



MURPH'S MODELS

The GBU-43/B Massive Ordnance Air Blast (MOAB) commonly known as the "Mother Of All Bombs" is a large-yield bomb, developed for the United States military by Albert L. Weimorts, Jr. of the Air Force Research Laboratory. At the time of development, it was touted as the most powerful non-nuclear weapon in the American arsenal. The bomb is designed to be delivered by a C-130 Hercules, primarily the MC-130E Combat Talon I or MC-130H Combat Talon II variants.

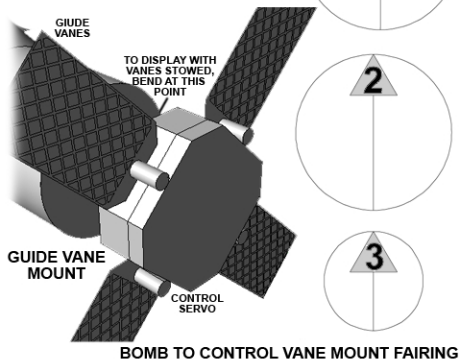
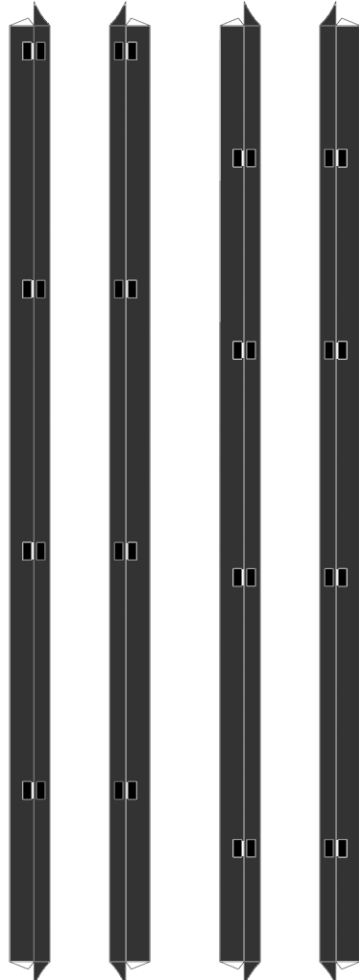
The first operational usage of the MOAB was during the 13 April 2017 airstrike against Islamic State of Iraq and Syria militants in Afghanistan.

The MOAB is the largest conventional bomb ever used in combat.

