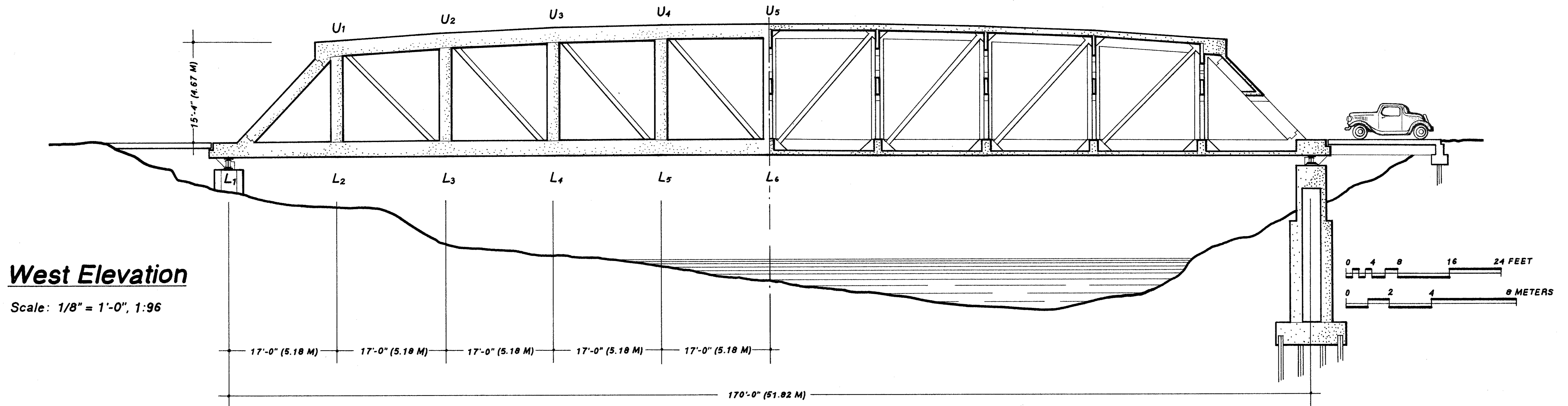


McMILLIN BRIDGE

PUYALLUP RIVER 1934 WASHINGTON



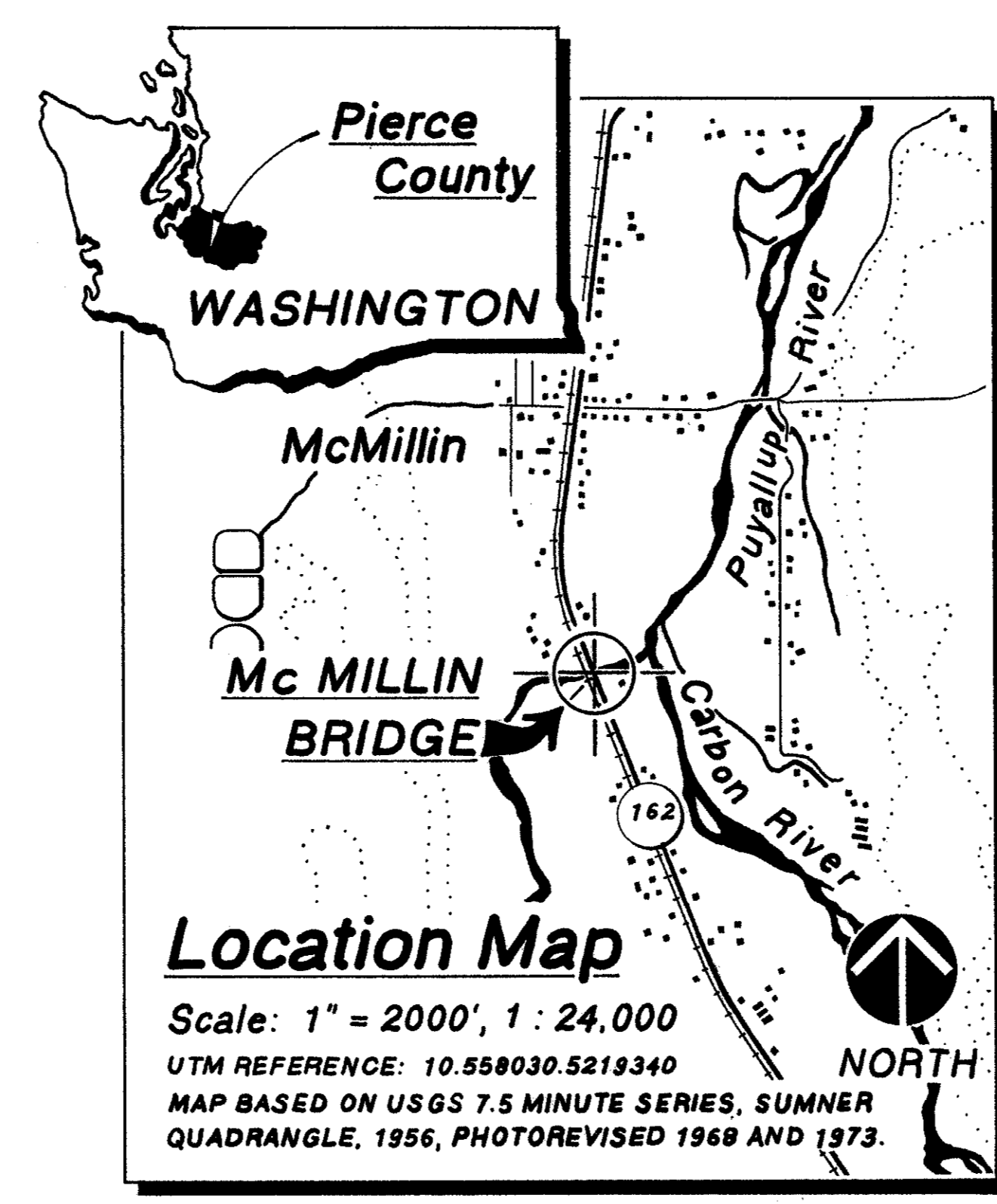
The McMillin Bridge was built by Pierce County beginning in 1934. It replaced a steel truss span of the same name and location, damaged by flooding of the Puyallup River. Similar to its predecessor, the new bridge employed a through-truss type, enabling it to accommodate the largest practical waterway. This required its width and length to increase.

