

Funding Opportunity Announcement Number: W911KB-24-2-5801

Industry Question(s) and Government Response(s) as of 3 July 2024

Industry Question 1.) The specification in 3.1.3 has a 16' wide right of way clearing spec and a 12x8x2 concrete footing. The bridge specs from the Bailey Bridge company are a 20' outside width. Wondering if we are looking at the wrong bridge? Could you please provide more detailed specifications and/or drawings?

Government Response 1.) The bridge identified in the Statement of Work (SOW) is a single-single, as referenced in Army Technical Manual (TM) 3-34.23 pages 1-4 and 1-5. See enclosed Attachment 1 - Army Technical Manual (TM) 3-34.23 page 1-4 and Attachment 2 - Army Technical Manual (TM) 3-34.23 page 1-5 for additional details. Known commonly as the Bailey M2 Bridge, it is a commercial off-the-shelf item as illustrated in the Bailey Bridge brochure provided. See enclosed Attachment 3 - Bailey Bridge Brochure for additional details. The SOW provides dimensions of the bridge span and number of sections required to satisfy this part of the requirement.

Enclosure(s):

- Attachment 1 - Army Technical Manual (TM) 3-34.23 page 1-4 (1 page)
- Attachment 2 - Army Technical Manual (TM) 3-34.23 page 1-5 (1 page)
- Attachment 3 - Bailey Bridge Brochure (2 pages)