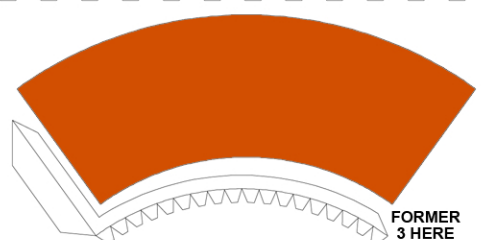
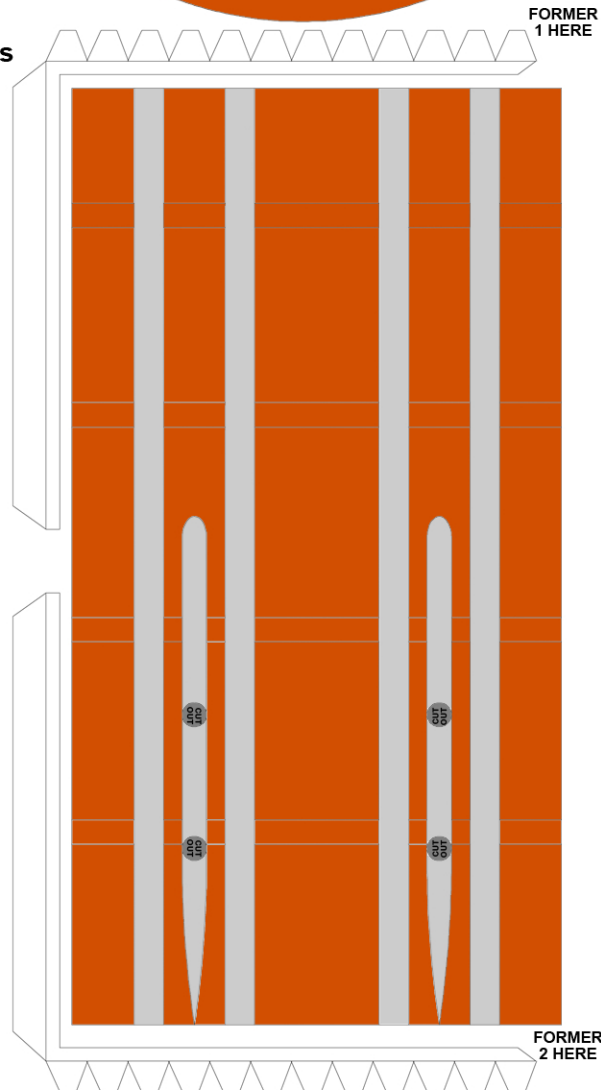
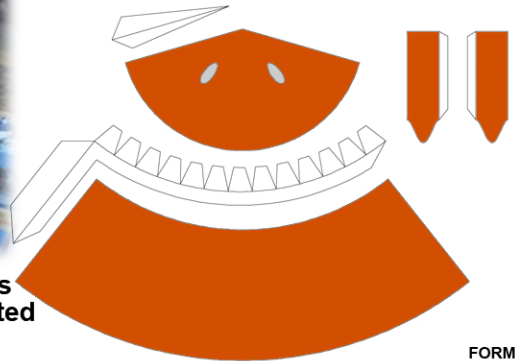
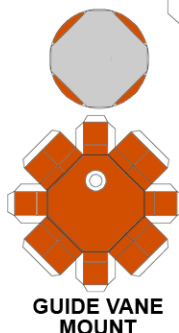
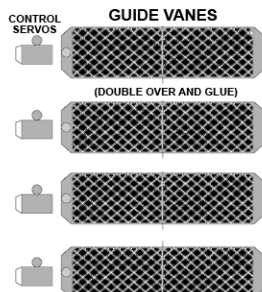
MOUNTING RAILS

TOP

BOTTOM



BOMB TO CONTROL VANE MOUNT FAIRING



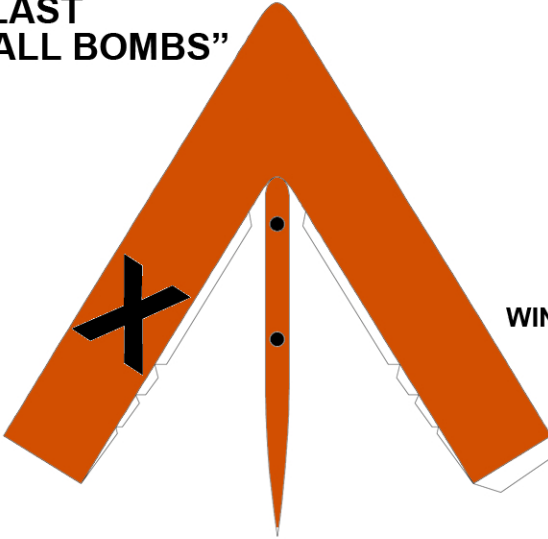
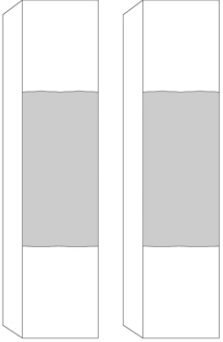
U.S.ARMY
GBU-43/B