This reinforced concrete design was chosen over alternate bids for structural steel trusses because of its inherent maintenance advantages and lower cost due in part to the simplicity of its construction. The resulting Pratt truss bridge consisted of a 170-foot span with two 20-foot approaches. "Double trusses" flanking the 24-foot wide road deck creates covered walkways for pedestrians. The breadth of these paired trusses affords the structure its

great stiffness, therefore eliminating the need for lateral bracing over the roadway.

At the date of its completion the McMillin Bridge was recognized as the longest reinforced concrete span exclusive of arches in the country. It is significant regionally as well as nationally because the structural properties of concrete make it an unusual material choice for truss construction.

Homer M. Hadley, regional structural engineer of the Portland Cement Association conceived the Mc Millin's design. However, W.H. Witt Company of Seattle prepared the construction documents that were executed by general contractor Dolph Jones of Tacoma. The project was supervised by Pierce County engineer W.E. Berry and his successor Forest R. Easterday.

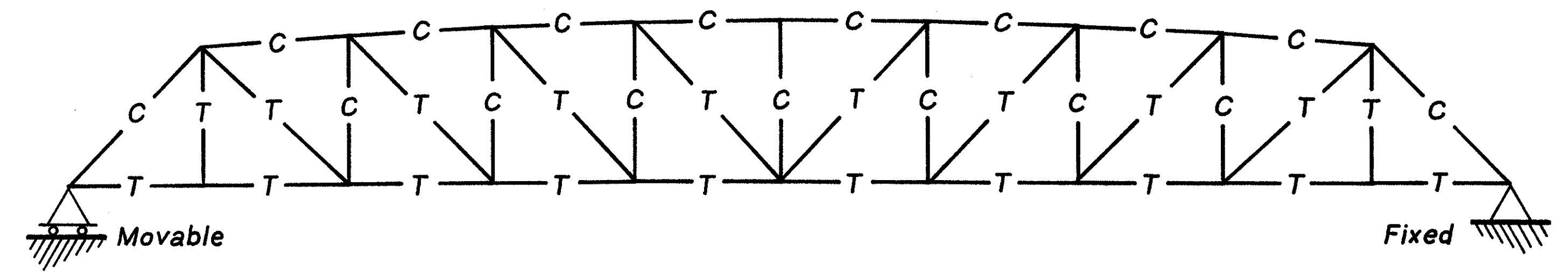
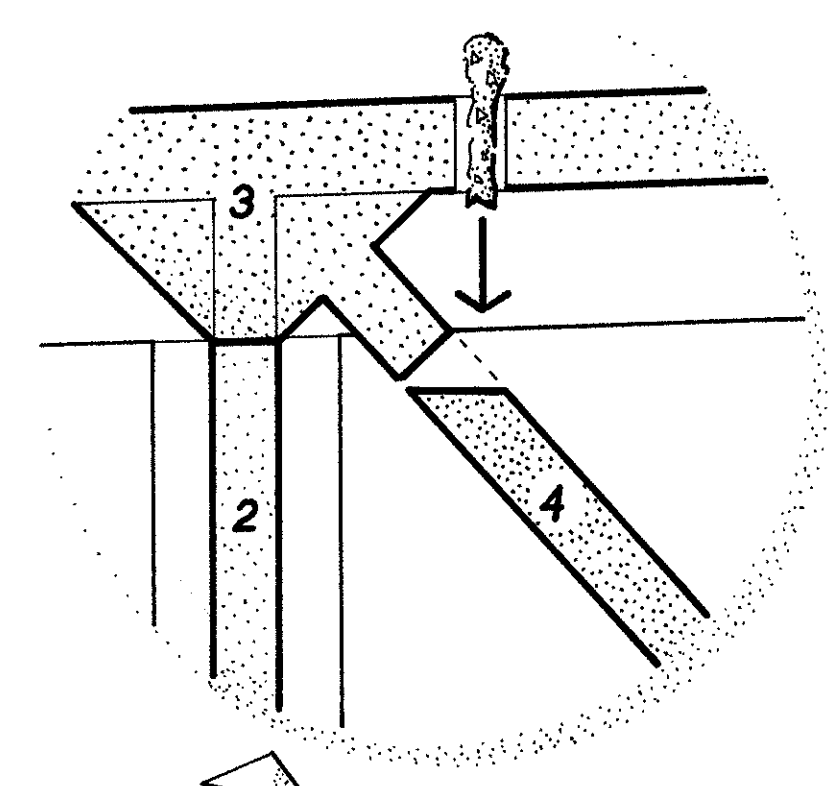
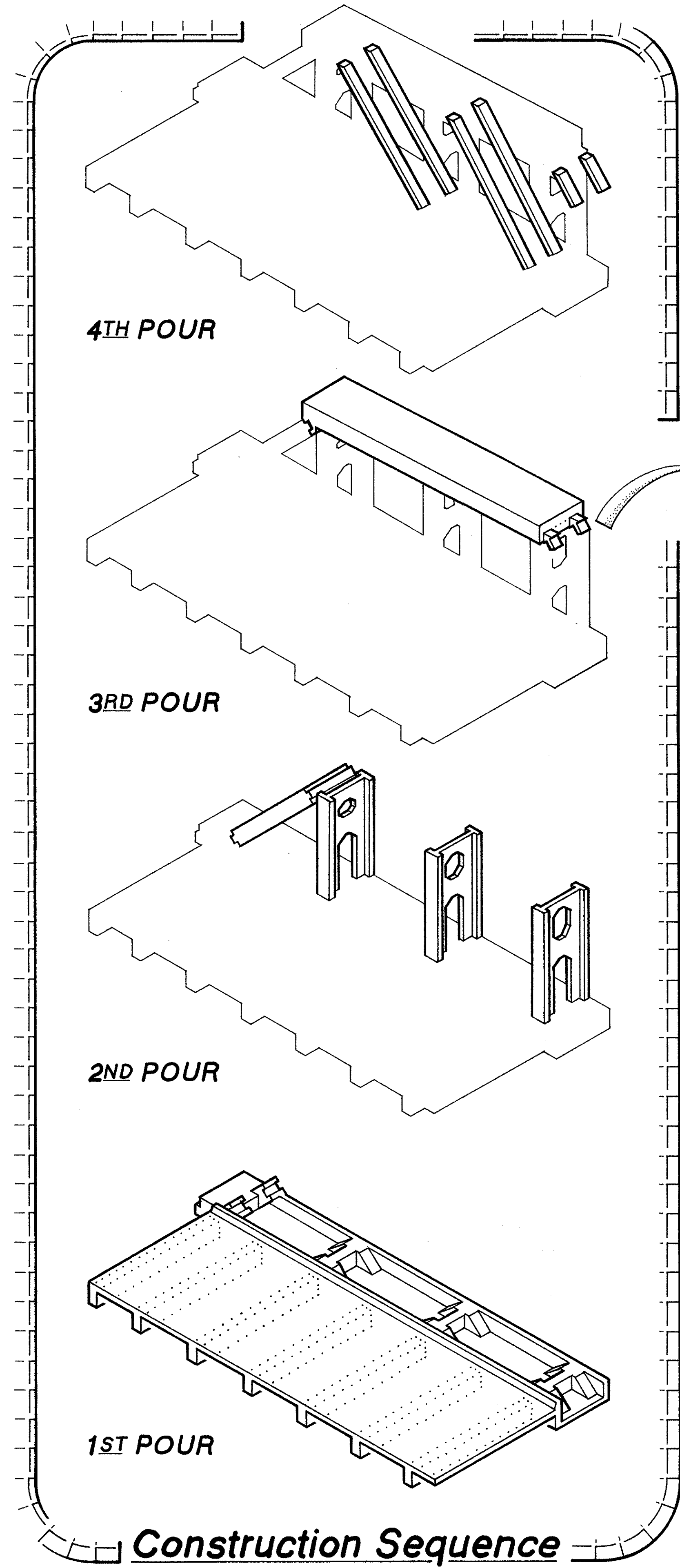


This recording project is part of the Historic American Engineering Record (HAER), a long-range program to document historically significant engineering and industrial works in the United States. The HAER program is administered by the Historic American Buildings Survey/Historic American Engineering Record Division (HABS/HAER) of the National Park Service, U.S. Department of the Interior. The Washington State Bridges Recording Project was cosponsored during the summer of 1993 by HABS/HAER under the general direction of Dr. Robert J. Kapsch, Chief, and by the Washington State Department of Transportation (WSDOT), Bernie L. Chaplin, Environmental Program Manager.