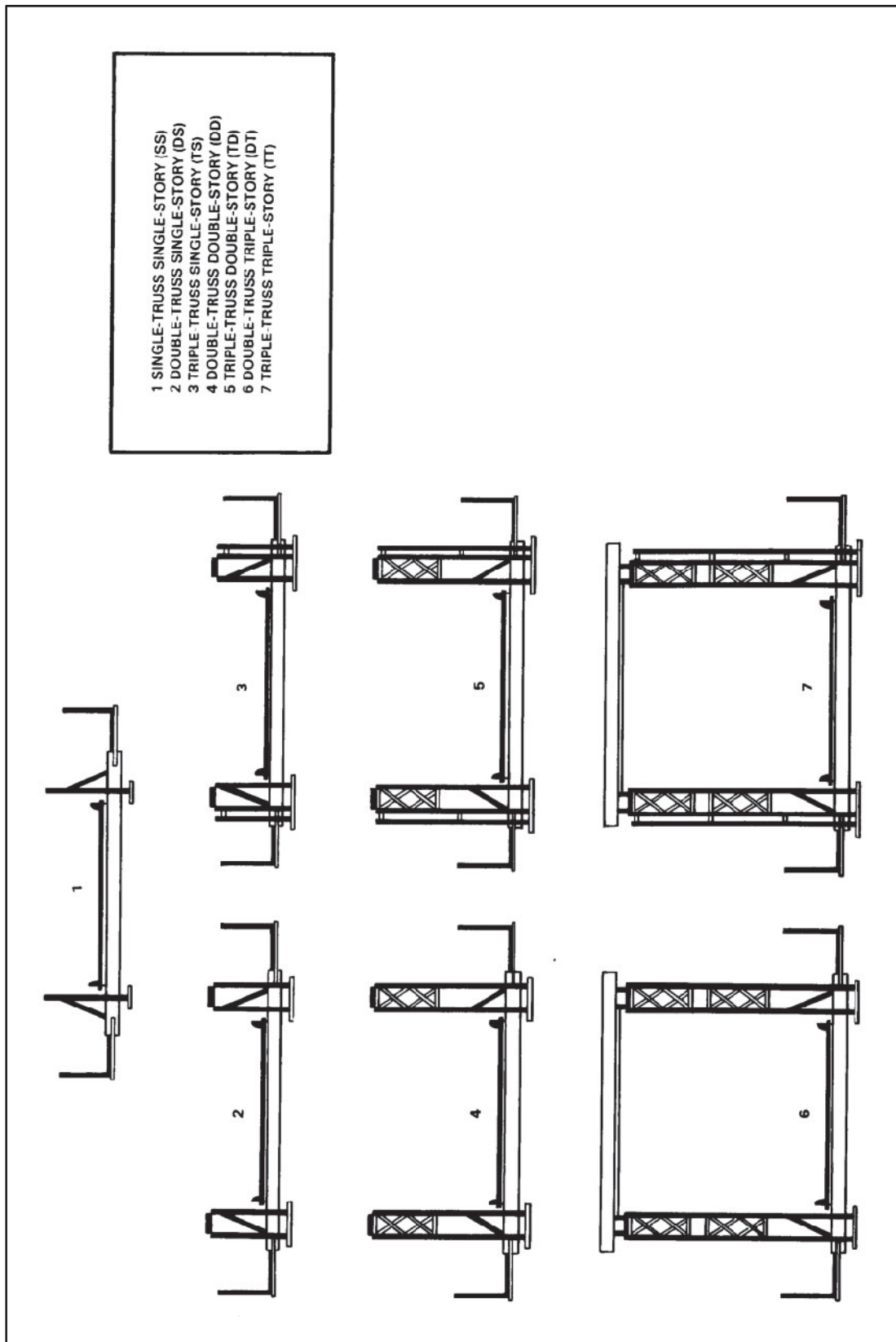


Figure 1-2. Single-, double-, and triple truss assemblies

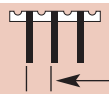
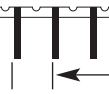
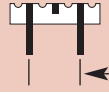
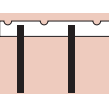
Table 1-1. Abbreviations for single-lane panel bridges, Bailey type M2

<i>Type</i>		<i>Usual Nomenclature</i>	<i>Abbreviation</i>
<i>Truss</i>	<i>Story</i>		
Single	Single	Single-single	SS
Double	Single	Double-Single	DS
Triple	Single	Triple-Single	TS
Double	Double	Double-double	DD
Triple	Double	Triple-double	TD
Double	Triple	Double-triple	DT
Triple	Triple	Triple-triple	TT

Table 1-2. Weight of M2 panel bridge in tons per bay

<i>Type of Construction</i>		<i>Weight in Tons Per Bay</i>						
		<i>SS</i>	<i>DS</i>	<i>TS</i>	<i>DD</i>	<i>TD</i>	<i>DT</i>	<i>TT</i>
Bridge bays		¹ 2.76	¹ 3.41	¹ 4.01	¹ 4.66	¹ 5.88	¹⁻² 6.46	¹⁻² 8.29
Launching-nose bays		1.00	1.64		2.90			
Decking	Chess and steel ribbands	0.66	0.66	0.66	0.66	0.66	0.66	0.66
	Stringer only	0.79	0.79	0.79	0.79	0.79	0.79	0.79
	Wear treads (four 3" x 12" panels on each side)	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Miscellaneous	Footwalks	0.17	0.17	0.17	0.17	0.17	0.17	0.17
	Overhead bracing (supports, transoms, sway bracing and chord bolts)	0.54	0.54	0.54	0.54	0.54	0.54	0.54
¹ Footwalks and wear treads not included. ² Overhead bracing included.								

Attachment 3 - Bailey Bridge Brochure

Bailey Bridges Road Way Grid Flooring — Type RWB All components are 27 ksi steel or equal					
Pattern	Bailey Type	Main Bar Size (inches)	Minimum Section Modulus (in ³ /ft)	Max Continuous Clear Span HS20	Approx* Wt. (lbs/sf)
				Wheel Load Allowable Stress 27 ksi	
	RWB 38.0	4 x 3/8	1.705	2' – 9"	29.6
		5 x 3/8	3.368	4' – 7"	36.1
		6 x 1/4	3.760	5' – 0"	28.4
	RWB 48.0	4 x 3/8	1.350	2' – 5"	24.3
		5 x 3/8	2.687	4' – 0"	29.3
		6 x 3/8	4.464	6' – 0"	34.5
	RWB 64.1	5 x 3/8	2.241	3' – 8"	28.1
		6 x 1/4	2.847	4' – 5"	24.3
		7 x 1/4	3.934	5' – 9"	26.8
	RWB 96.2	5 x 3/8	2.460	4' – 5"	23.0
		6 x 1/4	3.075	5' – 2"	20.4
		7 x 1/4	4.042	6' – 7"	22.2
Standard Decks for Bailey Bridges					
	RWB 48.0 PL	6 x 1/4	3.573	5' – 0" cont.	24.3
	RWB 64.0 PL	7 x 3/8	9.188	10' – 0" simple	34.6

* the deck weights psf are based on uncoated standard width panels and are presented for information only. Actual weights will vary due to panel widths employed, the coating weight if coated and deck attachments or modifications.

Note: Unless specified otherwise, the RWB grid flooring is supplied with all grid components in the same plane or a flush riding surface. In all cases, the top surfaces of all grid components are serrated for improved skid resistance. However, to help reduce “wheel tracking”, Bailey suggests the user consider the following options:

PL Design: Used when main grid bars are parallel (PL) to the flow of traffic. The distribution bars or cross bars are assembled such that the cross bar is approximately 1/8” to 1/4” above the surface of the other components.

