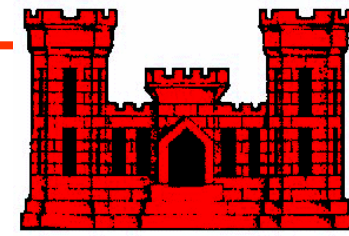


**Temporary Restoration of
French Port Facilities
Normandy Invasion - Summer
1944
(Cherbourg, LeHavre, Brest)**

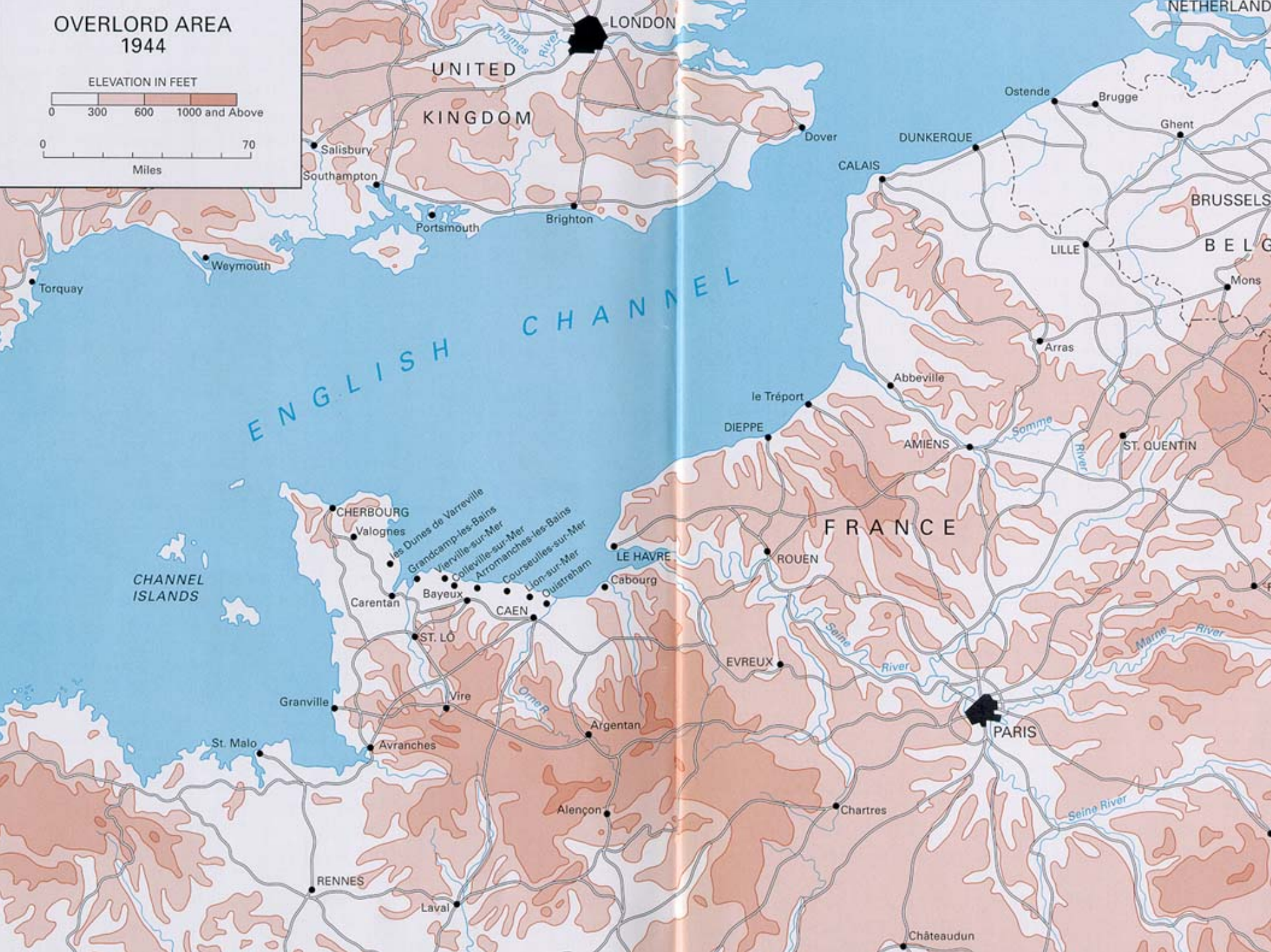
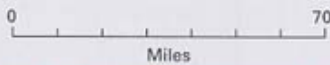


SUNKEN SHIPS in the harbor at Naples converted into piers for the berthing of Allied ships.