The field work, measured drawings, historical reports, and photographs were prepared under the direction of Project

Leader Eric N. DeLony, Chief of HAER and HAER Historian Dean A. Herrin, Ph.D. The recording team consisted of Supervisory Architect Karl W. Stumpf (University of Illinois at Urbana-Champaign); Supervisory Historian Robert W. Hadlow, Ph.D. (Washington State University); Architects Vivian Chi (University of Maryland), Erin M. Doherty (Miami University), Catherine I. Kudlik (The Catholic University of America) and Wolfgang G. Mayr (US/ICOMOS, Technical University of Vienna, Austria); Historians Jonathan C. Clarke (US/ICOMOS, Ironbridge Institute, England) and Wm. Michael Lawrence (University of Illinois at Urbana-Champaign). Formal photography was done by HAER Photographer Jet Lowe. WSDOT Cultural Resources Specialist Elizabeth A. Robbins served as department liaison.

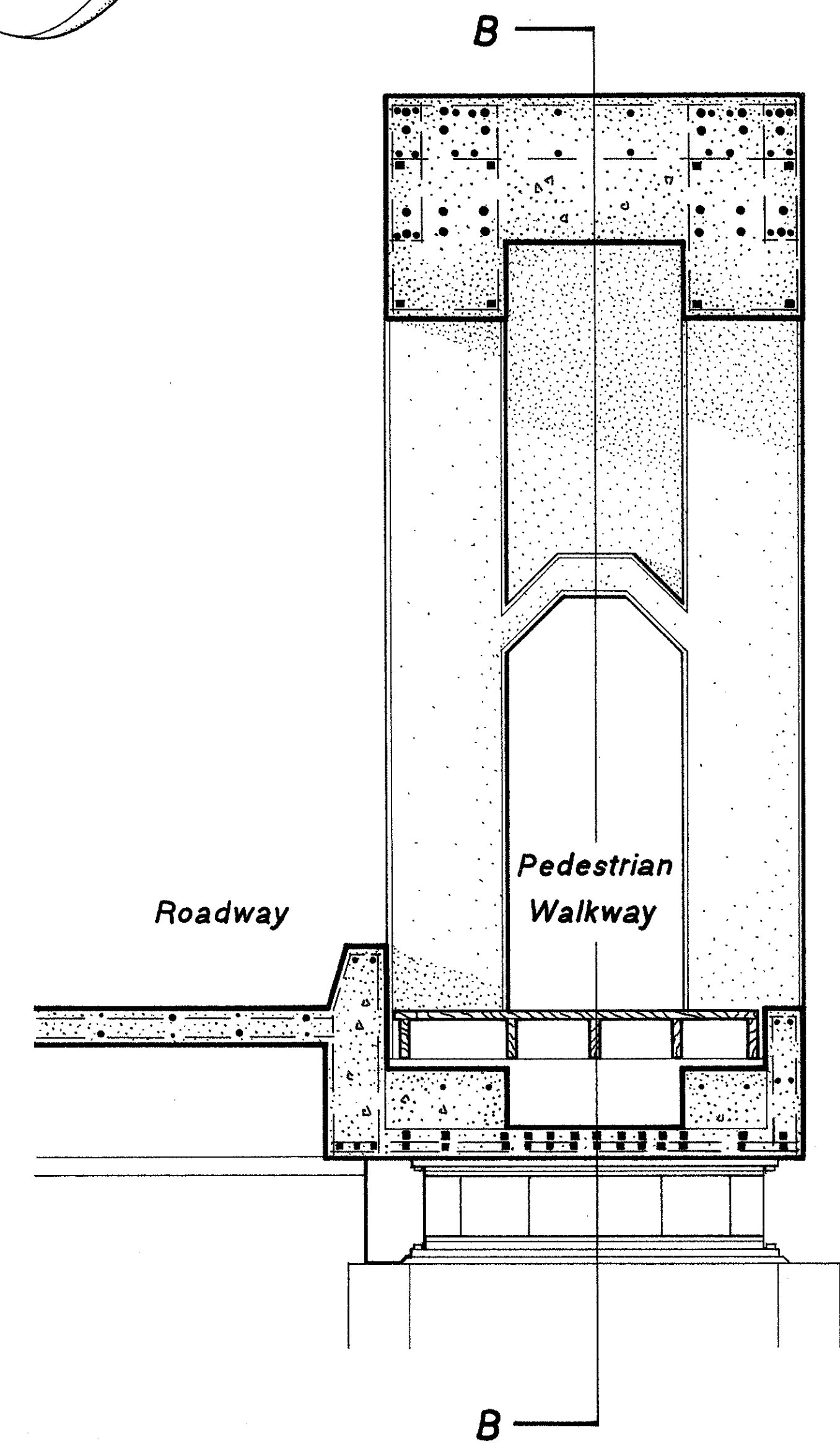
HISTORIC AMERICAN ENGINEERING RECORD
 SHEET 1 OF 3
 WASHINGTON
 STATE ROUTE 162 SPANNING THE PUYALLUP RIVER, 0.8 MILES SOUTH OF MC MILLIN
 PIERCE COUNTY
 MC MILLIN BRIDGE - 1934
 DELINEATED BY: Erin M. Doherty, Summer 1993
 WASHINGTON STATE BRIDGES RECORDING PROJECT
 UNITED STATES DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF THE DRAWING
 WA-73



