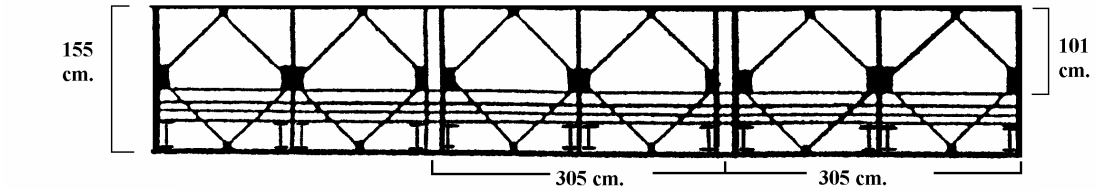
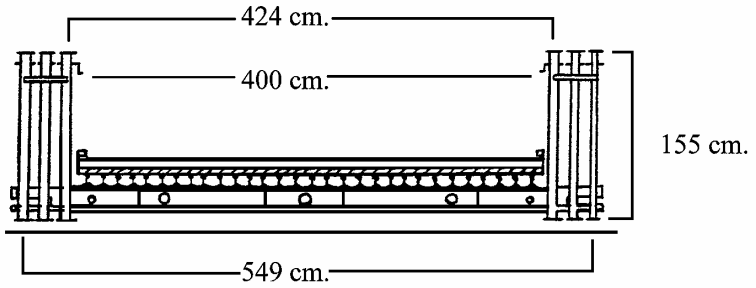
SINDORF TRADING HOLLAND B.V.

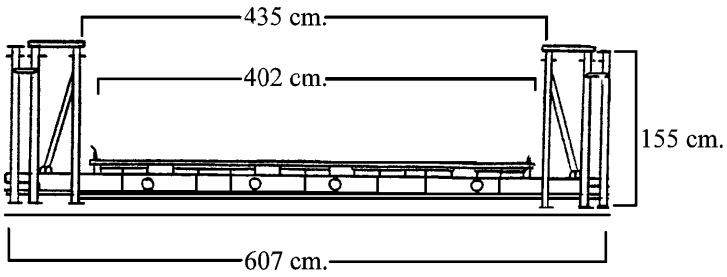
BAILEY PANEL BRIDGE SYSTEMS

"TS" Class 100 "triple truss, single storey, 4 transoms per bay"

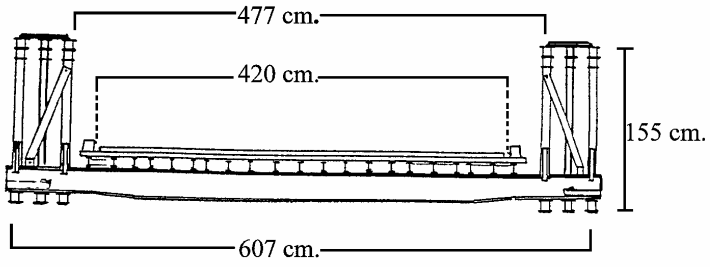




BAILEY M1



BAILEY M2



BAILEY M3

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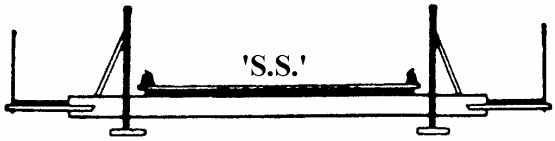
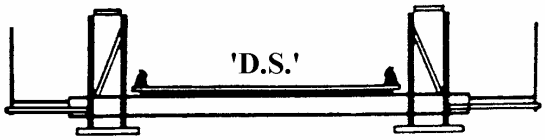
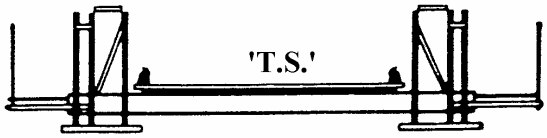
TYPES OF TRUSS ASSEMBLY



