverse bracing panels tying the tops of all the vertical member pairs together above the train travel corridor. The corridor itself has a clear width of 15' and a clear height at the centerline of 24'. A deep I-section transverse floor beam also spans between each pair of vertical members (four per typical span, six at span 5) and at each pier. These floor beams in turn support two continuous I-section beam strings, of similar depth and in the same plane, which are located directly under the positions of the rails.

Spans 1 and 2 are identical, being five panel trusses of trapezoidal profile, approximately 134' long, 35' tall, and 20' wide. Span 3 is similar, except that its easternmost panel is expanded upwards an additional 64' to form an acutely right-triangular lift tower, with the outer edge, adjoining the lift section, being vertical. Span 4 is the lift section, similar in dimension to the foregoing but of rectangular profile, and span 5 mirrors span 3, except that it includes two additional panels for a total of seven and an overall length of approximately 185'. Further details of the truss configuration are best understood by reference to the accompanying drawings and photographs.

The mechanism of the patented Waddell & Harrington Lift Bridge design relies on a counterbalancing system to operate. In the case of the Union Street Bridge, four large concrete counterweights, in two pairs, are suspended within the open tower structures bracketing the lift section. In simplified terms, the cables supporting these counterweights pass up and over four massive pulleys at the tops of the towers and then run down and attach to the lower corners of the lift span. The aggregate mass of the counterweights being almost equal to that of the lift span, only a small amount of effort, provided by a gasoline-powered motor in the bridge operator's house, was required to overcome inertia and raise or lower the bridge. The lift span mechanism was designed to provide at least 55' of clearance between the bottom of the movable truss and the surface of the river during the high water conditions that were

common on the Willamette River during winter and spring prior to installation of upstream flood control measures in the postwar period.

Trestle

The original curving timber trestle was constructed at the same time as the bridge. However, a recent (2005) engineering survey of the trestle states: "The trestle was reconstructed in 1939 and 1940, as indicated by date nails driven into the timber piles and sawn members. In 1975, the timber trestle partially burned, causing damage to members throughout the entire length. The timber ties, most of the timber girders, and some of the bracing members were replaced with new creosote-treated members and the bridge was returned to service carrying train traffic."

The log-piling bents are numbered 1 through 58, from west to east, for purposes of this discussion. These bents are spaced at 15' intervals, on center, and range in height above ground from about 10' where a headwall retains the graded embankment, to about 40' at the bridge. Although originally drawn as being on land, the two bents nearest to the bridge today stand in the water. The depth to which the piles were driven is undetermined, but typical practice would have been until a prescribed degree of resistance was met.

All the bents have essentially the same construction, five log piles, with the outer four splaying symmetrically away from the vertical central one at their bases, are capped with a 12' long, 13"x13", sawn beam. The outer pair of skewed piles slopes at a rate of 2" per vertical foot, and the inner pair at a rate of 1" per vertical foot. It is unclear how the cap beam is attached, but the connector is probably a heavy metal spike or lag bolt through the beam and into the top of each pile. There are sheet metal caps, probably for moisture protection, between the top of each pile and the beam above. Each bent is subdivided by horizontal bracing into tiers at 12'-6" intervals (measuring from the top down) and every tier on every bent includes a timber "X" brace.

Longitudinally the bents support two continuous courses of four, parallel 7"x17" beam strings. The breaks between the butted component timbers in an individual string of beams are staggered from those in the adjacent strings, and all the strings are spaced 2" apart. These composite beam courses center under the rail positions, and carry standard 9'-2", 8"x10" ties, spaced 18" on center and attached with spikes.

The pattern of horizontal transverse tier bracing carries around into the long plane, and two types of timber "X" bracing, on both sides, are also used to strengthen the structure in this direction. One

system ties three successive bents together with a single large "X" and the other ties two adjacent bents together with two stacked "X's," one at each tier. The three-bent brace type occurs at locations 8-9-10 and 15-16-17 in a modified "V" configuration owing to reduced height; and at 22-23-24, 29-30-31, 35-36-37, 49-50-51, and 56-57-58. The two-bent type occurs at locations: 18-19, 20-21, 25-26, 27-28, 45-46, 47-48, and 53-54. Horizontal lower tier bracing members that probably existed historically at bents 24-25-26 were likely removed when two lanes of roadway were installed under the structure during the development of Wallace Marine Park. All the bracing connections are made with galvanized steel through-bolts, the ends of which have been deformed beyond the nut to prevent unthreading.

The trestle is in reasonably good condition in spite of its age and the fact that parts of it have been burnt over the years, most notably in 1975 when almost the entire structure was involved. These fires occurred during railroad ownership, and after engineers determined that most of the pilings had suffered only surface charring, repairs were made and the structure was returned to service. Further details of the trestle configuration are best understood by reference to the accompanying drawings and photographs.

Operator's House

The operator's house is described here only on the basis of photographic evidence as it was removed from the bridge at some unknown time after 1980, when the Southern Pacific Railroad Company obtained permission from the U.S. Coast Guard to fix the bridge permanently in the down position. The remaining platform on which the house stood may provide some physical evidence of configuration in the future, but at the time of writing it is not safely accessible.

The function of this structure, approximately 15' x 27' in footprint, was to shelter the operator and the machinery used to raise and lower the lift span. It occupied a platform atop the central panel of this moveable section, and was reached from the rail bed below via still extant ladders and catwalks incorporated into the structure. The longer south and north faces of the operator's house were divided into three structural bays, with the center ones wider and protruding perhaps four feet to form a pair of observation bays from which approaching trains could be seen more easily. The walls appear to have been about 10' tall, and to have been finished on the outside with horizontal wood siding, and the shingled, hipped roof, with deeply overhanging eaves, was of about a 6/12 pitch. The two observation bays each had their own hipped subroofs sharing the eave line and overhang depth of the main roof.

