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TECHNICIAN TRAINING FOR THE CONSERVATION OF MOSAICS

PART 1
THE CONSERVATION OF IN SITU MOSAICS

Creating graphic and photographic bases for graphic documentation



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Graphic documentation for conservation

Graphic documentation enables the accurate mapping of different types of deterioration phenomena of a mosaic and makes it possible to rapidly assess their extent and to pinpoint the location of previous and current interventions.

Creating a base is the first step in graphic documentation.

There are two types of bases:

Base drawing

Base photograph

TYPE OF BASE

Base drawing

METHODS TO PRODUCE A BASE

Set up a regular grid of strings over the mosaic and draw the mosaic directly to scale, using graph paper, based on measurements of the mosaic taken using the grid.

Draw the mosaic decoration by transferring to scale, on a sheet of millimeter graph paper, the geometric structure originally created in constructing the mosaic, and complete the decorative motifs by hand within the design structure (only in the case of geometric types of decoration).

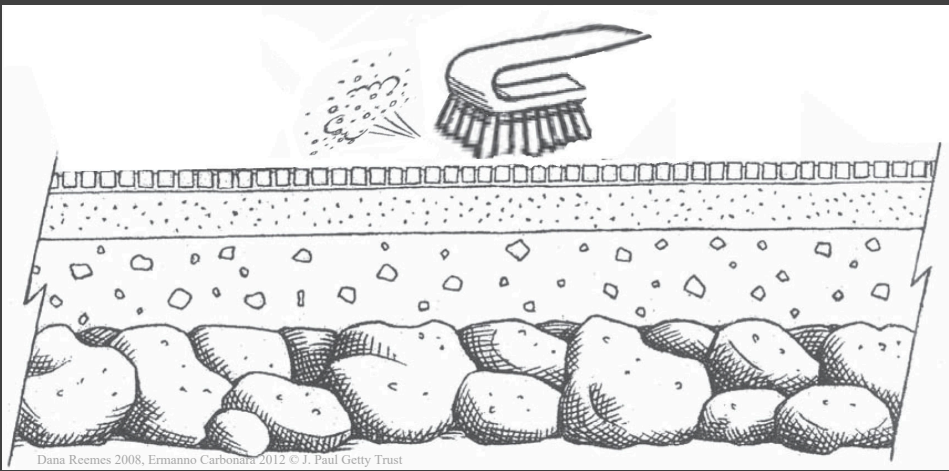
Photograph the mosaic in a single frame or by sectors and draw the mosaic on a transparent sheet overlaid on the single photograph or on the photomontage.

Obtain a copy of a drawing of the mosaic taken from a book or an archive.

Creating a base drawing

Measured drawing using a grid

The steps



Dana Reemes 2008, Ermanno Carbonara 2012 © J. Paul Getty Trust

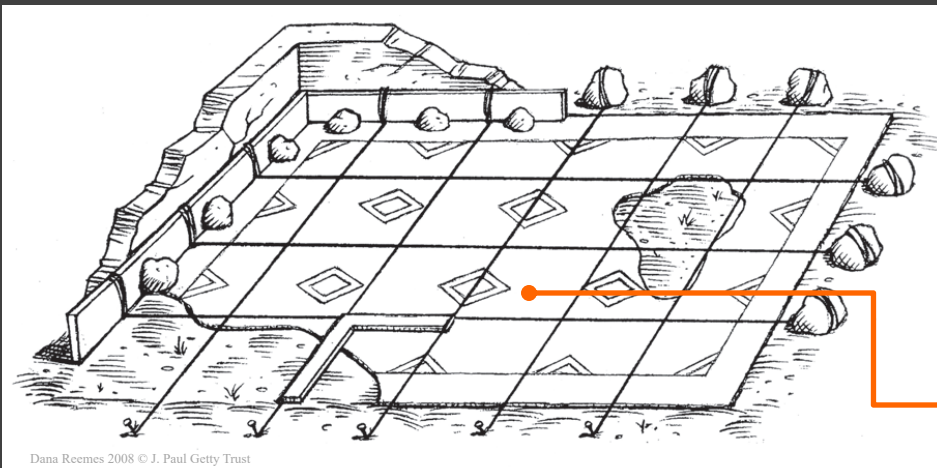
Remove dirt and sand from the mosaic surface with a soft brush, if it is possible to do so without damaging it.



Ermanno Carbonara 2012 © J. Paul Getty Trust



Ermanno Carbonara 2012 © J. Paul Getty Trust



Dana Reemes 2008 © J. Paul Getty Trust

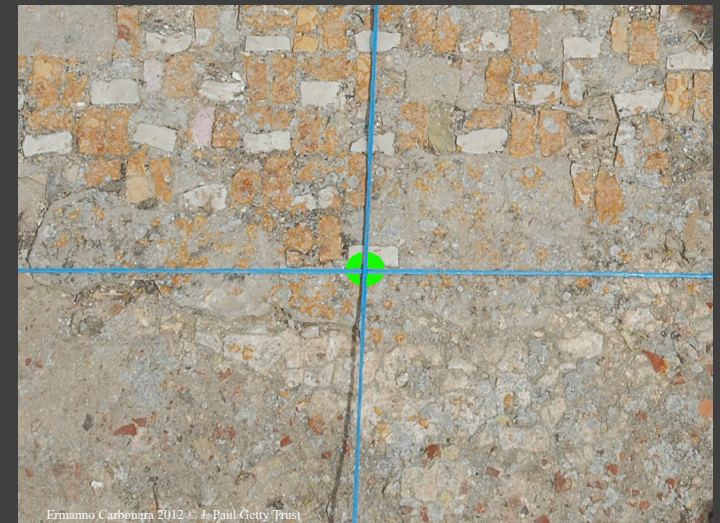
Set up a grid over the mosaic by stretching strings across it at regular intervals to create squares.