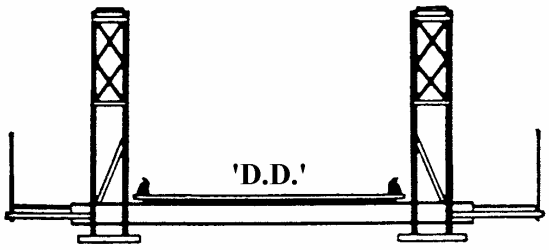
SINGLE-TRUSS SINGLE-STORY



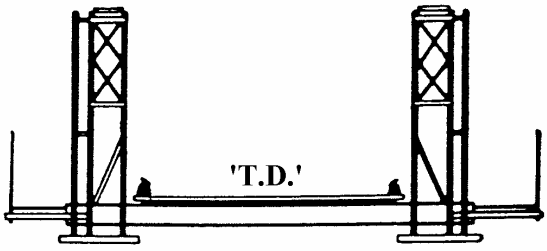
DOUBLE-TRUSS SINGLE-STORY



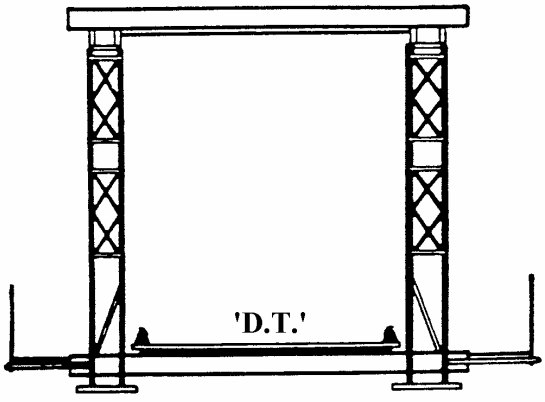
TRIPLE-TRUSS SINGLE-STORY



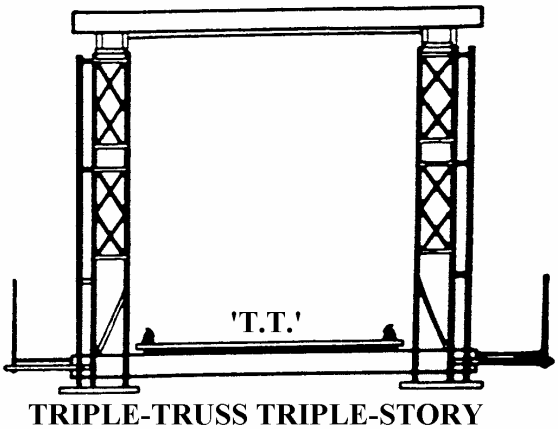
DOUBLE-TRUSS DOUBLE-STORY



TRIPLE-TRUSS DOUBLE STORY



DOUBLE-TRUSS TRIPLE-STORY



TRIPLE-TRUSS TRIPLE-STORY

Standard parts can be used to assemble seven standard truss designs for efficient single spans up to 210 feet (64 meter) in length, and to build panel crib piers supporting longer bridges. With minor nonstandard modifications, the expedient uses of its parts are limited only by the user's imagination.

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SINDORF TRADING HOLLAND BV

Dual classification table of Panel Bridge, Bailey type, M2 Class by type of construction and type of Crossing Posting Classifications

Span in Feet	SS		DS		TS		DD		TD		DT		TT	
	N	R	N	R	N	R	N	R	N	R	N	R	N	R
30	30	47												
40	24	40												
50	24	36	75	88										
60	20	33	65	85										
70	20	30	60	78										
80	16	24	55	66	85	100*								
90	12	19	45	55	65	82								
100	8	14	30	44	55	66	80	96						
110			20	36	40	54	70	83	90	100*				
120			16	30	35	45	55	68	80	91*				
130			12	21	20	38	45	56	60	80	80	90*		
140			8	17	16	31	35	48	55	70	70	90*		
150					12	22	24	40	45	58	60	90*		
160					8	17	16	33	35	48	55	89	80	100*
170					4	13	12	24	20	40	50	74	70	90*
180							8	18	16	32	45	60	60	87
190									12	22	35	51	55	77
200											20	43	40	62
210											16	35	24	51