MASSIVE ORDNANCE
AIR BLAST

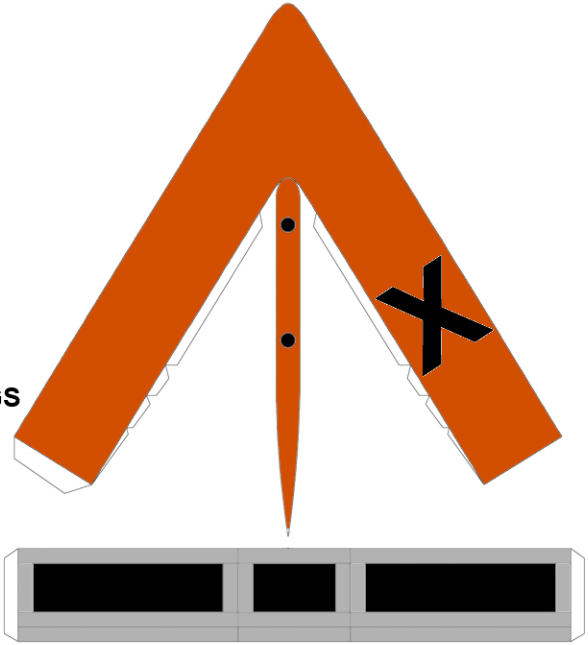
“MOTHER OF ALL BOMBS”

MURPH'S MODELS

WING SUPPORTS
(ROLL AND SLIDE
THROUGH BODY)