The south face of the building included three equal, one-over-one windows, probably double-hung and approximately 3' x 6' in dimension, each centered in one of the structural bays, and the sides of the observation bays had similar but narrower windows. As viewed from the outside, the east side of the building appears to have had a door with a transom window above it at the left and two approximately 3' x 6' windows to the right, all three openings of similar width and head height and deployed symmetrically. The north side of the building was like the south except that there was no window in the easterly third. The west face of the building is only distantly visible in one photograph found to date, but it appears to have mirrored the east face, with a door on its right and two windows to the left. Two stovepipe chimneys are visible in some photographs, one probably serving the gasoline powered lift engine and the other a heating stove. Apart from what little else might be inferred from position and operating patterns of the remaining machinery, which the preparers were unable to observe at close range, there is no known evidence of how the interior of the operator's house was arranged or finished.

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).

__X__ 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.

Areas of Significance
(Enter categories from instructions)

Transportation
Engineering

Period of Significance
1913-1940

Significant Dates
March 15, 1913

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 of age or achieved significance Within the past 50 years

Significant Person
(Complete if Criterion B is marked above)

Cultural Affiliation

Architect/Builder
Waddell & Harrington, Engineers
Southern Pacific Railroad Construction

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets)

9. Major Bibliographical References

Bibliography (Cite books, articles, and other sources used in preparing the form on one or more continuation sheets) See continuation sheets

Previous documentation on file (NPS):
- ___ preliminary determination of individual listing (36CFR67) 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

Primary location of additional data:
- ___ State Historic Preservation Office
- ___ Other State agency
- ___ Federal agency
- _X_ Local government
- ___ University
- ___ Other

Name of repository: City of Salem URA

Summary

The Union Street Railroad Bridge and Trestle (hereinafter Union Street Bridge) is eligible for listing in the National Register of Historic Places under Criterion A in the area of transportation engineering as an intact and locally significant example of railroad infrastructure which improved connectivity between Salem and its western hinterlands. Because it was designed to accommodate waterborne as well as surface transport, the bridge also speaks to the historic role of the Willamette River in moving goods and people. The structure is further proposed under Criterion C as the only local example of its design type and construction methodology. The period of significance for the property begins with its completion in March 1913 and ends with the wholesale replacement of trestle members in 1939-40, the railroad's last major investment in the structure.

Transportation in the Willamette Valley

The basic patterns of human movement in the Willamette Valley, largely dictated by physical geography, had already been established for millennia by the time non-native explorers and settlers began arriving in the area in the late eighteenth century. Two interconnecting systems were in use, overland trails, and river canoeing routes. Initially the influx of newcomers had very little effect on the physical character of these transportation patterns, but as immigration increased in the middle decades of the nineteenth century trails were transformed into roads, and attempts to stabilize river channels began. As had been the case throughout the prior westward expansion of the United States, the ability to move goods and people in and out of the valley was seen as a critical factor in "settling" the area. By the time of Oregon statehood in early 1859, a basic transportation network of roads, navigable rivers, ports, ferries, fords, and bridges was taking shape in the Willamette Valley, connecting settlements to one another as well as to the outside world.

Soon after the Civil War, two long-term efforts commenced in the Willamette Valley that were to significantly increase transportation capacity; the Army Corps of Engineers undertook to permanently stabilize the Willamette River below Eugene, and railroad construction began in the Portland area with the goal of a connection to San Francisco. Both undertakings affected the Salem area dramatically. The first railroad arrived in 1870 and the installation of locks around Willamette Falls, downstream at Oregon City, allowed uninterrupted river transport beginning in 1873. In the decades following, however, while the volume of river transport grew first at a slow, constant rate and then leveled off, railroad development went through a period of intensive growth. Where there had been no railroads in Oregon in 1860, fifty years later in 1910 there were 2,378 miles of tracks in the state.

Significant to this story is the fact that by this time the Southern Pacific Railroad (SP) had also largely consolidated a position as the leading rail company in the Willamette Valley.

Despite the dominance of SP, in 1902 a group of investors formed the Oregon Electric Railroad (OE) in direct competition to it. The new company developed its own right-of-way between Portland and Eugene and commenced operations between Portland and Salem on January 20, 1908, with an emphasis on passenger service. Although SP was ultimately successful in maintaining its preeminent position in the Willamette Valley, the challenge from OE forced it to consider electrifying lines and expanding its network of passenger services. This competition played a significant role in the decision to build a rail bridge across the Willamette River at Salem, spurring SP to work behind the scenes in bringing the project to fruition.

Another factor was also to greatly influence the character of the bridge. In 1892, acting on authority granted by the U. S. Congress, the War Department began to regulate both new and existing bridges over navigable rivers in order to provide for reasonably unobstructed waterborne use. Because the Willamette River above the proposed bridge location was still regularly used for shipping, this meant that the proposed railroad bridge would have to include a movable section to allow for safe passage of boats, especially at times of high water.

The Union Street Railroad Bridge and Trestle

On October 24, 1901, two prominent Salem businessmen, Louis Gerlinger and Charles K. Spaulding, incorporated the Salem, Falls City, & Western Railway (SFC&W), a short line intended initially to assist exploitation of the extensive tracts of timber their Willamette Valley Lumber Company (today's Willamette Industries) controlled in the Coast Range in western Polk County. The first phase of rail development saw construction of the line between Dallas and Falls City, opening May 29, 1903, with the line extended four miles west over the next three years up the narrow canyon of the Little Luckiamute River. The western terminus of the line, in the heart of the company's timber holdings, was at the small, unincorporated community of Black Rock. Work camps further afield delivered logs to Black Rock where they were loaded onto the train. This arrangement allowed economical transport of a steady supply of material to the Willamette Valley Lumber Company sawmills in Dallas, whence products could easily be shipped to market via the SP westside main line.