Capacities in short tons (x 900 kg)

1. N=Normal R=Risk
2. * = limited by roadway width
3. Bridges which have a normal rating over class 70 must be constructed with double transom
4. Single classification is designated below class 30

SINDORF TRADING HOLLAND BV

Dual classification table of Panel Bridge, Bailey type, M2 Class by type of construction and type of Crossing Posting Classifications

Span in Meter	SS		DS		TS		DD		TD		DT		TT	
	N	R	N	R	N	R	N	R	N	R	N	R	N	R
9,1	27,2	42,6												
12,2	21,8	36,3												
15,2	21,8	32,7	68,0	79,8										
18,3	18,1	29,9	59,0	77,1										
21,3	18,1	27,2	54,4	70,7										
24,4	14,5	21,8	49,9	59,9	77,1	90,7*								
27,4	10,9	17,2	40,8	49,9	59,0	74,4								
30,5	7,3	12,7	27,2	39,9	49,9	59,9	72,6	87,1						
33,5			18,1	32,7	36,3	49,0	63,5	75,3	81,6	90,7*				
36,6			14,5	27,2	31,7	40,8	49,9	61,7	72,6	82,5*				
39,6			10,9	19,0	18,1	34,5	40,8	50,8	54,4	72,6	72,6	81,6*		
42,7			7,3	15,4	14,5	28,1	31,7	43,5	49,9	63,5	63,5	81,6*		
45,7					10,9	20,0	21,8	36,3	40,8	52,6	54,4	81,6*		
48,8					7,3	15,4	14,5	29,9	31,7	43,5	49,9	80,7	72,6	90,7*
51,8					3,6	11,8	10,9	21,8	18,1	36,3	45,4	67,1	63,5	81,6*
54,9							7,3	16,3	14,5	29,0	40,8	54,4	54,4	78,9
57,9									10,9	20,0	31,7	46,3	49,9	69,8
61,0											18,1	39,0	36,3	56,2
64,0											14,5	31,7	21,8	46,3

Capacities in metric tons

1. N=Normal R=Risk
2. * = limited by roadway width
3. Bridges which have a normal rating over class 70 must be constructed with double transom
4. Single classification is designated below class 30

SINDORF TRADING HOLLAND B.V.

WEIGHT OF M2 PANEL BRIDGE IN TONS PER BAY

Bridge bays

Type[1]	Weight in short tons (900kg.)
SS	2.76
DS	3.41
TS	4.01
DD	4.66
TD	5.88
DT[2]	6.46
TT[2]	8.29

Launching-nose bays

SS	1.00
DS	1.64
DD	2.90

Decking

Chess 2" and steel ribands	0.66
Stringers only	0.79
Wear treads (four 3" x 12" planks on each side)	0.35

Miscellaneous

Footwalks	0.17
Overhead bracing (supports, transoms, sway bracing & chord bolts)	0.54

[1] Footwalks and wear treads not included.
[2] Overhead bracing included.

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Bailey Bridge M1 & M2 application possibilities

Description

The M2 Bailey Bridge was developed by the US Army Research and Development Laboratories. It has been well-proven both as a tactical and as a line of communication bridge and is capable of carrying heavy traffic loads. It is used for both temporary and permanent service. In emergencies it can be open to traffic in 1 to 3 days.