Port Restoration - WWII

OVERLORD AREA 1944

ELEVATION IN FEET





UNITED KINGDOM

FLANDERS

BELGIUM

GERMANY

Lille

Amiens

Le Havre

Rouen

Reims

Metz

LUXEMBOURG

Channel Islands (UK)

Caen

ÎLE DE-

PARIS

LOTTRE

Nancy

Strasbourg

Brest

BRITTANY

Rennes

Le Mans

Orléans

ANJOU

Angers

Tours

Dijon

Mulhouse

ALSACE

LIECH.

SWITZERLAND

Nantes

POITOU

FRANCE

BURGUNDY

Clermont-Ferrand

Limoges

Lyon

Saint-Étienne

Grenoble

Bordeaux

AQUITAINE

AUVERGNE

SAVOIE

ITALY

BASQUE COUNTRY

Toulouse

Montpellier

Nimes

PROVENCE

MONACO

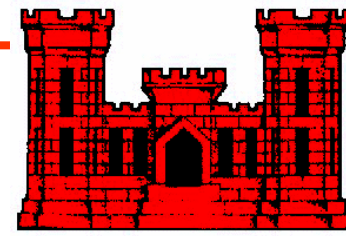
Aix (-en-Provence)

Nice

Marseille

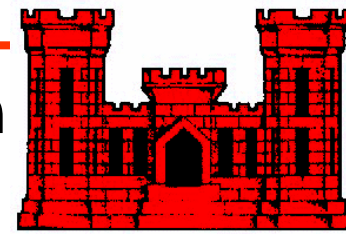
Toulon

Perpignan



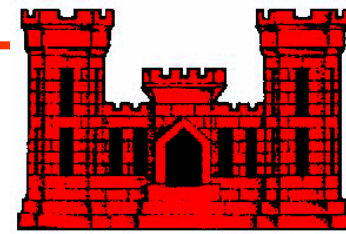
US Army Engineer Divers first appeared in World War II. During the war there were massive buildups of divers who were placed in Port Construction and Repair Groups. These groups were trained in Georgia and consisted of 17 officers and 235 enlisted men.

The Germans surrendered Cherbourg on D+20 (26 JUN 44), and the next day 18 engineer units, led by the 1056th Engineer Group, began reconstruction of Cherbourg.

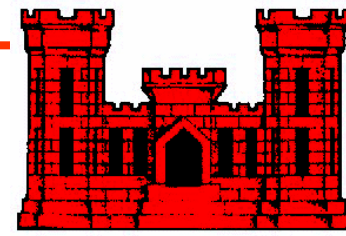


Cherbourg Harbor

By 1 November, when the group was ordered to the Albert Canal area, engineers had completed facilities for unloading 25,000 tons a day, well over the planned figure of 7,900 tons a day.



Scuttled Ship at Cherbourg



Graduated USMA West Point 1924

Alaska Road Commission 1927-29

Instructor Missouri School of Mines

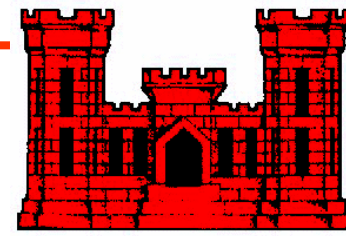
CONUS Army Airfield Construction

Reconstruction of Ports 1944-45

**Chief of Engineers from Oct 1956
to Mar 1961**



LTG Emerson C. Itschner

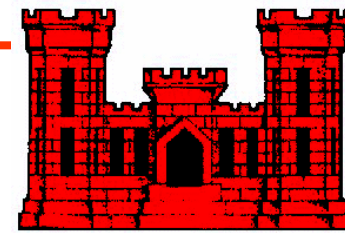


The enemy had made a big mistake at Cherbourg and the engineers turned it to their advantage. Lt. Gen. Emerson Itschner, then a colonel recalled the situation:

"The Germans were kind enough to leave us a lot of very heavy steel beams, one meter in depth and up to 75 feet long. We had enough of these to bridge from the piles that we drove back to the seawall."