Gerlinger and Spaulding appear to have been far more interested in their lumber enterprise than in operating a railroad, and in 1907 a deal was struck whereby SP took over management of the SFC&W line between Dallas and Black Rock. Soon thereafter the SFC&W line was extended, by SP,

eastward to the Willamette River, ending at the small community which in 1913, the year the bridge opened, would incorporate as the City of West Salem. For the time being however, eastbound passengers and freight arriving at the river could only reach Salem proper by way of the existing highway bridge or a ferry, and transport in the opposite direction obviously suffered the same inconvenient need to transfer. Discussion of a new railroad bridge begins to appear in the local press at almost the same time that the line arrived in West Salem.

At about this same time SP was also acquiring the Portland, Eugene, & Eastern Railroad (PE&E) and beginning to transform it and other holdings into an electric passenger system to rival the budding OE. At different times, local newspaper accounts from the period refer to the proposed bridge as an undertaking of all three companies, SFC&W, PE&E, and SP, with much confusion, speculation about mergers and acquisitions, and implausible denials by owners. In fact, while the Union Street Bridge was technically permitted to and built by the SFC&W, it was in reality a project completely controlled by SP, which soon after completion of the crossing in 1913 acquired the entire SFC&W operation outright.

The Union Street Bridge was begun in May of 1912, and completed in March of 1913. A newspaper article in the *Oregon Statesman* newspaper of March 3, 1913, announced the impending opening of the span: "Every citizen of Salem should constitute himself a committee of one to make this day [March 15] one to be remembered in the annals of our city...with the proposed development of the railroad lines, Salem is destined to be a railroad center and the principal city in the state outside of Portland." Ceremonies officially welcoming the arrival of the first train began at the east end of the new crossing at 11:30 a.m. on Saturday, March 15, 1913, with various dignitaries and Helen West, the young daughter of then Governor Oswald West, riding across the bridge on the front of the engine.

Ironically, just as the Union Street Bridge was creating a better rail linkage to Salem's western hinterlands, the use of motor vehicles was also beginning to increase, steadily capturing more and more freight and passenger capacity from both rail and river transport systems. While the crossing did serve its original purposes, its useful lifespan was effectively less than thirty years. The lift span was rarely raised after 1940, and, recognizing its declining value as infrastructure, SP stopped making major investments in the bridge after completion of a wholesale replacement of the trestle timbers in that year. Both the OE and PE&E lines failed to thrive, and the old SFC&W line to Dallas, Falls City, and Black Rock was never electrified. Passenger service over these tracks was provided instead by two gasoline-powered "McKeen Cars" until 1930, after which mixed freight and passenger

trains were used. These ran until 1945, but after World War II, with the timber near the railhead exhausted, logs began to be brought to the mills by truck and passenger service ended.

The bridge was, however, to play a role in at least one more memorable event in Salem history. Heavy rains and warm temperatures led to large-scale local flooding along the Willamette River in Salem between January 6th and 9th of 1948, with an especially severe impact on the low lying, recently developed residential areas in West Salem. Some displaced residents were cut off from access to the highway bridge but could reach the railroad line, and a small train was dispatched several times to shuttle them across the river to safety in Salem. Only after the water subsided was it discovered that in making these crossings the train had been running over a badly flood-damaged section of the trestle, which could easily have collapsed under its weight.

By 1962, the line between Black Rock and Falls City was abandoned, and by 1963 runs to Falls City were several months apart. In 1964 the end of the line was pulled back to Buman, an industrial locality just west of Dallas, and at the same time the Salem access to the bridge was shifted from Union Street to an SP side track running through the industrial area along Front Street. The line between West Salem and the SP westside main line was also rarely used by this time and by the early 1970s it was largely abandoned. In the summer of 1980 the SP track along Front Street was removed and the existing wye to the Burlington Northern Santa Fe (formerly OE) track was installed. The bridge was used only rarely thereafter and then only to shuttle freight cars between sister canneries lying on both sides of the river.

The date of the last train crossing the Union Street Bridge is unknown but believed to have been in the early 1990s. At about this same time discussion of an adaptive reuse for the crossing as a pedestrian and bicycle facility began to percolate in Salem. In 1999 the Urban Renewal Agency of the City of Salem started negotiations with the Union Pacific Railroad, heir to SP in Oregon, and on October 15, 2004 it purchased the bridge, trestle, and right of way as far west as Wallace Road for one dollar. The Agency is currently going forward with plans to redevelop the Union Street Bridge and the trestle as a bicycle and pedestrian link between Wallace Marine Park and Riverfront Park, with a hoped-for reopening in 2007 or early 2008.

Design

Designed by the prestigious firm of Waddell and Harrington, which ranked among the most respected engineers of movable bridges in the world at the time, the Union Street Bridge represents a compromise solution to the problem of intersecting rail and river transportation routes. By inserting a

lift section in the bridge, both modes could be accommodated. John Alexander Low Waddell (1854-1938), the senior partner in the firm, is generally credited with the invention of the steel truss, long-span, counterweighted, vertical-lift bridge in 1892, but when he formed a partnership with John Lyle Harrington (1868-1942) in 1907, the latter reworked the earlier design into the more practical and economical form that is exemplified by the subject property. This design, known as the Waddell & Harrington Lift Bridge, received a number of U.S. and Canadian patents in 1910 and 1911, and was built many times thereafter, worldwide, both for rail and road applications.