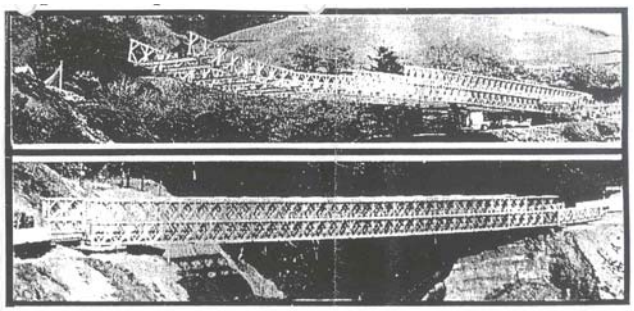
The M2 Bailey Bridge is an all-purpose prefabricated steel panel bridge designed for portability and speed of erection under adverse conditions. Optimum spans are 12.2 to 61 m. Width is 3.809 m between steel kerbs and 4.343 m. between trusses. The components are manufactured in fixtures to ensure accuracy and interchangeability. The heaviest component weighs 281 kg.

The Bailey roadway is supported between two trusses or multiple-truss girders. It consists of longitudinal runner planks over transverse planks (chess) laid over steel stringers supported by floorbeams (transoms) which rest on and are clamped to truss bottom chords. Steel kerbs secure the chess to the stringers. The basic truss element is the pane, which is 3.048 m long, 1.448 m deep and 165.1 mm wide. Pinconnected end to end, trusses of any length are formed. Where strength exceeding that of single trusses is needed, multiple-truss girders can be assembled with either two or three panels side by side in single-, double- or triple-storey heights. End ramps extend the deck 3.048 m onto the approach runway.

Bailey truss panels, end posts, transoms and ramps are of low-alloy high tensile steel having a yield point of 3515 kg/cm² and an ultimate strength of 4921.7 kg/cm².

The cantilever method of erection is accomplished without falsework. The bridge is assembled on stationary rollers and then pushed or pulled across the gap. A skeleton launching nose is assembled from standard bridge components and fixed to the leading end of the bridge. The nose precedes the leading end of the bridge while the bridge proper, acting as a counterweight, enables the nose to reach and land on rollers on the far bank. The bridge is then rolled into position, the nose is removed and the span is lowered onto its bearings. A 24.4 m double-truss bridge has been completed in less than 40 minutes in competitive trials.

There are approximately 15 major components in an average Bailey Bridge and about 50 components, fittings, accessories, special items and tools are available.



M2 Bailey bridge being launched (top) and completed (bottom).

Specifications

Length of single span:
(minimum) 9.144 m
(maximum) 61 m

Width of roadway: 3.809 m

Status

Production complete. In service with the US Army and other armed forces.