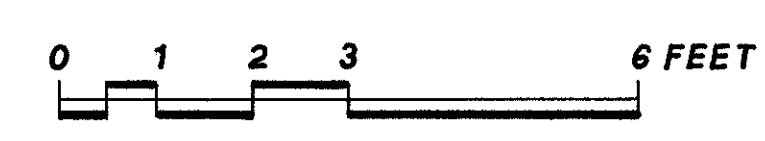
Structural Diagram
No Scale

T = Tension
C = Compression

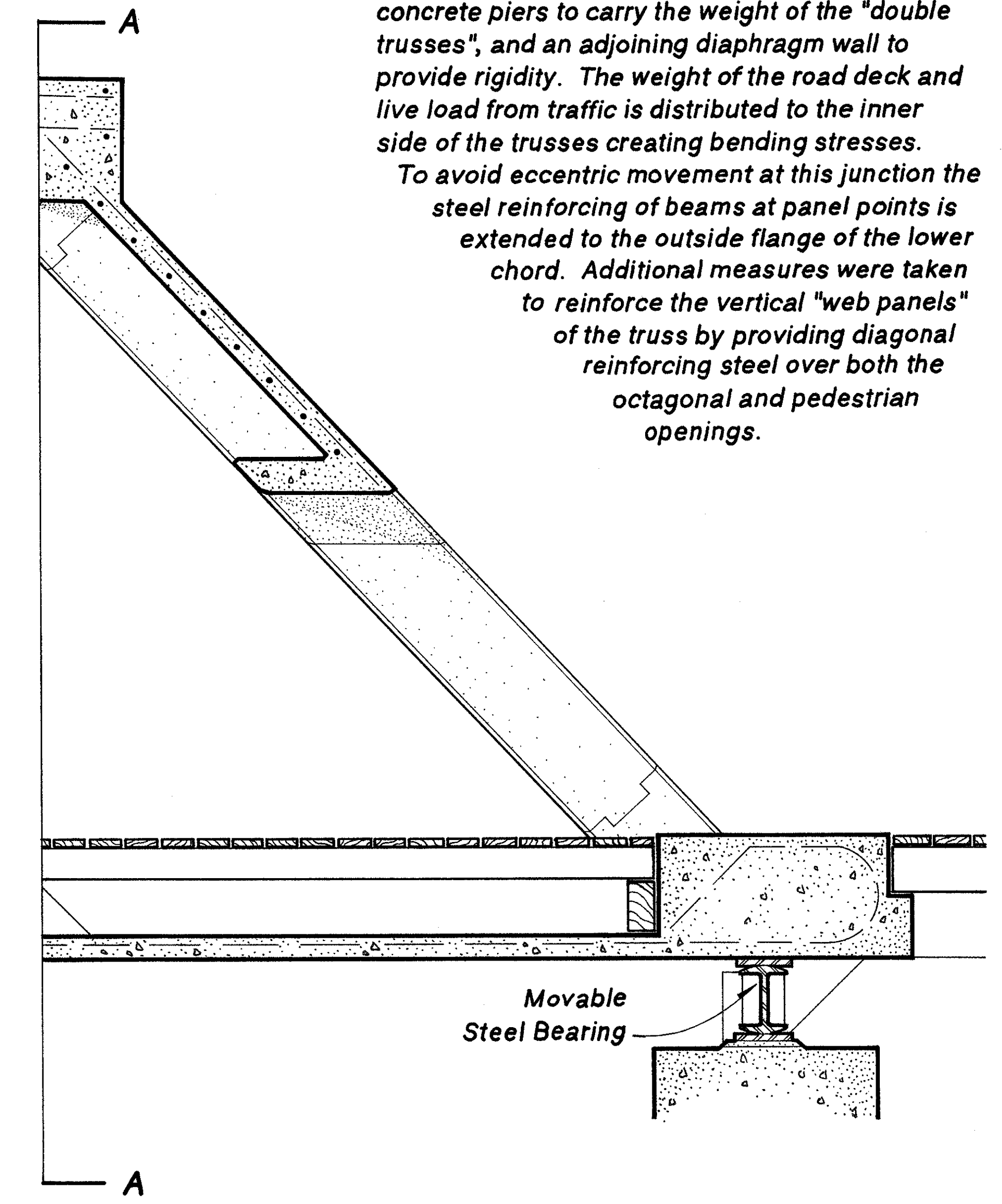
Through Pratt truss configuration
with curved upper chord