Construction and Materials

Although nominally an extension of the Salem, Falls City, & Western Railroad, it is no surprise that the contract to build the bridge and trestle was awarded to the seasoned construction crew of the Southern Pacific Railroad, which already managed the entire line and soon after completion of this project acquired it outright. A May 9, 1912 article in *The Oregon Statesman* newspaper, titled "Builders of Bridge Arrive," indicates that work on the project began with the establishment of a construction camp on the western shore of the Willamette River the day before. Within a few days work started on grading the western approach embankment and laying temporary tracks in support of the project. Delivery of timbers and lumber for construction of the trestle and the coffer dams was also reported. While the source of these wooden materials has not been uncovered, the steel parts of the bridge are known, from surviving shop drawings, to have been fabricated by the American Bridge Company, at its Toledo, Ohio, plant during the spring and early summer of 1912. The bridge parts were shipped by rail to Salem, assembled on dry land, and then maneuvered into place using rafts, cribbing, jacks, and hoists.

Contemporary accounts and photographs indicate that the trestle and bridge structures were built separately and in tandem, each starting from its respective western end. According to a March 1, 1913 article in *The Oregon Statesman*, work on the project was complete enough by February 28, 1913 for cautious testing of the new crossing with a small auxiliary engine pulling a single passenger coach.

Comparatives

The preparers know of five other Waddell & Harrington vertical lift railroad bridges located at least partially in Oregon. None of these are in Salem. The following brief descriptions are provided to indicate differences between these spans and the subject property:

The so-called Steel Bridge, across the Willamette River in downtown Portland, Multnomah County, is of a very rare telescoping, deck-over-deck, double lift design. The railroad occupies the lower level and the upper level is shared by road and light-rail uses. It is a single span structure.

The multi-span Burlington Northern Santa Fe Bridge, also crossing the Willamette in Portland (several miles downstream of the Steel Bridge), is similar to the subject property in scale but has trusses with a segmented curve profile. Its lift span is at the southwestern shore.

Two unnamed, multi-truss bridges, located side by side and carrying the former SP and OE line, cross the Willamette River between Lane and Linn Counties northeast of Junction City. They are similar to the subject property in scale, but employ segmented curve trusses. Like the Union Street Bridge, their lift spans are permanently fixed in the down position.

The multi-span Celilo Bridge carrying a single track across the Columbia River between Sherman County, Oregon, and Klickitat County, Washington, is substantially larger than the subject property and is also of segmented curve design. Its lift span is located at the southern shore.

All five of these bridges continue in active railroad use, and all but the two southern examples are still regularly opened and closed. Although one, the Steel Bridge, has been determined to be eligible for inclusion, none of the five is currently listed in the National Register of Historic Places.

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Wilson, Neill and Frank Taylor. *Southern Pacific: The Roaring Story of a Fighting Railroad*. New York, New York: McGraw-Hill Book Co., 1952.

Yenne, Bill. *The History of the Southern Pacific.* New York: Smithmark, 1994.

Pamphlets

"Ladd & Bush Quarterly". Salem, Oregon: Ladd & Bush Bankers, 1912-1939.

"Polk County Centennial". Dallas, Oregon: Polk County Itemizer-Observer, 1947.

"Polk County Centennial". Dallas, Oregon: Polk County Itemizer-Observer, 1993.

Newspapers

"Daily Oregon Statesman", Salem Oregon
May 9, 1912
May 11, 1912
August 3, 1912
October 13, 1912
October 26, 1912
December 26, 1912
January 1, 1913
January 22, 1913
March 1, 1913
March 2, 1913
March 5, 1913
March 15, 1913
April 11, 1913
April 26, 1913
April 30, 1913

Reports

HDR Engineering, *Field Inspection and Condition Report – Union Street Railroad Bridge (Rails to Trails Conversion), Key Number 11085*, Portland, Oregon, HDR Corporation 2005

Drawings

Copies of some original design and shop drawings are held by City of Salem Urban Renewal Agency, Salem, Oregon

10. Geographical Data

Acreage of Property less than one

UTM References
(Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing
1	10	496777	4976871
2			
3			
4			

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet)

11. Form Prepared By

name/title David Skilton, Virginia Green, and Sarah Jalving

organization Salem Urban Development Department date November 18, 2005

street & number 350 Commercial Street NE, telephone 503-588-6178 x7548

city or town Salem state OR zip code 97301

Additional Documentation

Submit the following items with the completed form:

Continuation sheets

Maps: A USGS map (7.5 or 15 minute series) indicating the property's location.
A sketch map for historic districts and properties having large acreage or numerous resources.

Photographs: Representative black and white photographs of the property.

Additional items (check with the SHPO or FPO for any additional items)

Property Owner

name City of Salem, Oregon, Urban Renewal Agency

street & number 350 Commercial Street SE telephone 503-588-6178

city or town Salem state OR zip code 97301

National Register of Historic Places Continuation Sheet

Section number 10 Page 1

Boundary Description: One (1) steel bridge (approximately 725' in length) and timber trestle (approximately 860' in length) crossing the Willamette River and Wallace Marine Park and including all support structures and appurtenances thereto, and located in the City of Salem, Marion and Polk Counties, Oregon, in the general location shown on the attached map issued by the Union Pacific Railroad Company and dated April 22, 2004.

Boundary Justification: The boundary selected reflects the boundary historically used by the railroad owners and public agencies to describe the structure. Note that the bridge and trestle are not considered real property.