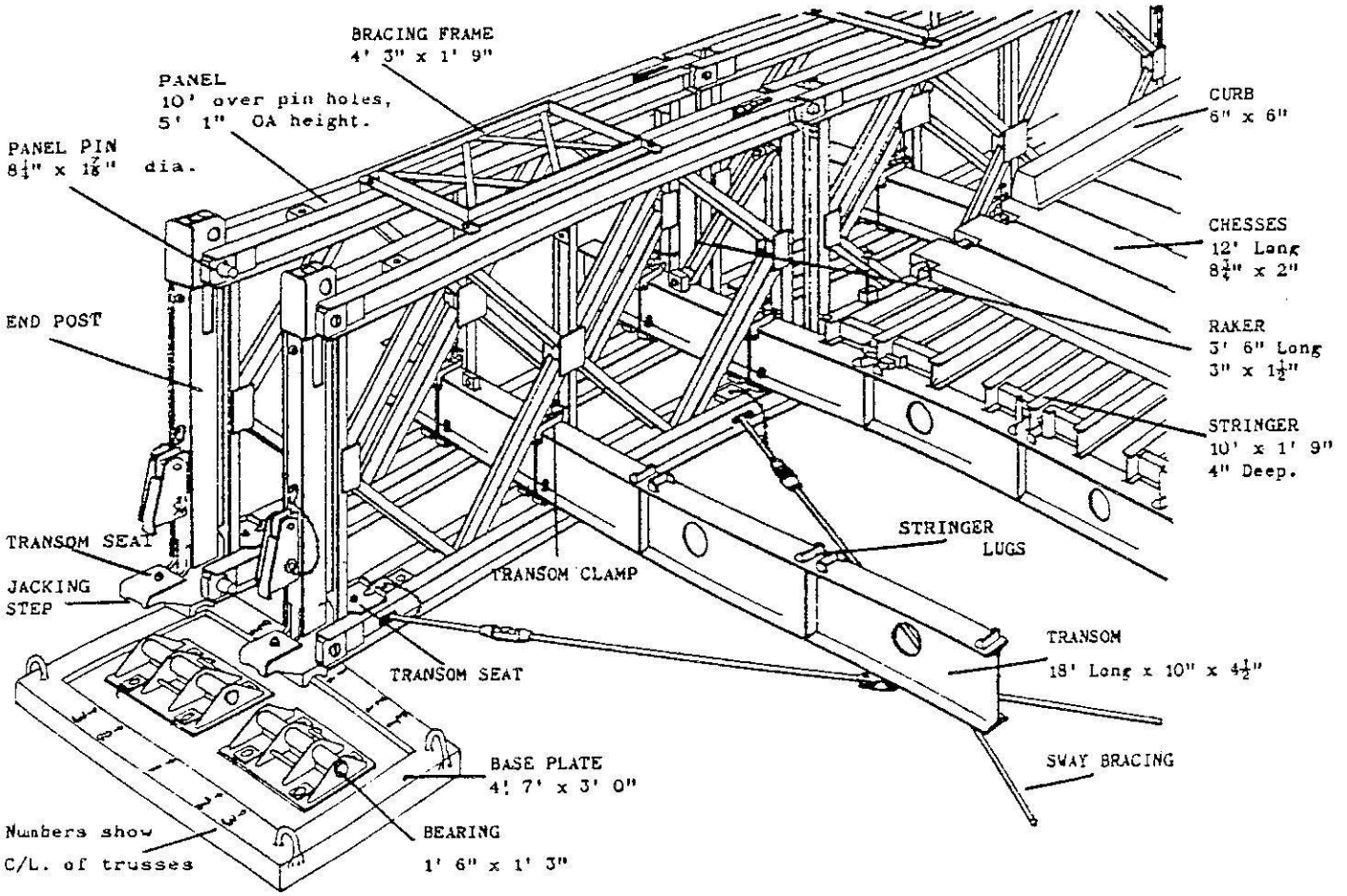


DIAGRAM OF DOUBLE TRUSS - SINGLE STOREY (DS)