Section 'A' - Transverse at Endpost



Scale: 1/2" = 1'-0", 1:24



Section 'B' - Longitudinal at Endpost



The foundation at each end of the bridge has two concrete piers to carry the weight of the "double trusses", and an adjoining diaphragm wall to provide rigidity. The weight of the road deck and live load from traffic is distributed to the inner side of the trusses creating bending stresses. To avoid eccentric movement at this junction the steel reinforcing of beams at panel points is extended to the outside flange of the lower chord. Additional measures were taken to reinforce the vertical "web panels" of the truss by providing diagonal reinforcing steel over both the octagonal and pedestrian openings.

DELINEATED BY: Erin M. Doherty, Summer 1993

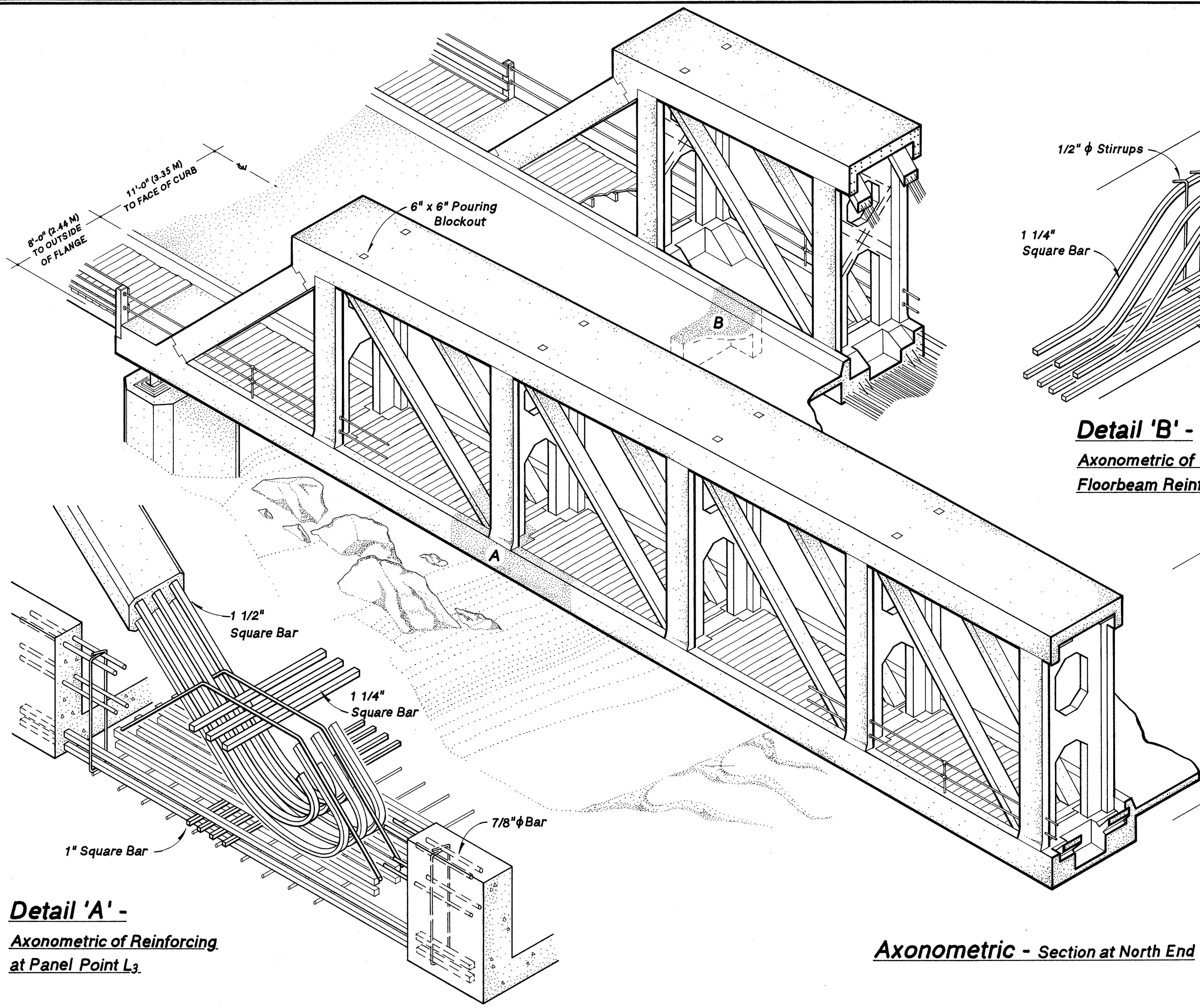
WASHINGTON STATE BRIDGES
RECORDING PROJECT
UNITED STATES DEPARTMENT OF THE INTERIOR