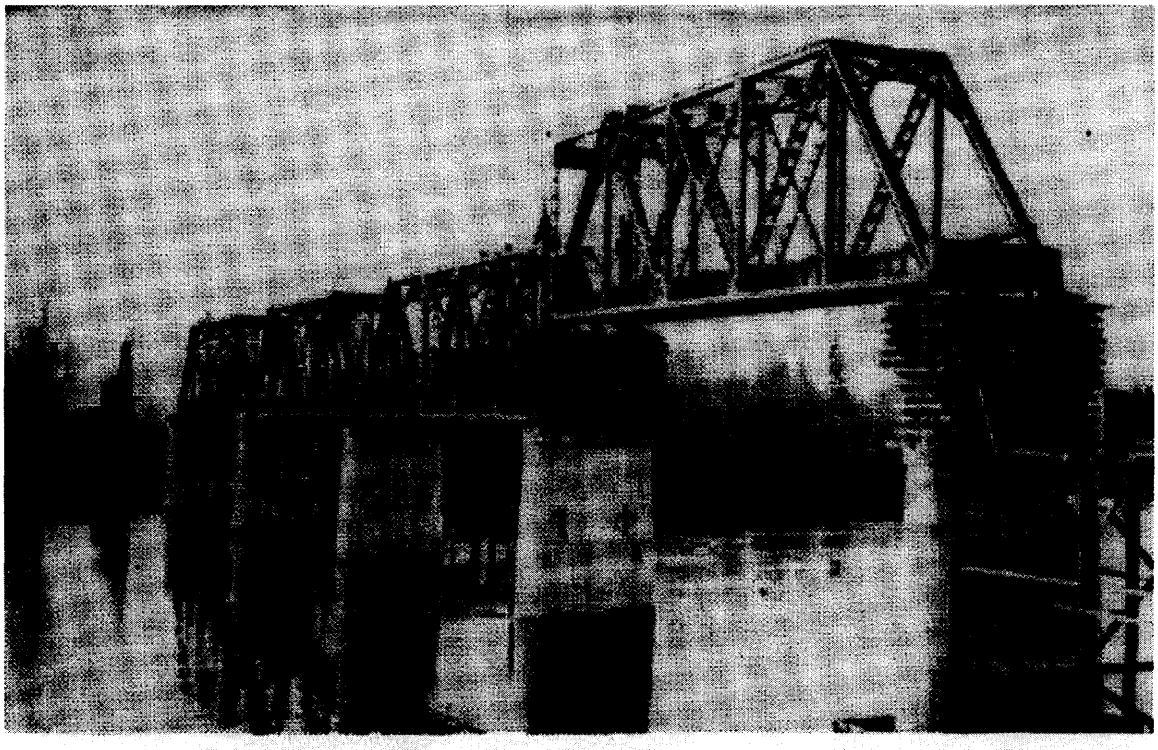
Union Street Railroad Bridge and Trestle,
Salem, Marion and Polk Counties, Oregon

Photo List (all images share the following information)

Subject:	Union Street Railroad Bridge and Trestle
Site Address:	Intersection of Union Street NE and Water Street NE
Location:	Salem, Marion and Polk Counties, Oregon
Photographer:	David Bogan, Oregon Parks and Recreation Department
Address:	725 Summer Street NE, Suite C, Salem Oregon 97301
Date:	June 23, 2005

1. Bridge from centerline of Union Street NE, looking west-northwest.
2. Bridge from east bank, looking northwest.
3. Bridge from Marion Street Bridge (Hwy 22), looking north.
4. Bridge from west bank, looking east.
5. Bridge connection to trestle, looking northwest.
6. Trestle from park roadway, looking east.
7. Typical transverse view of trestle, looking north-northeast.
8. Trestle from park roadway, looking west.
9. West end of trestle at embankment, looking northwest.
10. Lift span from Marion Street Bridge (Hwy 22), looking north.
11. Eastern lift tower, looking north.
12. Western lift tower, looking north.
13. Detail of lift mechanism, looking north.
14. Pier 1, looking northwest.
15. Pier 2, looking northeast.
16. Pier 4, looking north.
17. Truss detail, from below.

Construction of bridge (note pile driver working on trestle, left), Autumn of 1912.



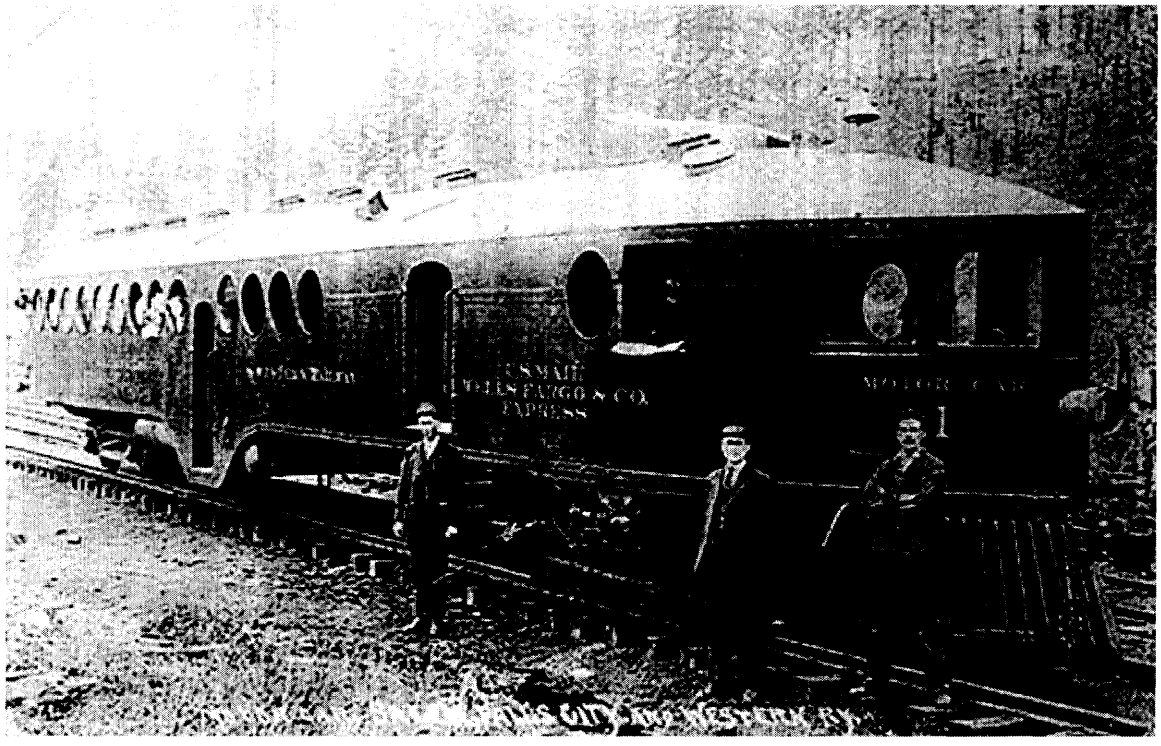
Railroad bridge spanning the Willamette under construction in 1912