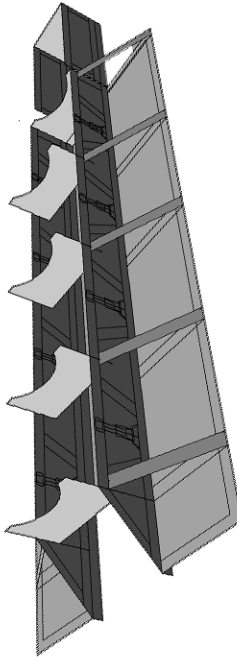


WINGS



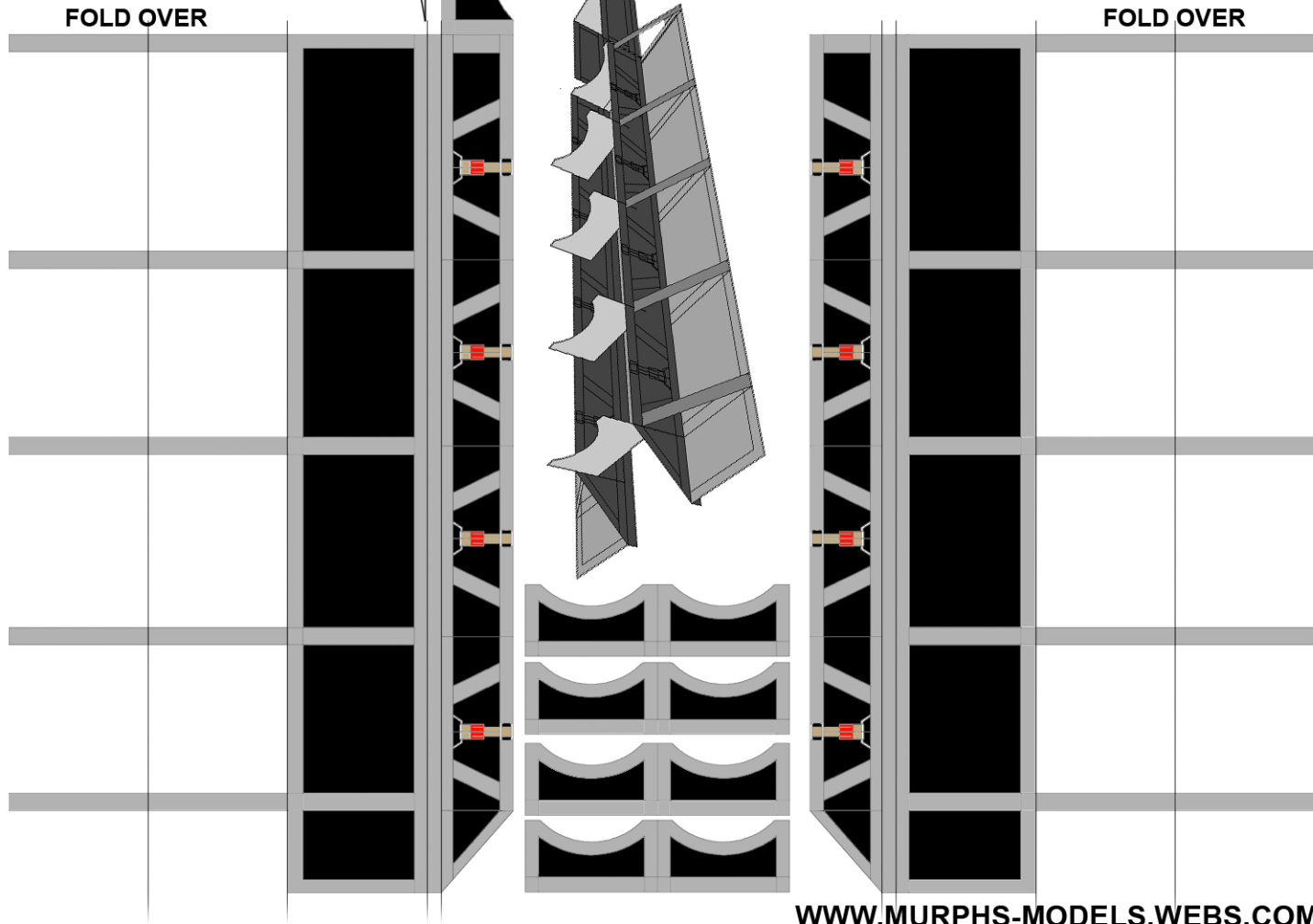
FOLD INTO
THIS
SHAPE

BOMB CRADLE



FOLD OVER

FOLD OVER

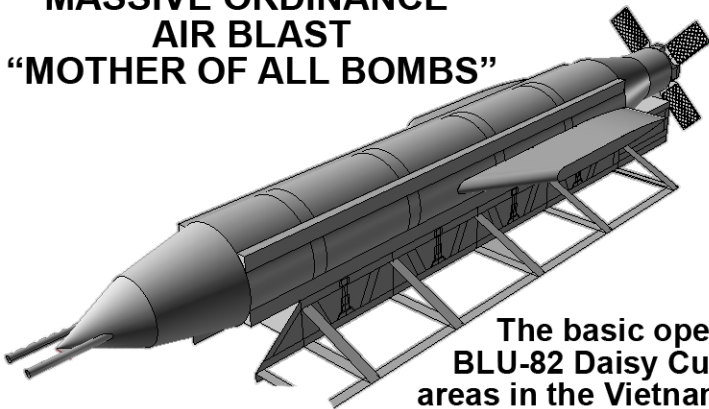


U.S.ARMY GBU-43/B

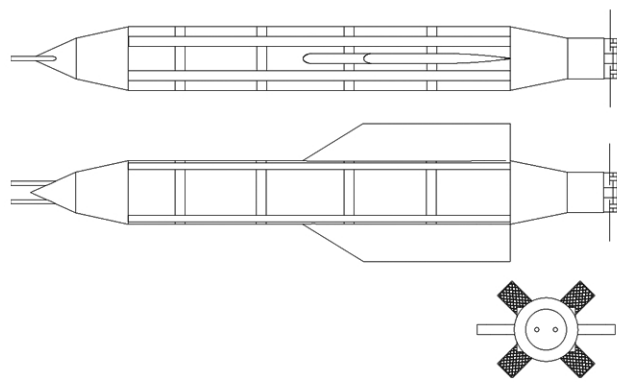
MASSIVE ORDINANCE

AIR BLAST

"MOTHER OF ALL BOMBS"