Squares of 50 cms

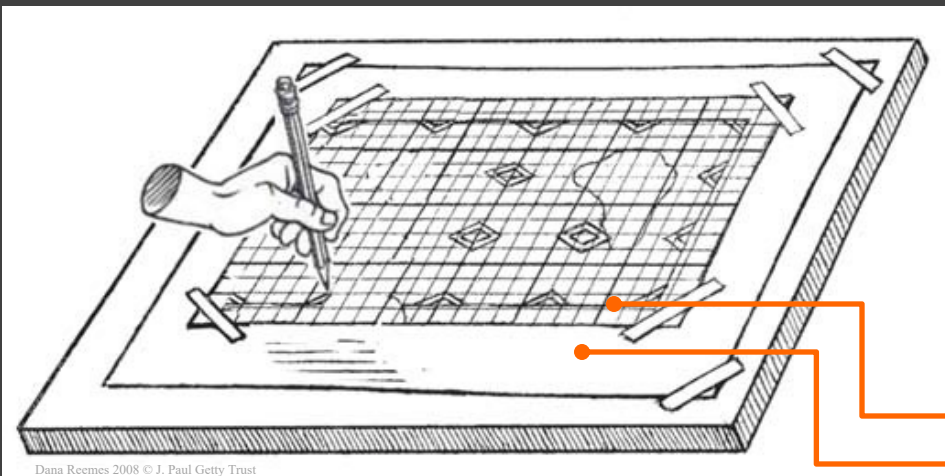


Espanno-Cathomas 2012 © J. Paul Getty Trust

Place adhesive labels on the mosaic surface where the strings intersect to mark the same points on the base drawing.



Espanno Carbonara 2012 © J. Paul Getty Trust



Dana Reemes 2008 © J. Paul Getty Trust

Draw with a pencil on the tracing paper the outline of the mosaic and its simplified design, by taking measurements of the mosaic and transferring them to scale on the tracing paper, using the graph paper grid. Also mark the grid intersection points.

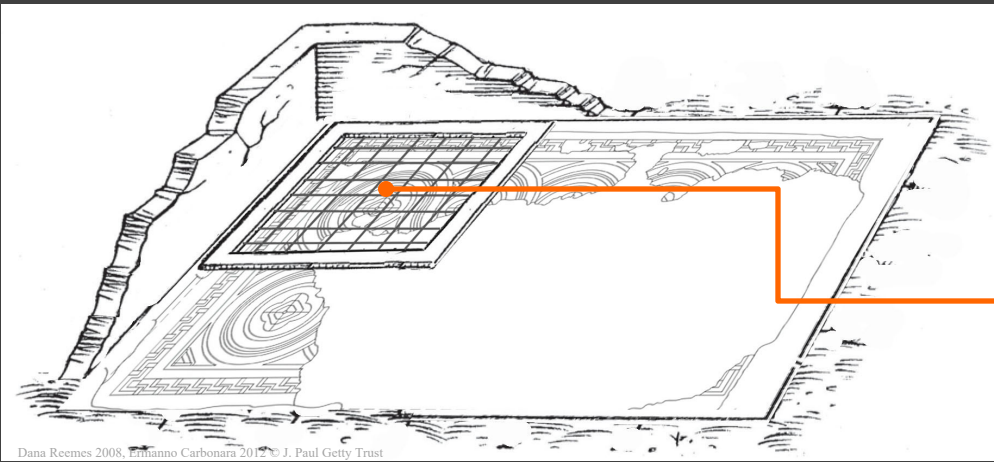
Millimeter graph paper
Tracing paper above



Ermanno Carbonara 2012 © J. Paul Getty Trust



Ermanno Carbonara 2012 © J. Paul Getty Trust



Dana Reemes 2008, Ermanno Carbonara 2012 © J. Paul Getty Trust

In the case of a complex geometric or figurative decoration, draw it with a pencil on tracing paper using a grid of smaller squares.