TR Design: Used when main bars are transverse (TR) or perpendicular to the flow of traffic. The main bars or supplementary/tertiary bars (if any) are assembled such that these bars are approximately 1/8” to 1/4” above the surface of the cross bar or distribution bar.

To specify or order these options, add the PL or TR designation to the product type, such as: Type RWB 48.0 PL or Type RWB 96.2 TR. *Please note that the above section properties and spans will change somewhat from the use of either the PL or TR options.* Call Bailey for additional information.

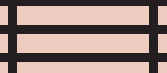
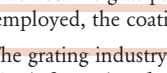
Finishes: Mill A588 Weathering); H.D. Galvanized; Inorganic zinc silicate paint.

The wood deck on an existing 120' Double-Double Bailey bridge with approach ramps was recently replaced with a more durable Roadway Open Grid Deck manufactured by Bailey Bridges, Inc.



Bailey manufactures a complete line of Heavy Duty steel grating to carry vehicular loadings in industrial and commercial applications. Most common use is trench covers. Bailey can also produce custom

gratings for special applications such as ore screens and trash racks. *The bar sizes listed below are the most common. However, Bailey can manufacture heavy duty gratings from any bar size. Contact Bailey for details.*

Bailey Bridges Heavy Duty Steel Grating — Type HDB							
Load tables are based on Gd 50 – 27 ksi allowable stress steel							
Pattern	Bailey Type	Main Bar (inches)	Cross Bar Dia. (in.)	Sec. Mod. (in ³ /ft)	Simple Span HS20 Load	Deflection† @ max. span	Approx.* Wt. (lbs/sf)
	HDB 150	2 x 3/8	3/8	3.200	3.34'	.17”	33.8
		3 x 1/4	3/8	4.800	4.58'	.19”	33.8
		3 x 3/8	1/2	7.200	6.42'	.36”	51.0
		4 x 1/4	1/2	8.533	7.45'	.35”	45.6
	HDB 190	4 x 3/8	1/2	12.800	10.59'	.68”	68.5
		2 x 3/8	3/8	2.526	2.86'	.13”	26.9
		3 x 1/4	3/8	3.790	3.87'	.15”	26.9
		3 x 3/8	1/2	5.648	5.36'	.26”	40.7
	HDB 220	4 x 1/4	1/2	6.737	6.20'	.25”	36.4
		4 x 3/8	1/2	10.105	8.79'	.48”	54.7
		3 x 3/8	1/2	4.909	4.82'	.21”	35.4
		4 x 1/4	1/2	5.818	5.56'	.21”	31.7
	HDB 300	4 x 3/8	1/2	8.727	7.85'	.39”	47.7
		5 x 1/4	1/2	9.090	8.17'	.34”	39.1
		5 x 3/8	5/8	13.636	11.65'	.66”	58.8
		3 x 3/8	1/2	3.600	3.89'	.15”	26.5
	HDB 380	4 x 1/4	1/2	4.267	4.46'	.14”	23.8
		4 x 3/8	1/2	6.400	6.24'	.25”	35.8
		5 x 1/4	1/2	6.666	6.48'	.22”	29.2
		5 x 3/8	5/8	10.000	9.21'	.42”	44.0
	HDB 380	4 x 3/8	1/2	5.052	5.30'	.19”	28.9
		5 x 1/4	1/2	5.263	5.49'	.16”	23.5
		5 x 3/8	5/8	7.894	7.77'	.31”	35.4
		6 x 1/4	1/2	7.578	7.51'	.24”	27.8
		6 x 3/8	5/8	11.368	10.73'	.47”	41.8

* The deck weights psf are based on uncoated standard width panels and are presented for information only. Actual weights will vary due to panel widths employed, the coating weight if coated and deck attachments or modifications.

† The grating industry does not provide guidance as to deflection. The user must make their own determination as to suitability to their particular application. For information, **bold** deflections exceed L/300 at the maximum simple span for HS20 load.

Options

- Inorganic Zinc Silicate Paint or Hot Dipped Galvanized finish
- 1 x 1/4” (min.) rectangular cross bar in lieu of the standard round cross bar
- Main bars can be provided with serrated top
- Rectangular cross bar can be supplied serrated
- Cross bars, round or rectangular, on 2” centers in lieu of the standard 4” centers
- End trim bars, 1/4” thick x depth of main bar less 1”, mounted flush with top
- Plate fasteners w/o hardware to attach grating to supports

Note

Grating industry guidelines state that all grating be firmly anchored to supports by some positive means and that the gratings must be installed with cross bars on the top side.