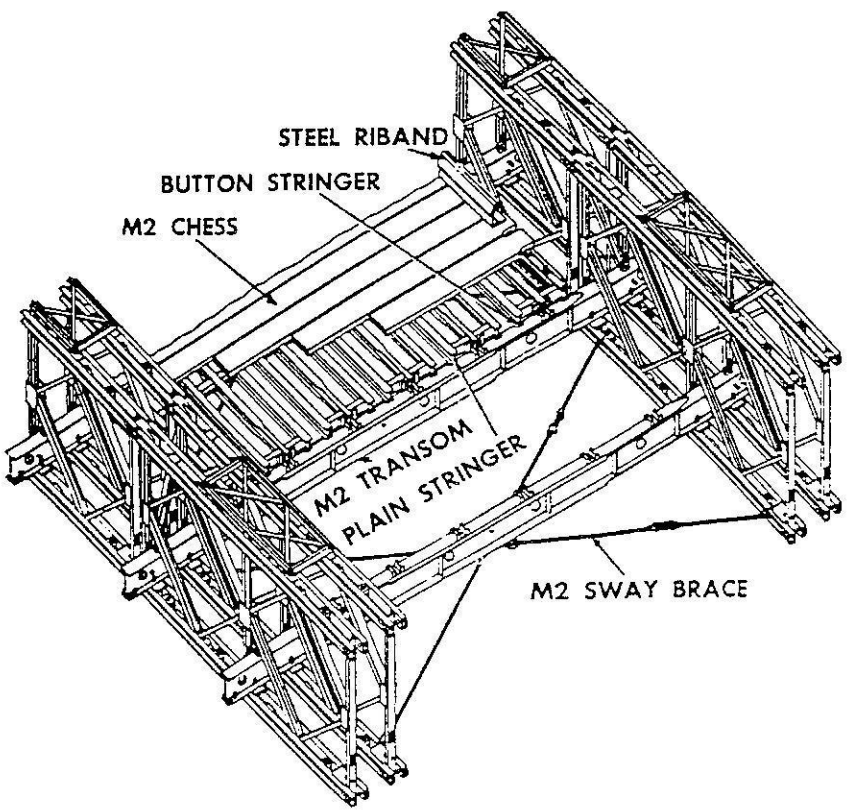


Figure 32. Location of bridge parts in decking of double-single bridge.