MC MILLIN
STATE ROUTE 162 SPANNING THE PUYALLUP RIVER, 0.8 MILES SOUTH OF MC MILLIN WASHINGTON
PIERCE COUNTY

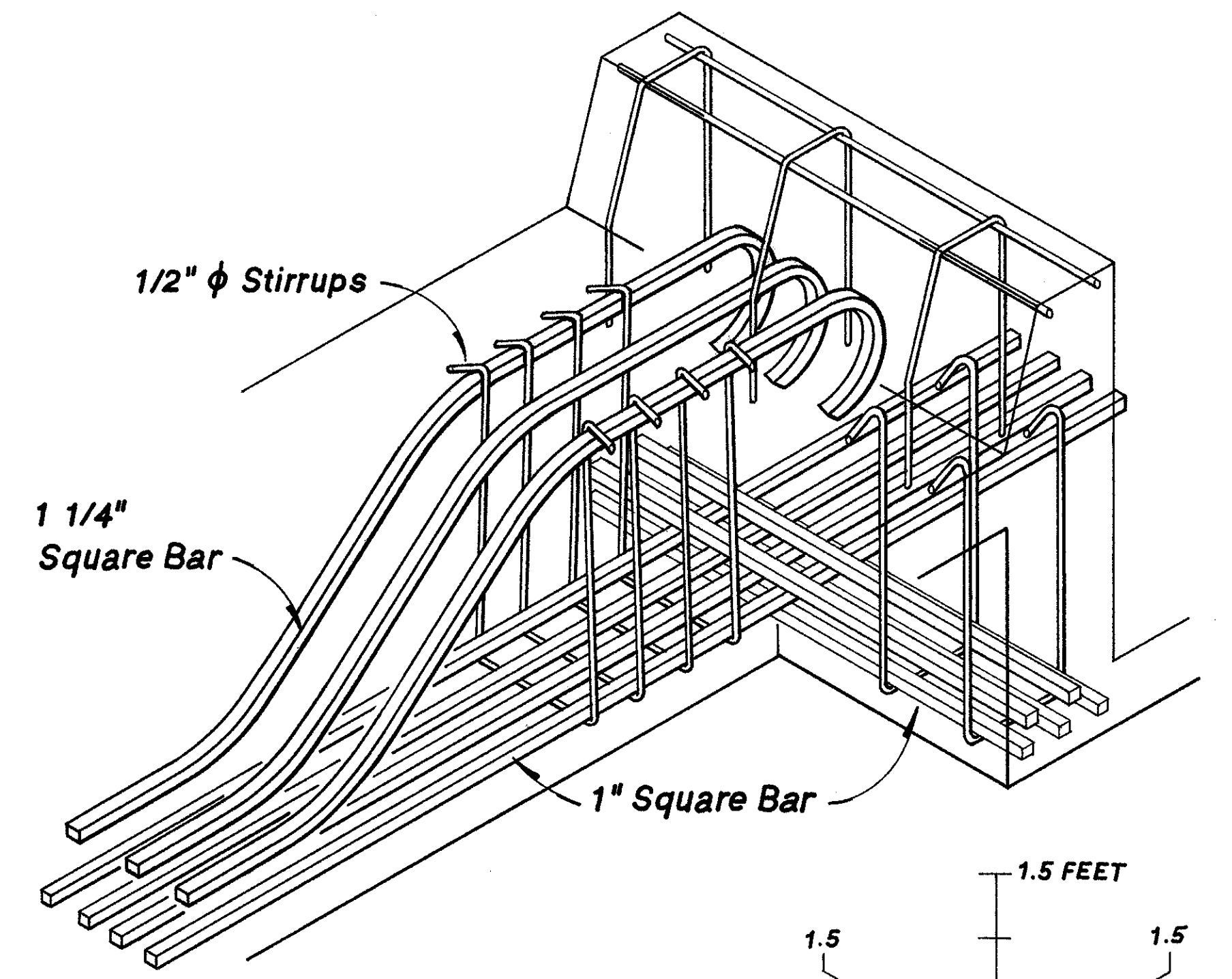
HISTORIC AMERICAN
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WA - 73