The information presented has been prepared using generally accepted engineering principles. However, the user is responsible to check this information and make an independent determination as to its applicability to any particular project or application. Bailey reserves the right to make changes to its specifications and products without notice. Bailey also reserves the right to substitute material of higher grade or greater section properties for those specified.

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Worldwide delivery • Safe • Reliable • Reusable • Heavy duty construction for many applications • Emergency Construction haul roads

Bailey Bridges, Inc. is and has been a well known and respected name in the bridge industry for over 50 years.

Bailey, in its newly opened facility in Ft. Payne, Alabama, now manufactures a line of Road Way grid flooring for

use in place of wood on its world famous modular “Bailey Bridges” or for use on fixed or movable bridges.

Bailey also offers a line of Heavy Duty steel gratings for vehicular loadings in commercial and industrial

applications such as trench and vault covers, loading or landing ramps,

vehicular platforms and wash or trash racks.

The Bailey System

Bailey bridges are built on site from a pre-engineered system of ready-to-assemble components. Utilizing standardized prefabricated components, Bailey bridges can be built to match a wide range of vehicular bridging applications. Because of their excellent versatility and overall value, thousands of Bailey bridges have been installed throughout the world.



Montana Power Company, Mystic Power Plant, 160 ft. DDR Bailey carries 54" water pipe. Bridge components transported to site by helicopter.

Features

- Adaptable - to match each application
- Fast - open to traffic in a matter of days
- Lowest Cost - an alternative to expensive bridges
- Easy - to handle, transport, assemble, install and reuse

Materials and Finishes

Domestic steel is used throughout. Most load-bearing components use low-alloy, high-tensile ASTM A242 steel with a yield point of 50,000 psi. Excellent corrosion resistance is achieved with an inorganic zinc silicate coating. Final color is lusterless light gray.

Standardized Components

The heart of the Bailey system is the ingenious set of precision-made, interchangeable steel components from which all Bailey structures are assembled. (figure 2)

Pacific Gas & Electric Company, 215 ft. access bridge with 2 intermediate piers over the Feather River at Buck's Creek Powerhouse, California.



Clear span 200 ft. temporary TDR M2 Bailey bridge of California Hwy. 1. All components later reused in two 150 ft. temporary spans on Hwy. 395; now on standby, stockpiled for emergency or other use. California Department of Transportation.

Made in the U.S.A. — U.S. army standard

The U.S. M2 Bailey bridging supplied by Bailey Bridges, Inc., is genuine U.S. Army equipment, manufactured in the U.S.A. to the highest military specifications, utilizing domestic steel. It is the current standard panel bridge of the U.S. Army.