Celebration of arrival of the "first" train in Salem,
March 15, 1913.

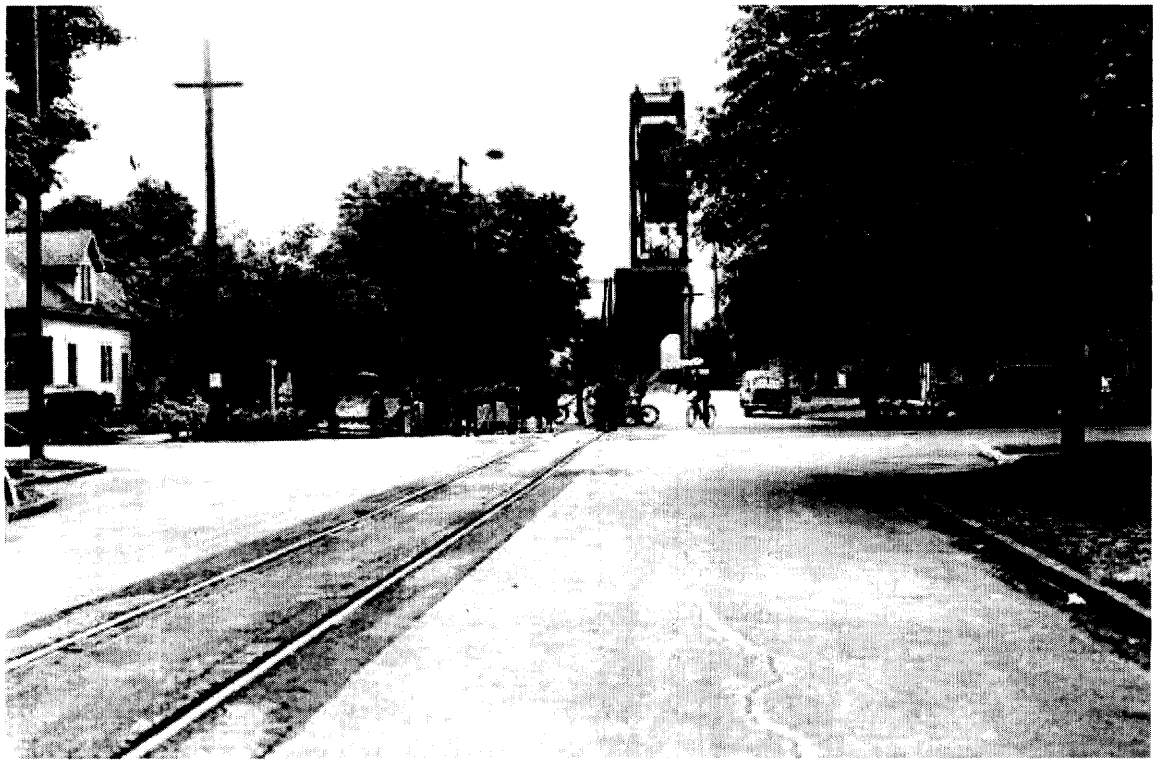
The sternwheeler *Grahamoma* passing under the raised lift span, Circa 1915.

McKeen motor passenger car (gasoline powered) on bridge,
Circa 1925.