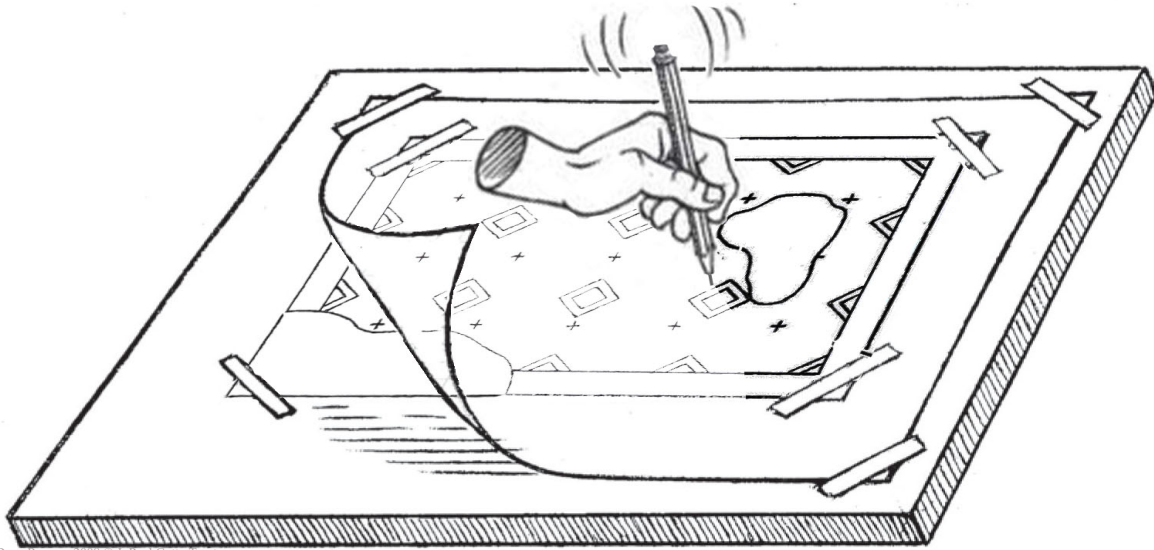
Squares of 10 cms



Ermanno Carbonara 2012 © J. Paul Getty Trust

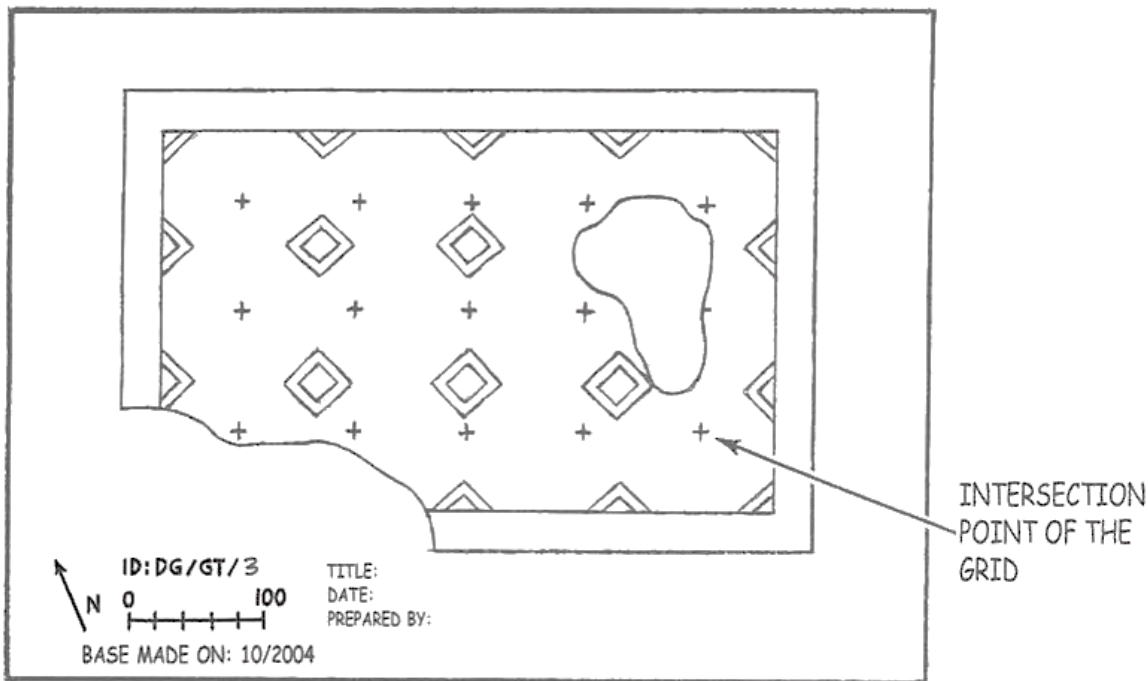


Ermanno Carbonara 2012 © J. Paul Getty Trust



Dana Reemes 2008 © J. Paul Getty Trust

Transfer the mosaic drawing with a 0.1 or 0.2 ultra-fine point pen, on a second tracing paper by retracing the outline made on the first sheet.



Dana Reemes 2008 © J. Paul Getty Trust

Label the base drawing with the following information:

ID:	<i>Mosaic ID</i>
BASE MADE ON:	<i>Date</i>
TITLE:	<i>Leave empty on the base</i>
DATE:	<i>Leave empty on the base</i>
PREPARED BY:	<i>Leave empty on the base</i>

Also add the graphic scale and an arrow indicating North.