Exploitation of the mistake did not stop with reopening the Port of Cherbourg. The engineers noted that all the beams bore the name of a single steel mill, Hadir in Differdange, Luxembourg. Right then Itschner decided they would head for Differdange. So, as soon as the town fell, the engineers were there.

They were not disappointed. The Hadir plant was intact and the citizens were eager to reopen it. After a little repair and cannibalization, Hadir began once again to produce meter beams. In a short time, these beams were put to many important uses, including building the massive railroad bridges across the Rhine.



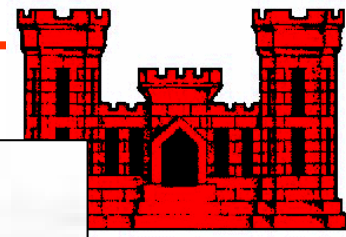
Le Havre, K2,
(ND615), 10 Sep
1944, 18:44
hours
10,000 feet,
Bomb load: 13
x 1,000, 4 x 500.
Good weather,
wizard prang,
Bomb from
8,000 feet, 1,000
aircraft

Port Restoration - WWII

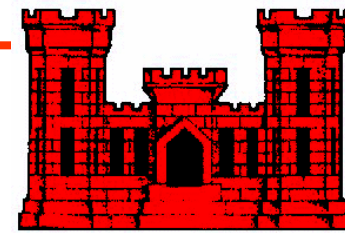


Basin de l'Eure within the locks at Le Harve, France

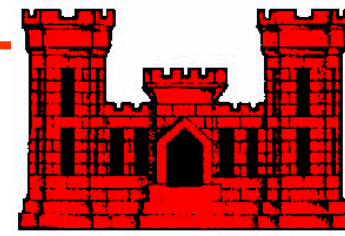
Port Restoration - WWII



Port at Brest, France



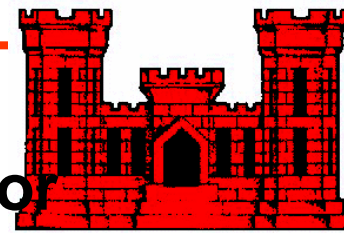
Brest : Le Port de Guerre



Brest : Port de commerce

Port Restoration - WWII

Seagoing diesel-electric hydraulic dredging vessels, under the Corps of Engineers control for maintaining and improving the coastal and harbor channels around the U.S. coasts.



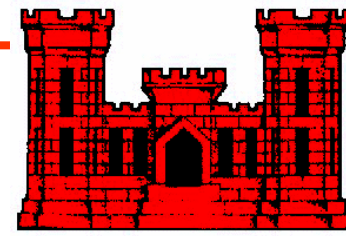
Port Restoration - WWII

Dredge Vessels



These were substantial and complex vessels, around 300 feet long, 3,000-ton displacement, and a crew complement of 60-plus men. They were seagoing diesel-electric hydraulic dredging vessels, normally functioning under Corps of Engineers control, maintaining and improving the coastal and harbor channels around the U.S. coasts.

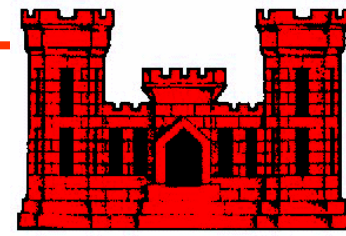
Four of them—the *Marshall*, *Rossell*, *Harding* and *Hoffman*—were "militarized" by adding a couple of 3-inch gun turrets, fore and aft, and two 20-millimeter machine gun turrets midships, along with crew quarters for a complement of about 12 Navy personnel who were to man the armament.



FM 5-480

PORT CONSTRUCTION AND REPAIR

“Until recently, scientific design criteria for shore protection developed slowly. Long trial and error expedience led to structures best suited to local conditions. Engineers had to experiment to find a suitable protected site long enough for an inner harbor without the rapid shoaling of channel approaches. The history of early structures and construction methods is practical background for new construction.”



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