SFC&W Railroad McKeen Car and Crew
Circa 1925

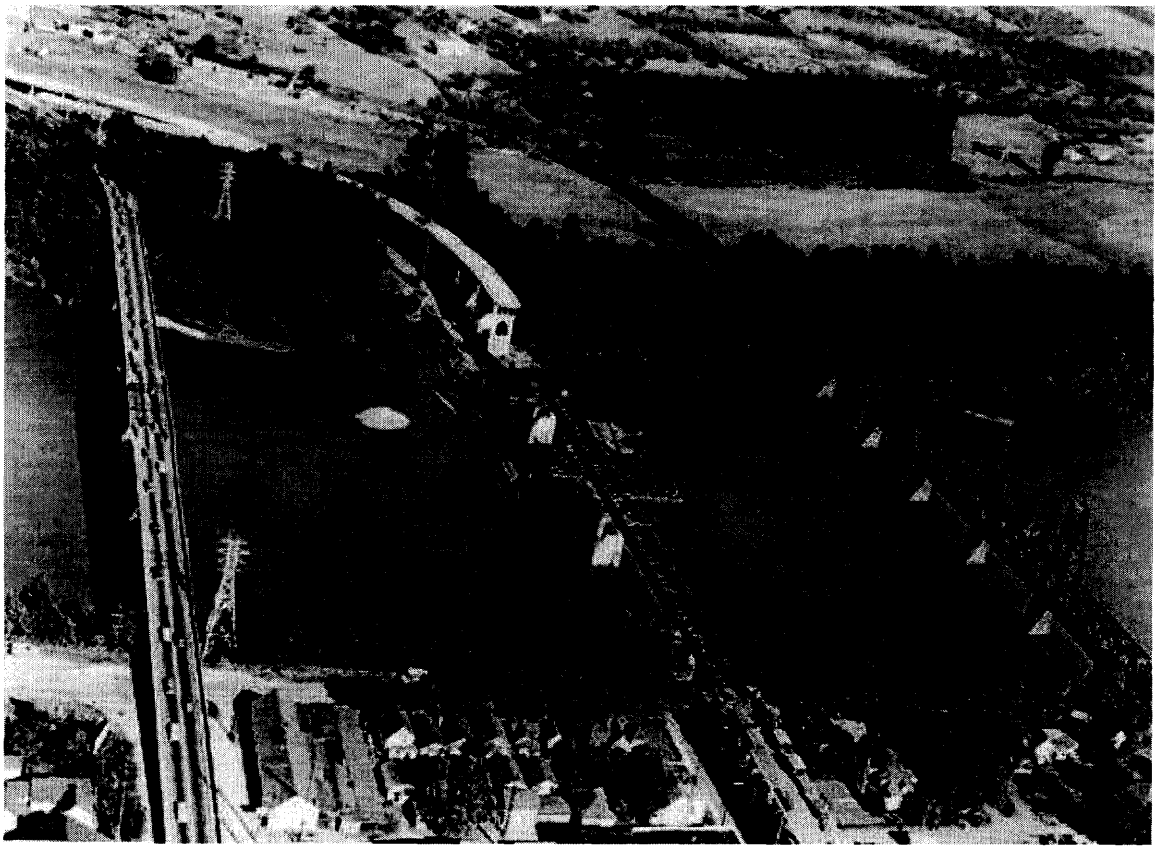


Bridge and tracks, from intersection of Union and Commercial Streets, Circa 1945.

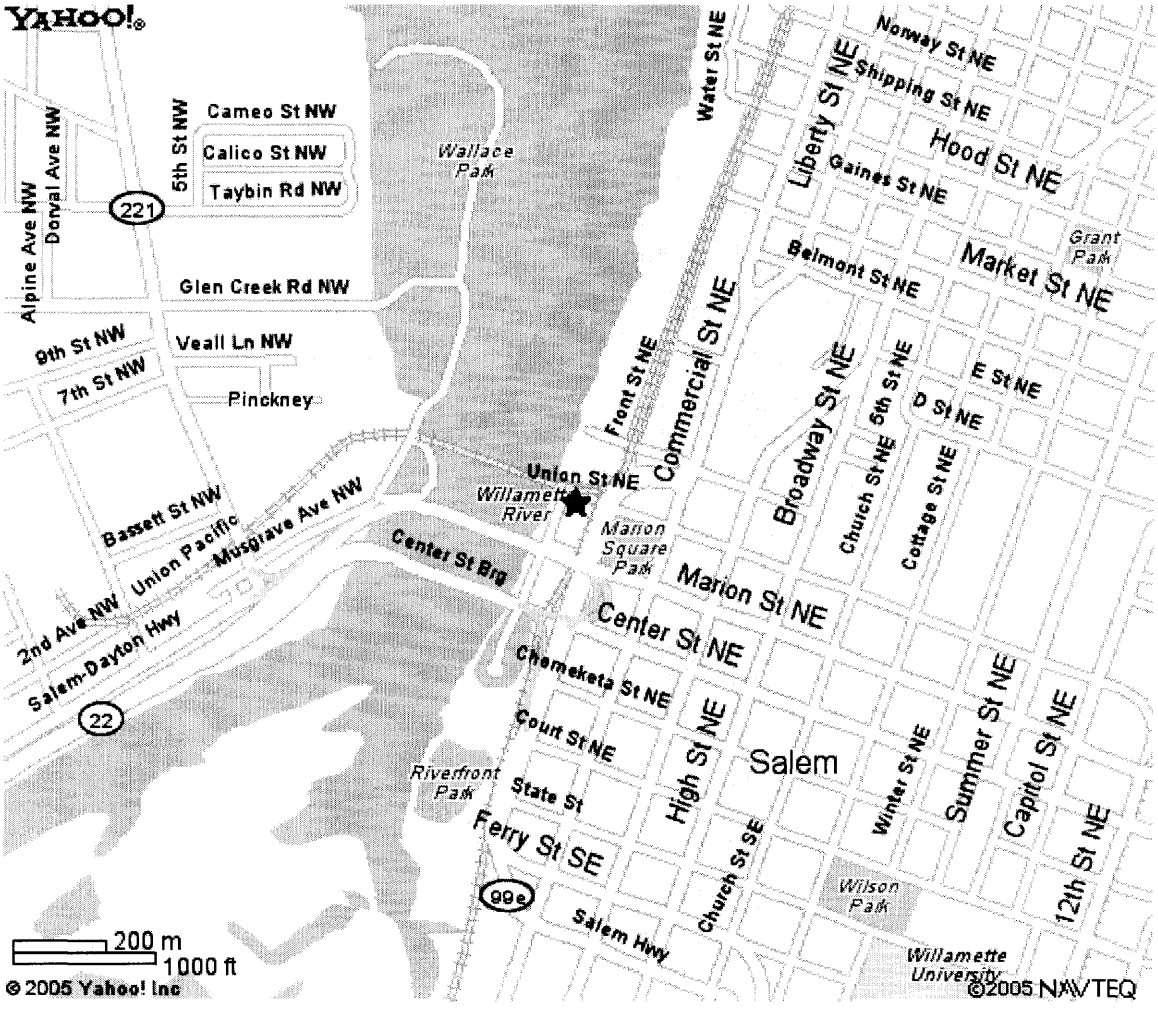


Flood refugees from West Salem leaving train at intersection of Front and Union Streets, January 1948.