Creating a base drawing

Direct drawing using the geometric structure of the decoration

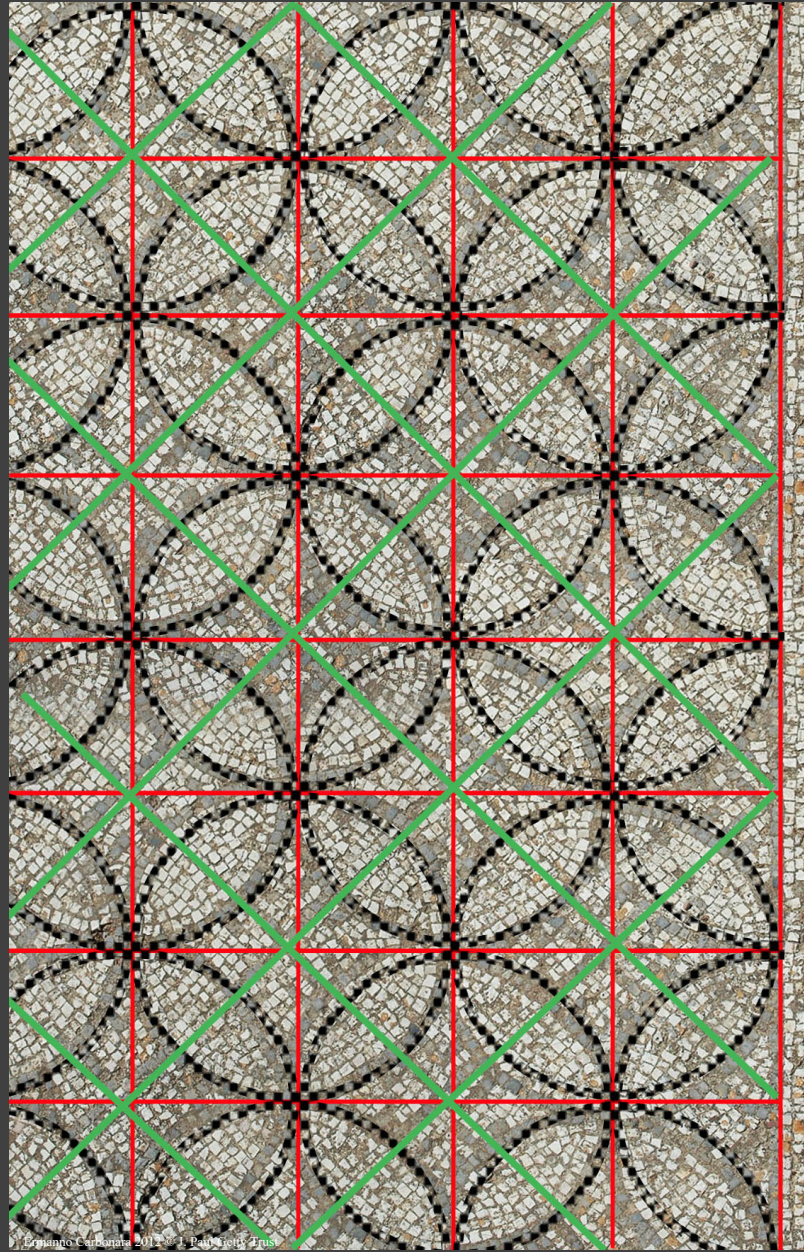
The steps



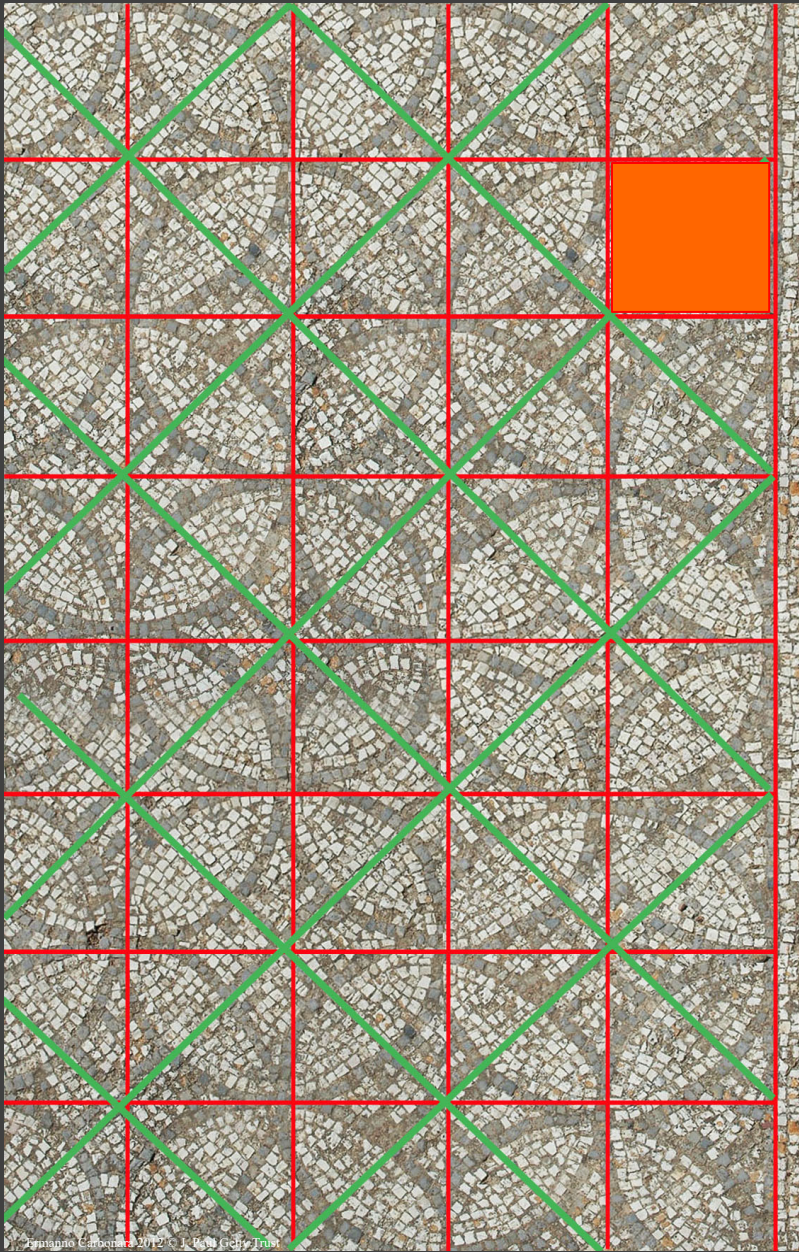
Manfredo Carbonaro 2012 © J. Paul Getty Trust



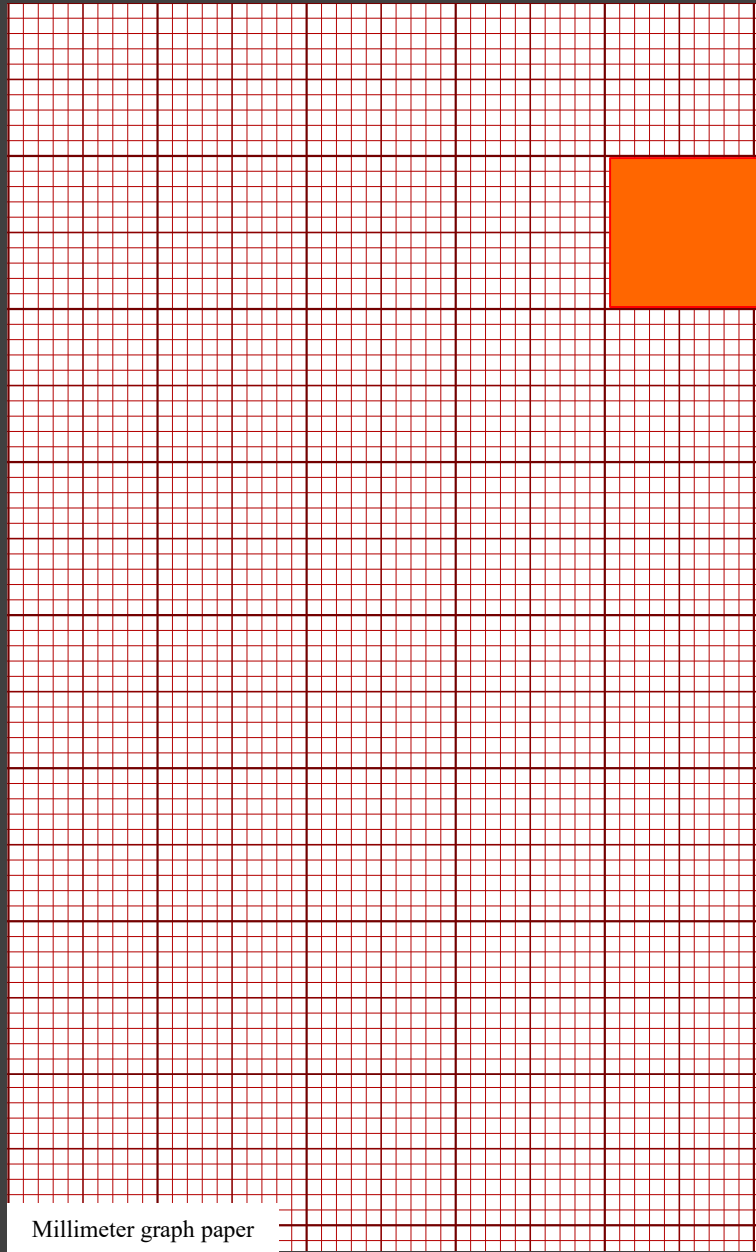
Ornamento Carbonara 2012 © J. Paul Getty Trust



