NPS Form 10-900-a (7-81)

### **United States Department of the Interior** National Park Service

## **National Register of Historic Places Inventory**—Nomination Form

**Continuation sheet** Wyoming Vehicular Bridges 7 Item number

USGS Weintz Draw 75' guadrangle UTM:

For vehicular spans in the 80'-100' range an early 20th century alternative to the straight chorded Pratt pony truss was the Camelback pony. Ten rigid-connected Camelback ponies still function in the county road systems; all of those traceable have been erected by one bridge company, the Monarch Engineering Company of Denver. One Camelback pony - the oldest and one of the longest - has been selected from this group.

County Line Bridge Big Horn County (over Nowood River) EJP erection date: 1917 contractor; Monarch Engineering Company Denver span length: 100'0" abutments: timber retaining w/ steel pilings 102'0" total length: piers: none roadway width: 14'11" roadway: timber stringers and decking span type: approaches: simple none Single-span, steel rigid-connected 5-panel Camelback pony truss top chords: two channels w/ cover plates and lacing; bottom chords: two channels w/ batten plates; verticals: four angles w/ lacing; diagonals: two angles w/ batten plates; angle guardrails. Big Horn County Road CN9-60 milepost: 0.4 6.8 miles southwest of Hyattville T49N, R90W, S32.

A notable subtype of the Parker truss design is the Pennsylvania truss, named after the Pennsylvania Railroad which used it extensively. With the diagonals braced by sub-struts or sub-ties, the Pennsylvania represented a strengthening of the basic Parker configuration. It has been used primarily as a railroad bridge, with less usage as a vehicular truss. Nevertheless, four Pennsylvania trusses - two rigidconnected with sub-struts and two pin-connected with sub-ties - are found in the survey; all are included in this nomination.

CQA Four Mile Bridge Hot Springs County (over Big Horn River) erection date: 1927-28 contractor: Charles M. Smith Thermopolis Wy. span length: 175'0" abutments: concrete retaining w/ sweptback wings total length: 295'0" piers: concrete solid shaft roadway: roadway width: 20'0" steel stringers w/ concrete deck span type: two 60' rigid-connected steel Warren simple approaches: (w/verticals) pony trusses Single-span, steel rigid-connected 7-panel Pennsylvania through truss w/sub-struts

top chords: two channels w/ cover plates and lacing; bottom chords: two channels w/ batten plates; verticals: rolled beams or four angles w/ batten plates; diagonals: rolled beams or two channels w/ batten plates; sub-struts: two channels w/ lacing; struts: four angles w/ lacing; sway bracing: angle; lateral bracing: two angles w/ lacing; lattice guardrail.



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CQA (continued)

Wyoming State 173

2.9 miles south of Thermopolis T42N, R95W, S13. 12.726265.4831445 USGS Wedding of Waters 7<sup>1</sup>/<sub>2</sub> quad UTM: DSD Bridge over Chevenne River Niobrara County erection date: ca. 1915 contractor: unknown 130'8" span length: abutments: concrete bent cap and full retaining 133'0" total length: piers: none roadway width: 16'6" roadway: timber decking span type: simple approaches: none Single-span, steel rigid-connected 7-panel Pennsylvania through truss w/ sub-struts top chords: two channels w/ cover plates and lacing; bottom chords: two channels w/ batten plates; verticals: two channels w/ batten plates or lacing; diagonals: two angles w/ lacing; struts, lateral and sway bracing: angle; lattice guardrail. Niobrara County Road CN14-46 milepost: 18.7 3.2 miles east of Riverview T40N, R61W, S25. USGS Riverview 7<sup>1</sup>/<sub>2</sub>' quadrangle UTM: 13.570315.4807740 ✓EDZ Irigary Bridge Johnson County (over Powder River) erection date: 1913 contractor: Canton Bridge Company Canton Ohio moved: 1963 mover: Etlin Petersen Const. Casper Wyoming 200'0" span length: abutments: concrete sills on steel piles total length: 283'0" steel pile bents w/ concrete caps piers: 14'2" roadway width: roadway: timber decking 39'4" steel girders span type: simple approaches: Single-span, steel pin-connected 10-panel Pennsylvania through truss w/ sub-ties top chords: two channels w/ cover plates and lacing; bottom chords: paired eyebars; verticals: eyebars and two channels w/ lacing; diagonals: eyebars; struts: two angles w/ lacing; lateral and sway bracing: round bars; angle guardrails; decorative builder's plate mounted over portal strut. Johnson County Road CN16-254 milepost: 0.1 18.1 miles northeast of Sussex T46N, R77W, S19. USGS Hoe Ranch  $7\frac{1}{2}$ ' quadrangle UTM: 13.407210.4865885 31 Rairden Bridge Big Horn County (over Big Horn River) erection date: 1916 Monarch Engineering Company contractor: Denver 250'0" span length: abutments: concrete retaining w/ sweptback wings 252'0" total length: piers: none 15'6" timber stringers and decking roadway width: roadway: span type: simple approaches: none Single-span, steel pin-connected 12-panel Pennsylvania through truss w/ sub-ties