Bailey Bridge M1 & M2 Application possibilities

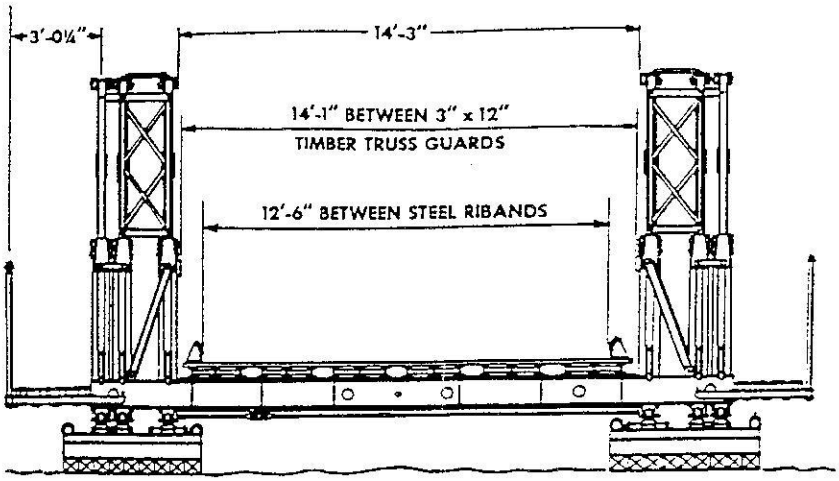
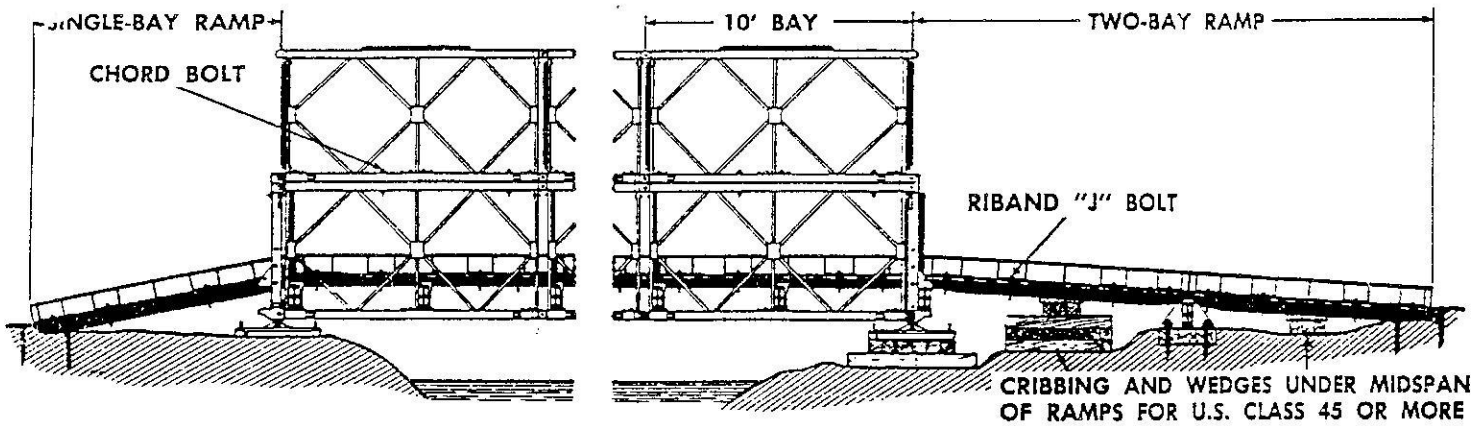
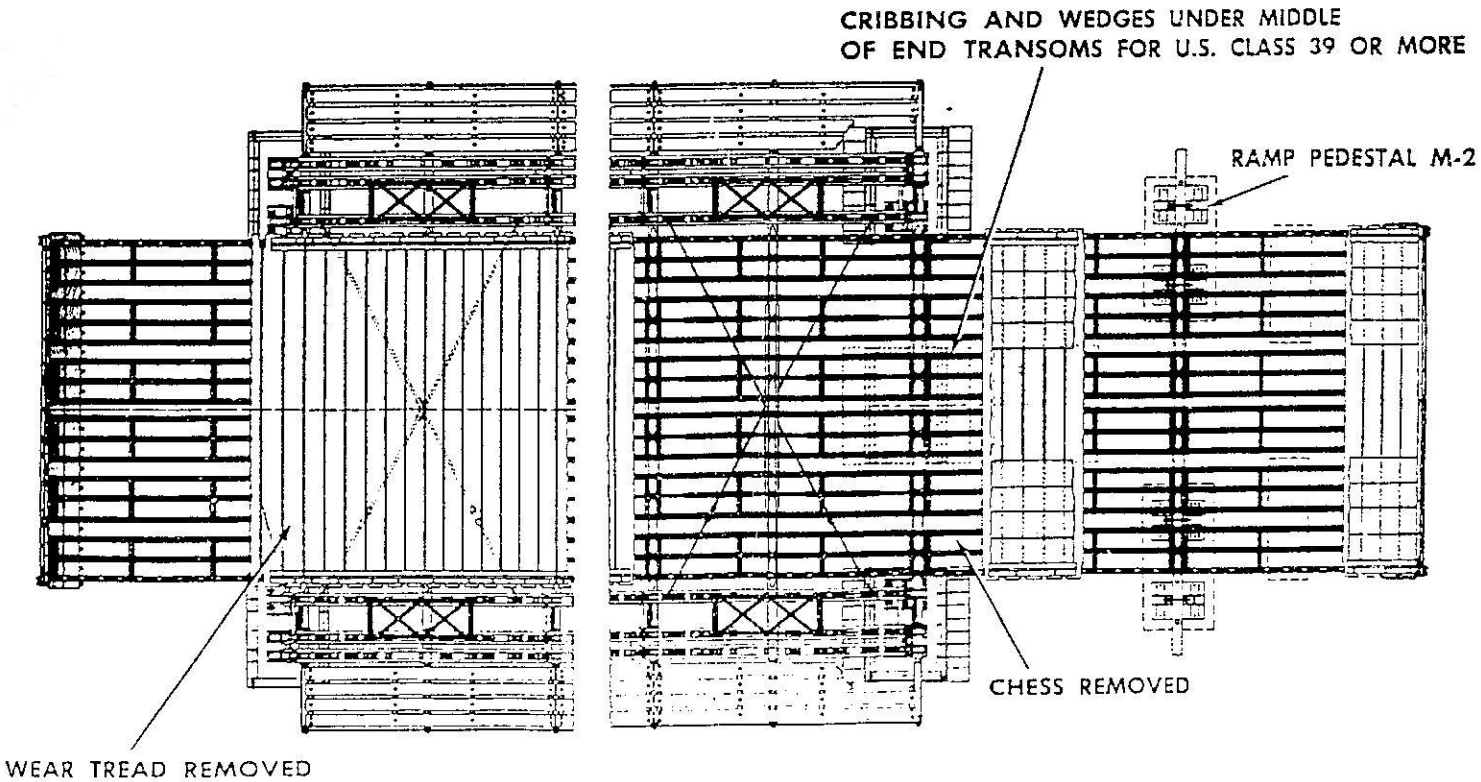


Figure 5. Triple-double bridge showing critical horizontal clearance.