Ornamento Carbonara 2012 © J. Paul Getty Trust

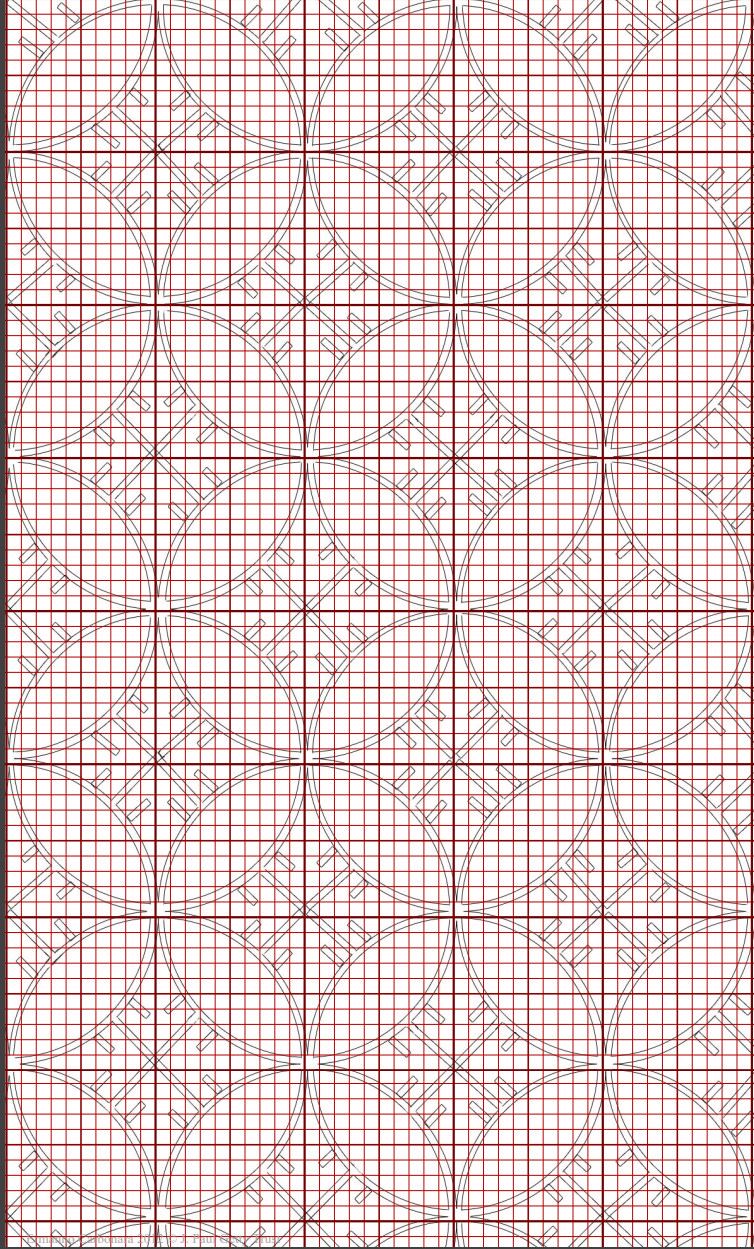
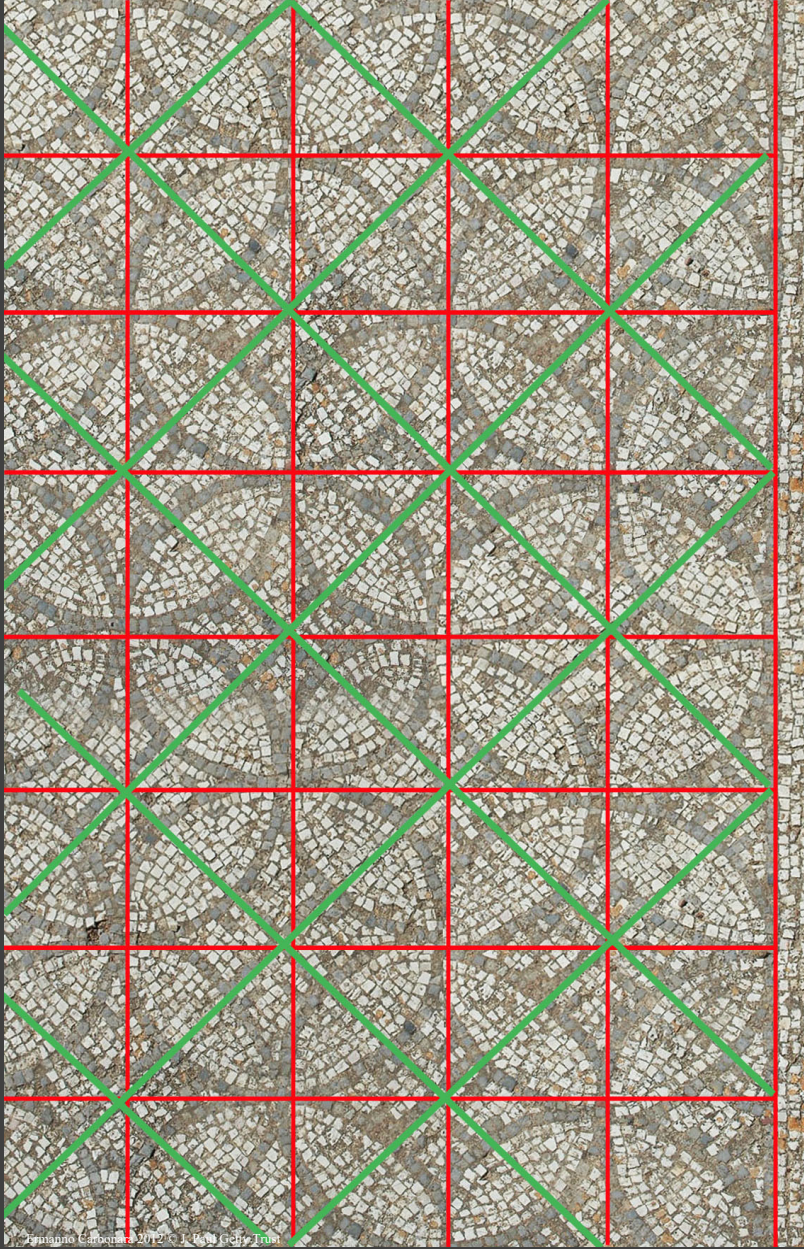