(Thermopolis - Buffalo Creek Road)



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After World War II, new trussbuilding was rare in Wyoming. Most trusses erected from that time to the present have been salvaged from other locations - dismantled, transported and reassembled at the new locations. In 1952 the Highway Department removed a 119-foot, six-panel truss from the Laramie River near Uva and moved it intact into Platte County; the county elected to use only 85' (five panels) of the truss to replace a washed-out bridge over the North Laramie River. The Wind River Bridge [BMU] is another Highway Department-moved truss, assembled at its present location by Charles M. Smith in 1953. Today trusses have been largely superceded by more sophisticated engineering designs - girders, box beams, twin Ts - and are seldom erected. The remaining highway and roadway truss bridges are just that - remnants of past technologies, whose numbers are continually dwindling through attrition.

#### Individual Bridges

AJX Bridge over South Fork of Powder River

This 306' steel deck truss, built in 1931-32 by the Omaha Steel Works of Omaha, Nebraska, under contract with the Wyoming Highway Department, is one of the state's spectacular vehicular bridges built during the Depression-sparked 1930s. Erected at a time when the large interstate-type highway cantilevered trusses were appearing across the country, this three-span Pratt truss is Wyoming's only large cantilever bridge. As such it is one of the state's most important highway trusses.

BMU Bridge over Wind River

During the early- to mid-1930s the Highway Department erected several rigid-connected Parker through trusses across the state. Of these seven remain. Most are in the 120'- 175' span range, but one bridge freespans 250'. The Highway Department contracted with Charles M. Smith of Thermopolis in July 1953 to reassemble this bridge over the Wind River on Wyoming 132. It is the longest single-span highway truss in Wyoming still in use.

CKW Bridge over Powder River

The Highway Department contracted with the W.P. Roscoe Company in August 1932 to construct two steel bridges on the Sheridan-Gillette Road as part of Federal Aid Project 206B. This Pratt deck truss is one of the bridges. Consisting of three continuous main spans and two shallower approach spans, it is an excellent example of the long span deck trusses built in the 1930s through the 1950s for major highway crossings. As one of only two major highway deck trusses built in Wyoming and the only continuous vehicular truss still in use in the state, it is an important representative of the most recent truss development. Although slightly less than fifty years old, it possesses the exceptional significance as the only one of its type for eligibility.

CQA Four Mile Bridge

The Highway Department reopened Federal Aid Project 90 in 1927, and in April awarded

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CQA (continued)

the construction contract for this bridge over the Big Horn River to Charles M. Smith of Thermopolis. The bridge is one of only two rigid-connected Pennsylvania through trusses with sub-struts still functional in the state and county road systems of Wyoming. With a simple span of 175' it is the longer of the two. As such it is an uncommon truss type for a highway bridge, more usually associated with railroad spans, and is one of Wyoming's more significant trusses.

### DDW Granger Bridge

The construction contract for this bridge over Blacks Fork at Granger was awarded in June 1912 to the C.G. Sheely Contracting Company of Denver by the Sweetwater County commissioners. Sheely, later president of the Colorado Bridge and Construction Company, had submitted the lowest bid at \$3999. By November he had delivered the steel for the superstructure for the 150' truss, requesting that the Board visit Granger and decide upon a bridge site. Construction was completed the following year. This pin-connected Pratt through truss, one of the longest of its type in the state, displays classic member configuration. It is a well-preserved early example of a truss type which is common for Wyoming's county and state roads.

DDZ Bridge over New Fork River

This bridge reportedly erected in 1917 by Lincoln County, is the only two-span kingpost timber truss in the state. With its paired chords with timber spacer blocks and steel rod stiffeners, it is the most sophisticated of the few timber trusses still functional on the county road system. As the best example of its configuration and material, it is one of the more significant trusses in Wyoming.

DFT Bridge over Medicine Bow River

In August 1911 the Carbon County commissioners toured the county to inspect the current road and bridge conditions. After reviewing the numerous petitions from around the county for bridge construction and repair, they arrived at two conclusions: an additional two mill levy was needed to finance the large volume of work and three bridges were needed immediately. The three - one over Savery Creek southeast of Wamsutter, one over Big Creek southeast of Encampment and this bridge over the Medicine Bow River north of Hanna. Bids were opened in September, and the contract was awarded to Charles G. Sheely of Denver, lowest bidder in a group of six with a total of \$19,445 (this bridge cost \$9873). With a span of 152' this bridge is one of the longest pin-connected Pratt throughs built in the state; it is an excellent example of a truss type which proved to be a staple for the early county road system - one of the earlier remaining bridges in the survey.

DFU<sup>V</sup> Elk Mountain Bridge

Carbon County awarded the construction contract for three trusses (over Pass Creek southeast of Walcott, the Medicine Bow River at Elk Mountain and Mill Creek just north of Elk Mountain) in August 1923 to D.B. Miller of Cheyenne and Denver. With