MURPH'S MODELS

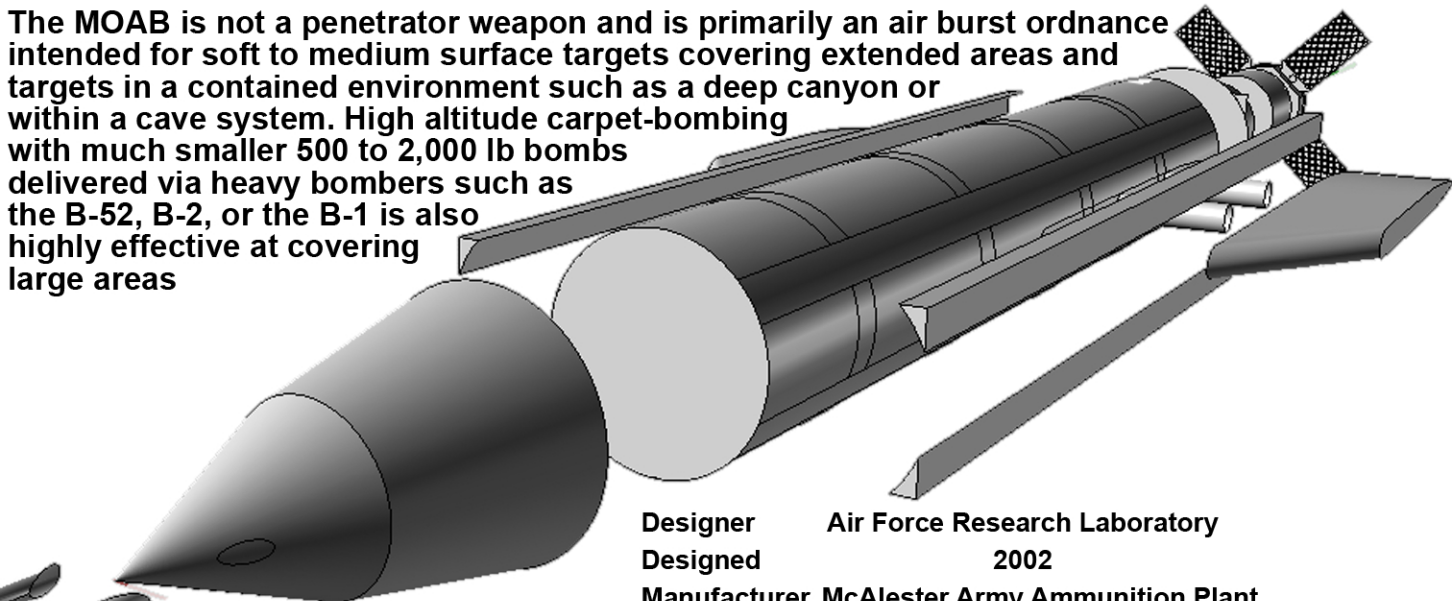


The basic operational concept bears some similarity to the BLU-82 Daisy Cutter, which was used to clear heavily wooded areas in the Vietnam War. Decades later, the BLU-82 was used in

Iraq, first to clear mines and later as a psychological weapon against the Iraqi military. Its success as a weapon of intimidation led to the decision to develop the MOAB. Pentagon officials suggested MOAB might be used as an anti-personnel weapon, as part of the "shock and awe" strategy integral to the 2003 invasion of Iraq.

GBU-43s are delivered from C-130 cargo planes, inside which they are carried on cradles resting on airdrop platforms. The bombs are dropped by deploying drogue parachutes, which also extract the cradle and platform from the aircraft. Shortly after launch, the drogues are released and bombs fall unretarded. GPS satellite-guidance is used to guide bombs to their targets.

The MOAB is not a penetrator weapon and is primarily an air burst ordnance intended for soft to medium surface targets covering extended areas and targets in a contained environment such as a deep canyon or within a cave system. High altitude carpet-bombing with much smaller 500 to 2,000 lb bombs delivered via heavy bombers such as the B-52, B-2, or the B-1 is also highly effective at covering large areas



Designer	Air Force Research Laboratory
Designed	2002
Manufacturer	McAlester Army Ammunition Plant
Produced	2003
No. built	15
Weight	21,600 lb
Length	30 ft 1.75 in
Diameter	40.5 in
Filling	H-6
Filling weight	18,700 lb
Blast yield	22,000 lbs of TNT

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