SHEET
2 of 3

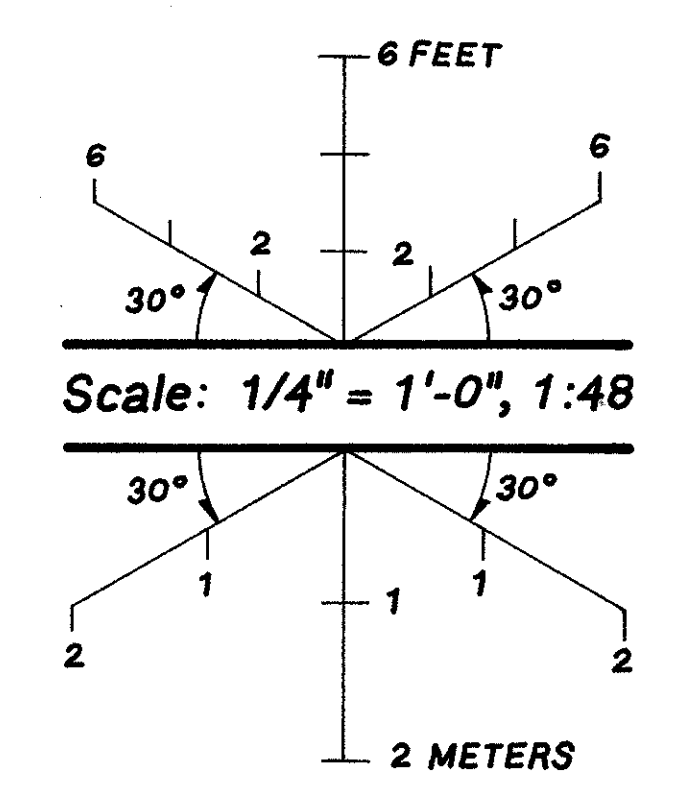
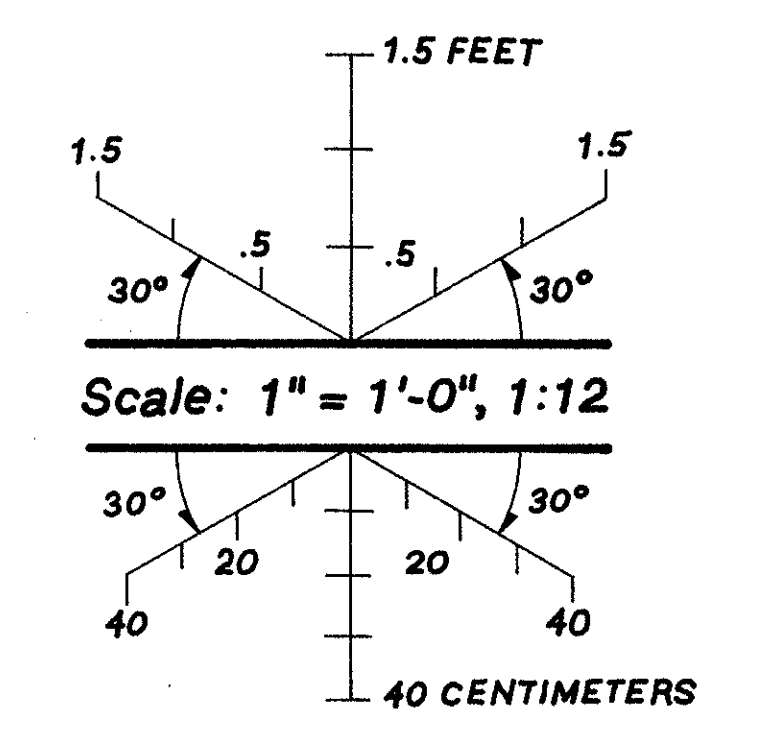
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Detail 'A' -
Axonometric of Reinforcing
at Panel Point L₃



Detail 'B' -
Axonometric of Typical
Floorbeam Reinforcing



Axonometric - Section at North End

DELINEATED BY: **Erin M. Doherty, Summer 1993**
 WASHINGTON STATE BRIDGES
 RECORDING PROJECT
 UNITED STATES DEPARTMENT OF THE INTERIOR

MC MILLIN BRIDGE - 1934
 STATE ROUTE 162 SPANNING THE PUYALLUP RIVER, 0.8 MILES SOUTH OF MC MILLIN
 WASHINGTON
 PIERCE COUNTY

HISTORIC AMERICAN
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 SHEET 3 OF 3

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