

## ART 4.5.2.7 Construct Bridges

Provide construction and repair of bridges. ART 4.5.2.7 includes all design, new construction, and modification of existing bridges to meet military traffic needs. (FM 3-34.343) (USAES)

NO.	Scale	Measure
01	Yes/No	An inability for building and maintaining standard and nonstandard fixed bridges within the time the construction directive specifies did not degrade or delay unit operations.
02	Yes/No	Fixed bridges supported the traffic loads for which they were designed.
03	Yes/No	Unit inspected fixed bridge projects for quality control.
04	Yes/No	Bridge construction projects completed on time.
05	Yes/No	Environmental considerations planning and procedures were present and being followed.
06	Time	To prepare engineer construction estimate that determines the effort needed to meet gap crossing requirements, assign operational and construction responsibilities, and determine additional personnel and equipment requirements.
07	Time	To reconnoiter to evaluate proposed bridge site for suitability and conditions, identify construction problems and possible courses of action, and update or revise the engineer estimate.
08	Time	To adapt standard fixed bridge construction designs to specific situation.
09	Time	To coordinate for and receive engineer assets to perform task.
10	Time	To prepare construction directive or operation order to construct or maintain a fixed bridge. This directive states exact assignment, project location, and start and completion times; specifies additional personnel, equipment, and materials available;

		prioritizes projects; and specifies type and frequency of construction reports, time needed for special procurement, and required coordination with user agency.
11	Time	To perform location survey to establish permanent benchmarks for vertical control and well-marked points for horizontal control.
12	Time	To monitor construction and perform quality assurance inspections.
13	Time	To perform construction layout survey.
14	Percent	Of difference between planned and actual requirements for fixed bridge construction or maintenance in the area of operations (AO).
15	Percent	Of force becoming casualties due to enemy actions or accidents while building or maintaining fixed bridges.
16	Percent	Of increase in the throughput capability of a line of communications or main supply route because of the replacement of tactical assault bridges with fixed bridges.
17	Percent	Of planned fixed bridge construction or maintenance capability completed in AO.
18	Percent	Of personnel in AO required for building and maintaining fixed bridges.
19	Percent	Of fixed bridge construction or repair capability provided by host nation.
20	Percent	Of existing fixed bridges repaired or improved in AO.
21	Percent	Of existing fixed bridges in AO that can be used in current condition.
22	Percent	Of unit operations degraded, delayed, or modified in AO due to an inability to use existing fixed bridges.
23	Percent	Of fixed bridges in the AO damaged by enemy fire or natural disaster.
24	Percent	Of tactical assault bridging in the AO replaced by fixed bridges.
25	Number	Of fixed bridge kits available for employment in the AO.
26	Number	Of fixed bridges constructed, improved, or rehabilitated in the AO.

27	Number	Of existing fixed bridges in the AO requiring maintenance or repair.
28	Number	And types of fixed bridges in the AO damaged by enemy fire or natural disaster.
29	Number	Of meters of gaps crossed by fixed bridges constructed, improved, or repaired in the AO within a given time.
30	Number	Of instances of delays in scheduled arrivals due to the destruction or damage of fixed bridges in the AO by combat actions or natural disaster.
31	Number	Of instances in which troop movement or sustaining operations were prevented due to an inability to use a fixed bridge.
32	Number	Of tons per day of bridge construction supplies required in the AO.
33	Number	Of inspections of fixed bridges performed per month in the AO.

### Supporting Collective Tasks:

Task No.	Title	Proponent	Echelon
05-2-0607	Construct a Bailey Bridge	05 - Engineers (Collective)	Company
05-3-0623	Construct a Ribbon Bridge	05 - Engineers (Collective)	Platoon
05-3-1023	Use Helicopters in Float-Bridge (Ribbon) Construction	05 - Engineers (Collective)	Platoon
05-3-5200	Construct a Nonstandard Fixed Bridge	05 - Engineers (Collective)	Platoon
05-3-5201	Construct a Bridge Abutment	05 - Engineers (Collective)	Platoon
05-3-5202	Reinforce a Existing Bridge	05 - Engineers	Platoon

		(Collective)	
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