2 Elevation (footwalk removed)



3 Plan

Figure 3—Continued.

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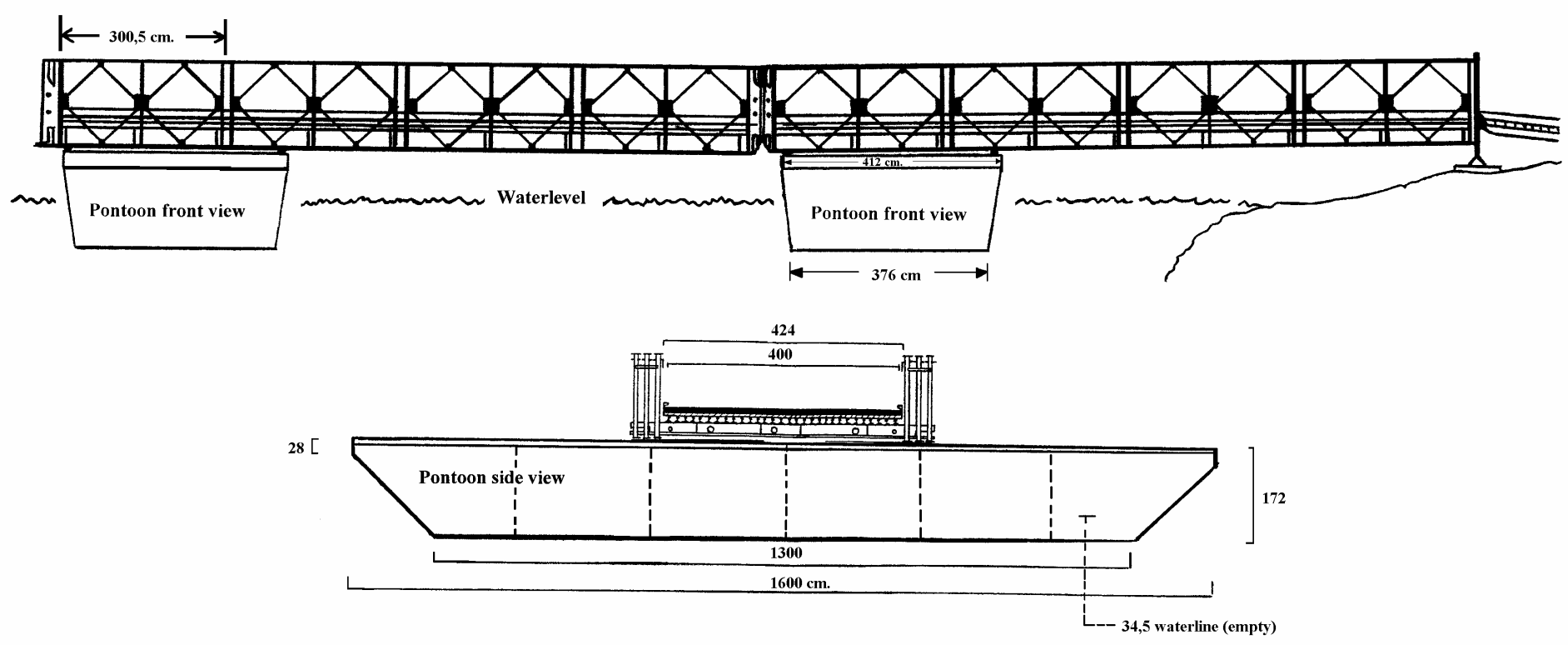
1067 m. Bailey Pontoon bridge M1 & M2 & M3

Floating capacity: 100 ton Class MLC 100



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2001 m. Bailey Pontoon Bridge M3

Floating capacity: 40 ton per carriage way
c/w 160 pcs. pontoons 16 x 4,1 x 1,72 m.