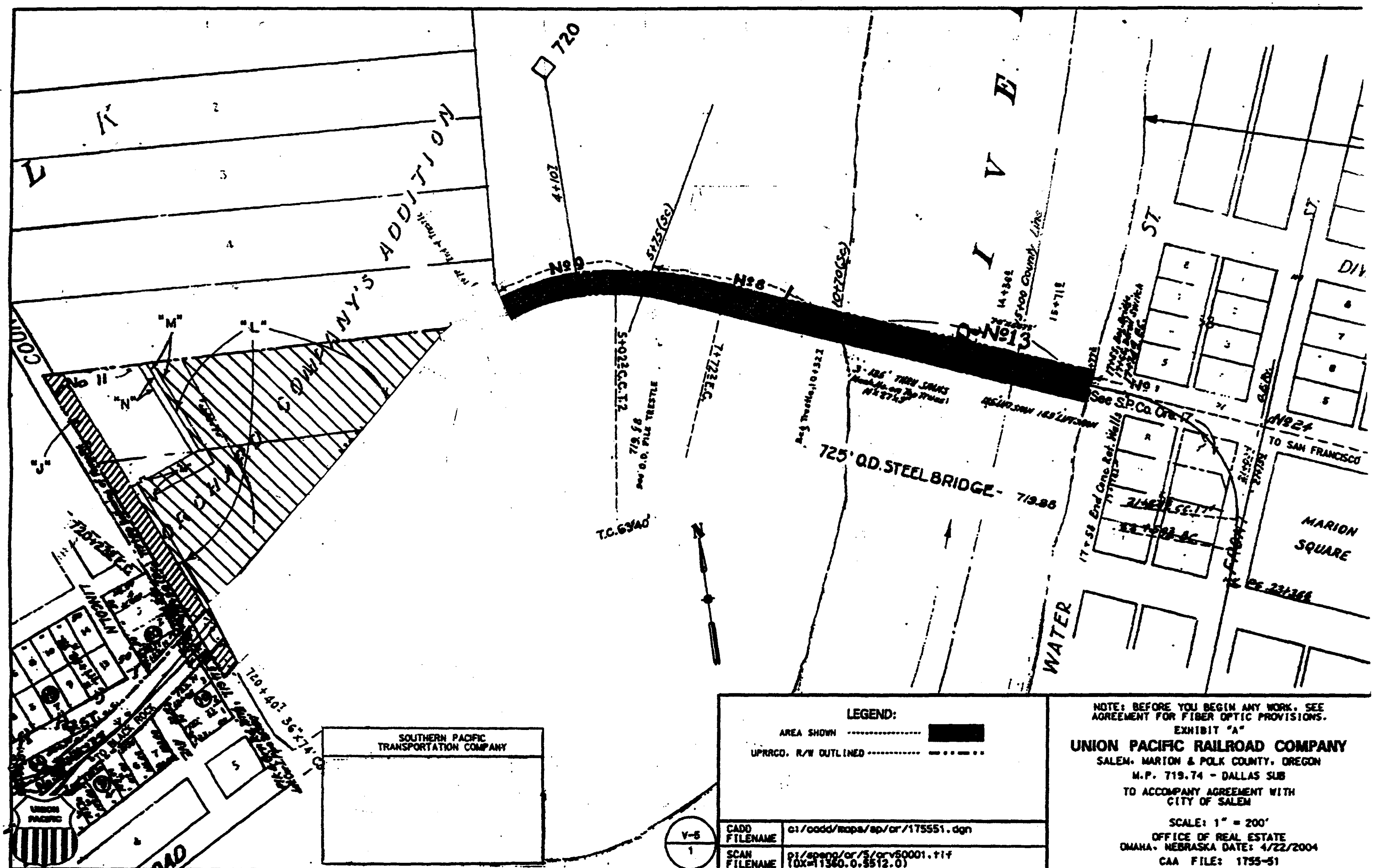
Aerial photograph showing construction of Marion Street Bridge, Summer of 1952.



Floodwaters from east end of bridge,
December 1964.



Union Street Railroad Bridge and Trestle, Salem, Marion and Polk Counties, Oregon



LEGEND:

AREA SHOWN

UPRRCO. R/W OUTLINED

CADD FILENAME: c:/cadd/maps/sp/or/175551.dgn

SCAN FILENAME: p:/speng/or/5/orv50001.tif (OX=11360.0.5512.0)

NOTE: BEFORE YOU BEGIN ANY WORK, SEE AGREEMENT FOR FIBER OPTIC PROVISIONS.

EXHIBIT "A"

UNION PACIFIC RAILROAD COMPANY

SALEM, MARION & POLK COUNTY, OREGON

M.P. 719.74 - DALLAS SUB

TO ACCOMPANY AGREEMENT WITH CITY OF SALEM

SCALE: 1" = 200'

OFFICE OF REAL ESTATE
OMAHA, NEBRASKA DATE: 4/22/2004

CAA FILE: 1755-51