18 cm



Millimeter graph paper

1 cm

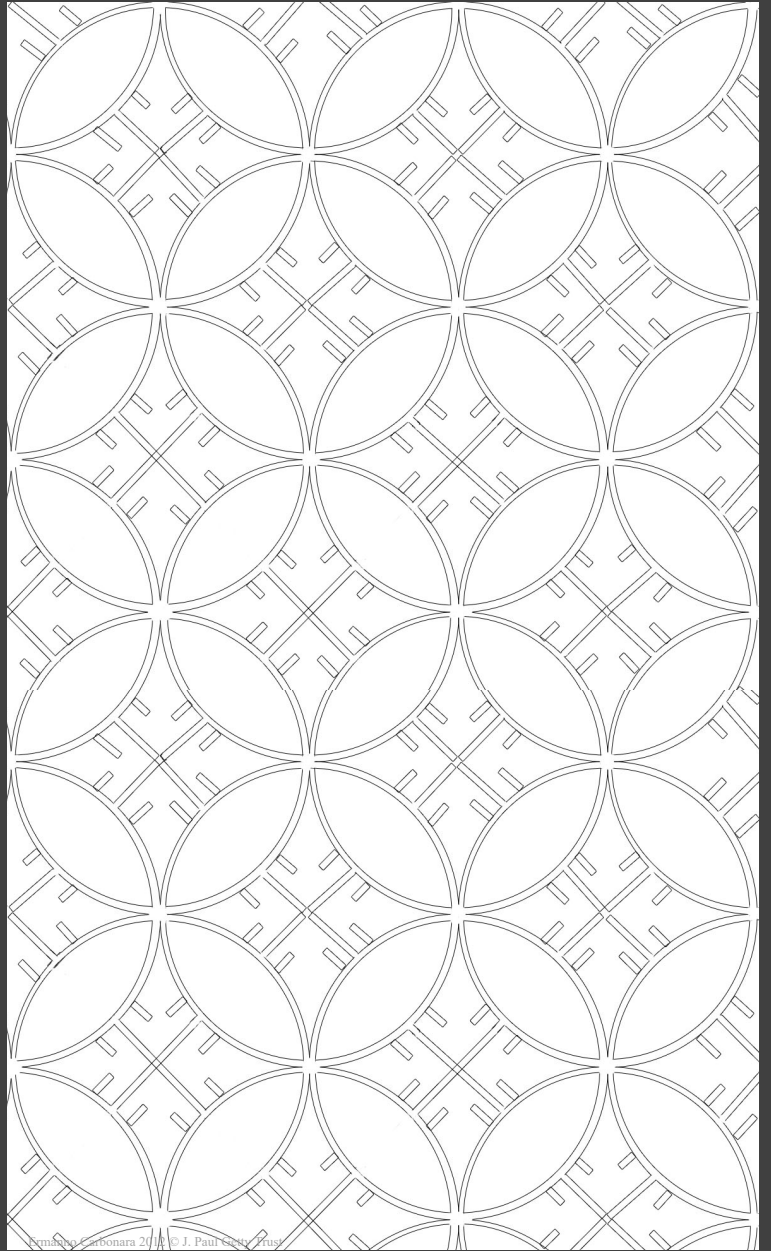


© Zemanio Carbone 2012 © J. Paul Getty Trust

www.getty.edu/conservation



Emmanio Carbonara 2012 © J. Paul Getty Trust



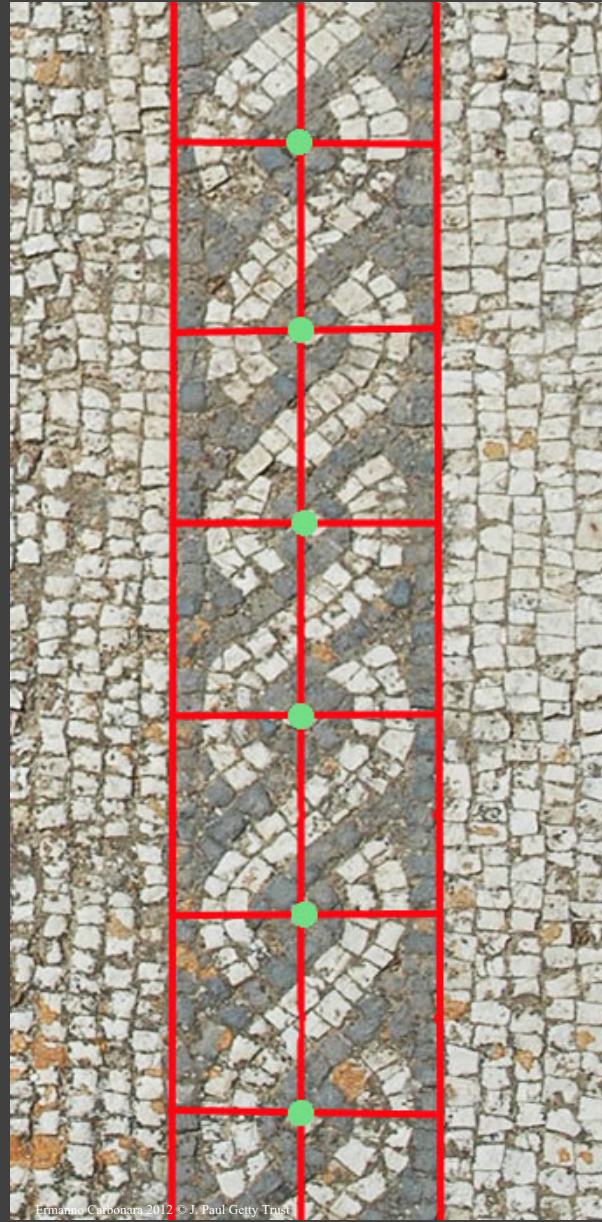
Emmanio Carbonara 2012 © J. Paul Getty Trust