Ease of Assembly and Installation

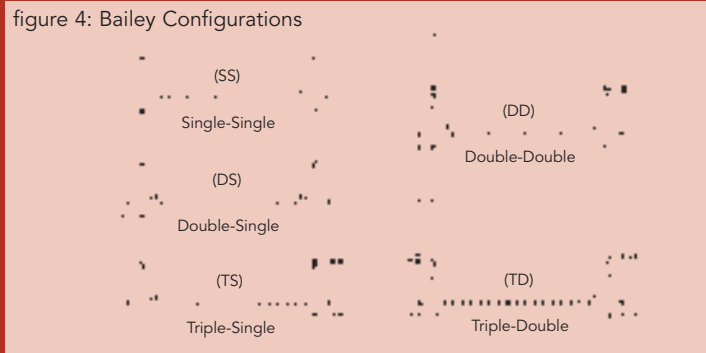
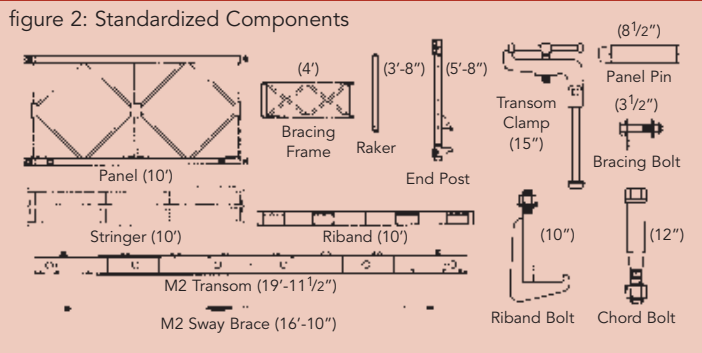
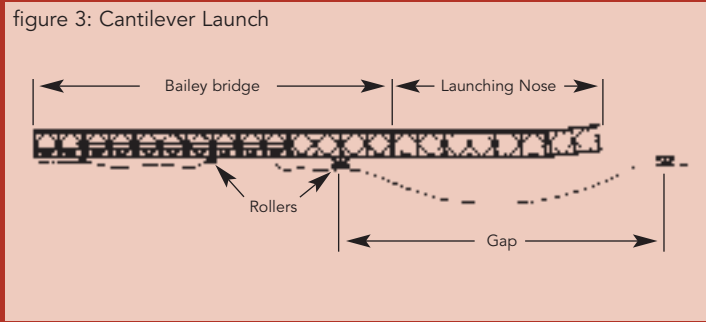
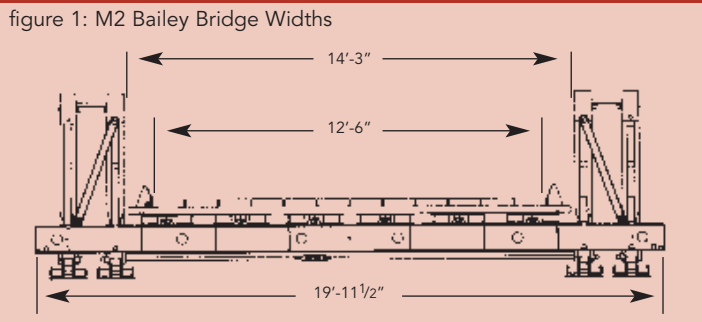
Most Bailey bridges are assembled and installed in a matter of days by a small crew. Common hand tools are utilized. All connections are pinned, bolted or clamped. No welding is necessary. Disassembly is similarly easy, and components can be stored in minimal space until reused.

Bailey bridges are often installed by the cantilever launching method, in which the assembled bridge together with a "launching nose" is rolled out across the gap, without falsework or heavy equipment (figure 3). The cantilever method allows bridges to be quickly erected over rivers or deep gorges. Additionally, some Bailey bridges may be hoisted into place by crane.

On-site technical service is available during installation.



Big Horn Golf Course by Westinghouse Communities. Temporary 90 ft. DS M2 Bailey bridge for access during construction. Palm Desert, California.



Variable Configuration

Bailey bridge components can be assembled in seven different configurations to efficiently accommodate a wide range of span and capacity requirements (figure 4). Panels, the primary Bailey components, are pinned together at the job site to make girders of any length. Various girder strengths are achieved by assembling either a single row of panels, or two or three rows side-by-side. Panels may also be stacked in double-story height for further increase strength. For greatest strength, long spans may be chord-reinforced.

Spans

For highway use, typical Bailey bridge clear spans range from 50 ft to 190 ft. Multiple-span bridges of any length are possible by incorporating intermediate supporting piers.

- The Bailey Bridge is a safe, proven answer to diverting or detouring traffic for construction. A perfect solution, a temporary Bailey Bridge detour for the contractor:
- Eliminate flagmen
 - Speed construction – early completion
 - Safety – separate the traffic from the construction crew
 - Simple – fast installation and removal
 - Versatility – 40' or 60' use the same parts
 - Economical to own and re-use in different length bridges
 - Damaged parts are replaceable



A 60 foot Double-Single Bailey was selected for this utility right-of-way access bridge near Orlando, Florida.



U.S. Army Corps of Engineers utilized a Bailey bridge system as a conveyor support for transporting over 19 million cubic yards of earth and rock for the construction of Seven Oaks Dam near San Bernardino, CA.

Bailey Bridge Data Sheet	
Please copy this sheet and fax your inquiry to 256.845.7775 or visit our website at www.baileybridge.com/datasheet	
Date of Inquiry _____	Will this be temporary bridge? _____ Rent? _____
Company Name _____	Will container loading for export be required? _____
Contact Name _____	Project _____ Location _____
Street _____ City _____	Clear Span _____ Vehicle Load _____
State _____ Zip Code _____	Clear Span _____ Vehicle Load _____
Telephone _____ Fax _____	Clear Span _____ Vehicle Load _____
Floor Deck: wood steel grating checkered plate	Comments _____
Will bridge be continuous over a pier? _____	_____
If a launching nose is required, what bridge span? _____	_____