Bridge Renewal
Over
Coyote Creek
Near Wayne, Cal.
1900.
Central Pacific Railroad.
San Jose Branch.
Western Div.
Old Structure Looking Northwest.
New Structure Looking Northwest.
New Structure Looking Southwest.
Bridge Renewal - Coyote Creek near Wayne-1900.
Central Pacific Railroad - San Jose Branch.


Piers: -
Piers (Nos. 1 to 7) - Concrete abutments resting on clay, well below line of possible scour - plastered above ground with mixture of one part cement to two parts of sand.
2,3,4,5,6 - Concrete on untreated piles, cut off five feet below low water line.
Coping - Quarry-faced granite from Rocklin, rough-pointed on joints and top, pedestal seats pear-hammered. Coping set with traveling crane.
Concrete: - Mixed by Drake's Concrete Mixer. In the case of Piers 6 & 7, it was carried in wheelbarrows up runways from the mixing platform on East bank of stream and dumped. It was carried to the rest of the piers by the traveling crane, being raised from the mixing platform in coal buckets and dumped from them. Crushed or broken rock from Tolson, sand and gravel from Niles, cement K.B.S. brand. Proportions are:
Broken rock 35%, sand and gravel 49%, cement 16%.

Miscellaneous: - This bridge was built on same line as the old one, the grade being raised 3' feet. Falsework consisted of standard 4-pile bents - 12 feet center to center. Piles were driven and capped, and the members of the upper chords of the old bridge used as stringers, the old spans being taken down by means of a mast and beam attached to the pile driver. After the piers had been completed, the girders were placed on skids on the ends of the piers, by means of the pile driver, the floor system of the falsework removed, the girders skidded into position, and the floor system replaced, the moving of the floor-system and the final placing of the girders being accomplished after the last evening train had passed and requiring only six hours time.
The siding at Wayne, one-half mile distant, was used for storage purposes.

Old Structure: - Consisted of 4-64" stringing beam spans on concrete abutments and framed piers with pile foundations, and 74-1/2" old three-stringer trestle - East approach.
<table>
<thead>
<tr>
<th>ITEMS</th>
<th>Cost</th>
<th>Item of Unit</th>
<th>ITEMS</th>
<th>Cost</th>
<th>Item of Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOUNDRATION</td>
<td>$1,000</td>
<td>Total</td>
<td>FLOOR SYSTEM</td>
<td>$1,000</td>
<td>Total</td>
</tr>
<tr>
<td>Concrete</td>
<td>$2,500</td>
<td>Total</td>
<td>Painting</td>
<td>$2,500</td>
<td>Total</td>
</tr>
<tr>
<td>Casing</td>
<td>$1,000</td>
<td>Total</td>
<td>False Work</td>
<td>$1,000</td>
<td>Total</td>
</tr>
<tr>
<td>Miscel. Items</td>
<td>$1,500</td>
<td>Total</td>
<td>Miscel. Items</td>
<td>$1,500</td>
<td>Total</td>
</tr>
</tbody>
</table>

### STEEL SPAN
- **Phoein Rive Bill**
  - $1,000
- **Eastern Freight**
  - $1,000
- **Ex. Material Work Travers**
  - $1,000
- **Labor eractieng**
  - $1,000
- **Total**
  - $1,000

### FLOOR SYSTEM
- **3444 sq.ft.**
  - Material Labor Total
  - $1,000
- **Concrete**
  - $1,000
- **Casing**
  - $1,000
- **Total**
  - $1,000

### PAINTING
- **Material Labor Total**
  - $1,000

### FLOOR SYSTEM
- **3444 sq.ft.**
  - Material Labor Total
  - $1,000

### Miscel. Items
- **Freight Material Labor Total**
  - $1,000

### Grand Total
- **Material Labor Total**
  - $1,000

### Description:
- 6-strt single track steel deck plate girder spans
- *Coyote Creek* Bridge Co. Mls.
Notes:—
47 cu. yds. of the excavation was concrete from the old pier, which had to be removed by blasting. The balance—shift clay—was partly removed by shovel and partly in coal buckets by means of the derrick. The water was boiled out by heat.

Quantities:

Concrete: 204.6 cu. yds.
Broken Rock: 100.1 cu. yds.
Sand and Gravel: 12.3 cu. yds.
Cement in Concrete: 298.5 lb/feet.
Plastering: 359 yds.
Setting Coping: 50 yds.
Coping Stone: 7.96 yds.
Excavation above water: 375 yds.
Excavation below water: 80 yds.
Backfilling: 200 yds.
Lumber in form: 1384 ft.

Coyote Creek Bridge
near Wayne—San Jose Branch
Pier No. 1
Scale: 1" = 10 ft.
June 1900
F.R.B.
Notes:

Piers 2, 3, 4, 5 & 6 are alike and the quantities given are an average for any one of them. With the exception of pier 6, all required caissons in building. The two caisson piles were first driven by large driver from the bridge and then the caisson piles and sheet piling by small hand driver below. After the caisson was in place, excavation was carried on inside by shovel, the water being kept down by the 8 cent. sub-slug pump.

In the case of piers 4 & 6, excavation was through stiff blue clay. At pier 6, part of an old concrete pier had first to be removed by blasting. Piers 2 & 3 had a two foot stratum of gravel underlying the clay.

Quantities:

- Concrete: 78.72 cu. yds.
- Broken Block: 38.5 -
- Sand and Gravel:
  - Cement in concrete: 97.4 -
  - Plastering: 99.6 lbs.
  - Setting coping: 1.6 -
  - Casing stone: 2.87 cu. yds.
- Excavation above water:
  - Below: 14.6 cu. yds.
- Backfilling:
  - Timber in caisson—diameter: 3800 ft. 8 M.:
    - 117.02 ft. 8 M.:
    - 11 Piles: total length 271 ft. 8 M.:
  - Dead load on pier: 25.0 tons
  - Live: 102.4 -
  - Weight of casing and concrete: 146.5 -
  - Total weight on piles: 223.9 -
  - Maximum load per pile: 29.9 -
  - Safe load allowable (safety factor 2): 35.5 -

Coyote Creek Bridge

near Wayne--San Jose Branch

Piers 2, 3, 4, 5 & 6.

Scale: 1 inch = 20 ft.

June 1900

F.B. H.
Notes:
Excavation was through stiff clay by shovel. Part of the water was removed by the centrifugal pump and part by bailing.

Quantities:

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>139.9 cu. yds.</td>
</tr>
<tr>
<td>Broken Rock</td>
<td>89.0</td>
</tr>
<tr>
<td>Sand and Gravel</td>
<td>84.3</td>
</tr>
<tr>
<td>Cement in Concrete</td>
<td>170.0 bbls.</td>
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<tr>
<td>Plastering - 33.8 sq. yds</td>
<td>6.6</td>
</tr>
<tr>
<td>Setting coping</td>
<td>5.0</td>
</tr>
<tr>
<td>Coping Stone</td>
<td>6.58 cu. yds.</td>
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<tr>
<td>Excavation above water</td>
<td>21.0</td>
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<tr>
<td>Below</td>
<td>22.0</td>
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<tr>
<td>Backfilling</td>
<td>125.0</td>
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<tr>
<td>Lumber in form - 12 ft. 10 in.</td>
<td>1900</td>
</tr>
<tr>
<td></td>
<td>(63 ft 9 in.)</td>
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</tbody>
</table>

Coyote Creek Bridge
near Wayne - San Jose Branch
Pier No. 7
Scale – 1/8" = 1'
June 1900
F.H.B.