Fra Mauro Carbonara 2012 © J. Paul Getty Trust



Ermanno Carbonara 2012 © J. Paul Getty Trust



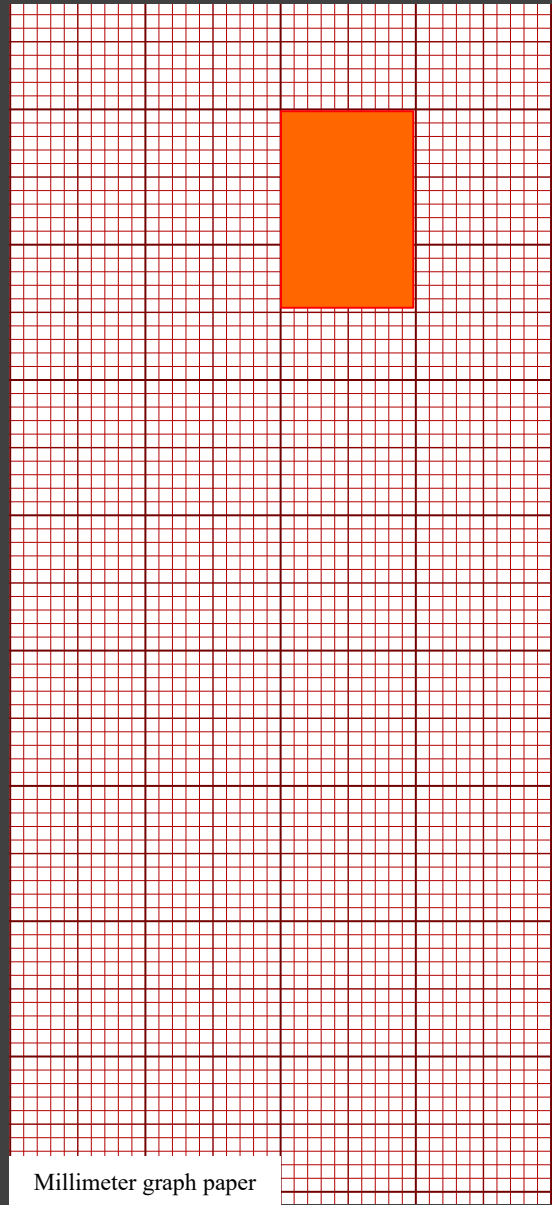
Ermanno Carbonara 2012 © J. Paul Getty Trust



7 cm

10.5 cm

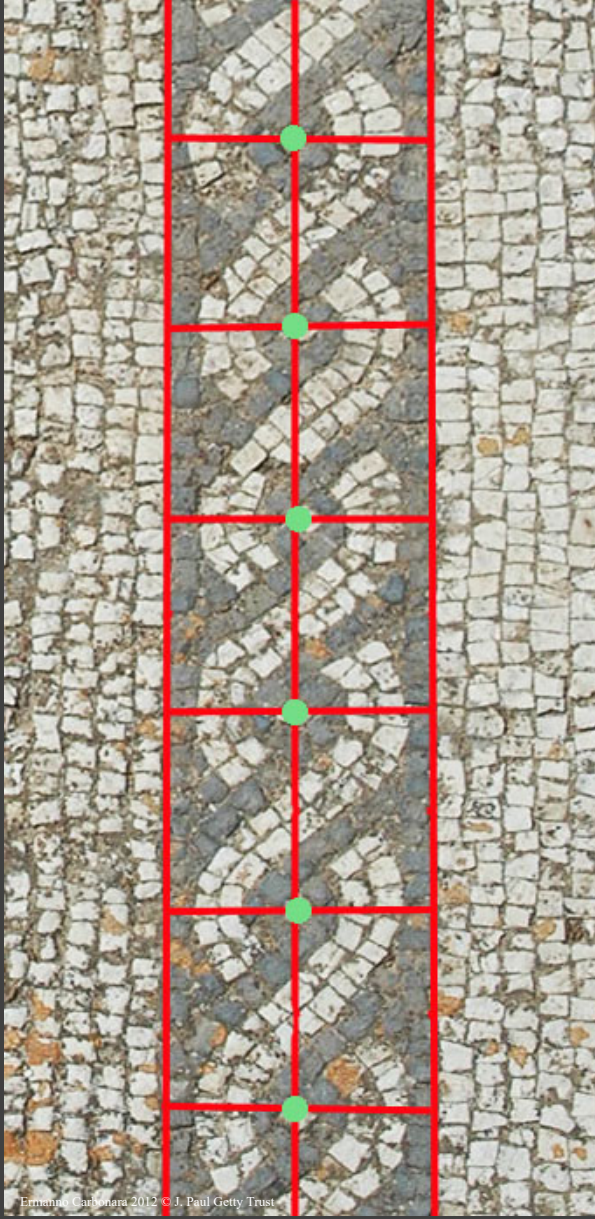
Franzino Carbonara 2012 © J. Paul Getty Trust



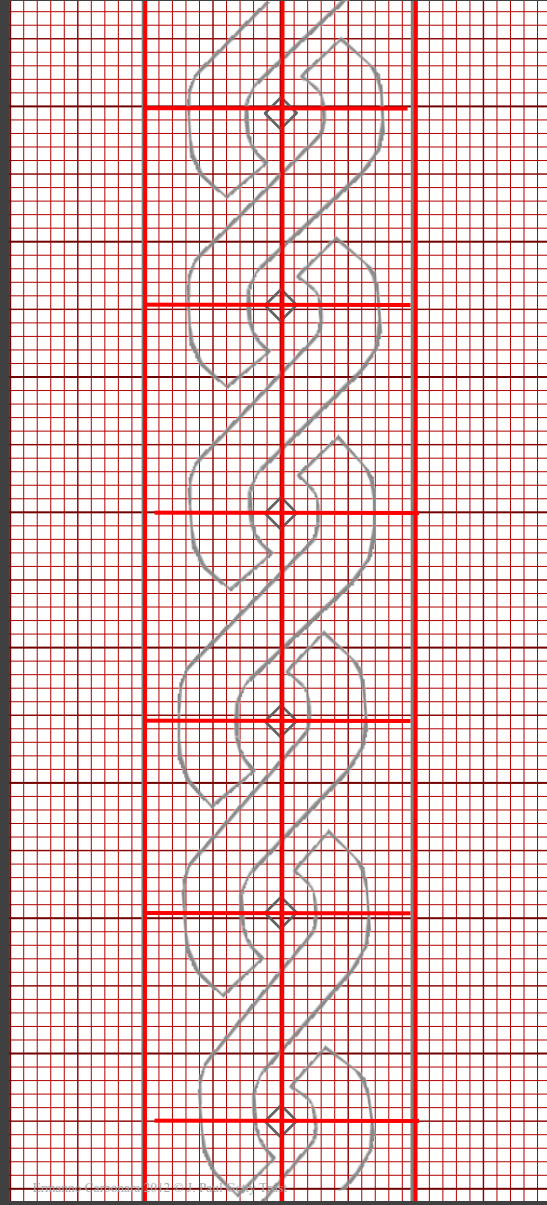
1 cm

1.5 cm

Millimeter graph paper



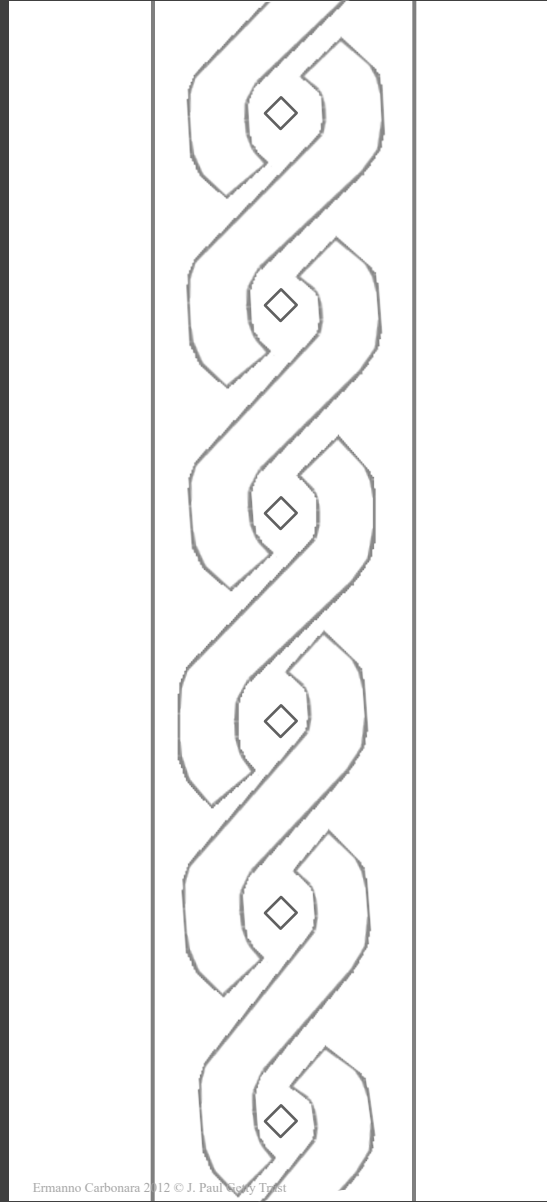
Emmano Carbonara 2012 © J. Paul Getty Trust



Emmano Carbonara 2012 © J. Paul Getty Trust



Ermanno Carbonara 2012 © J. Paul Getty Trust



Ermanno Carbonara 2012 © J. Paul Getty Trust



Creating a base drawing

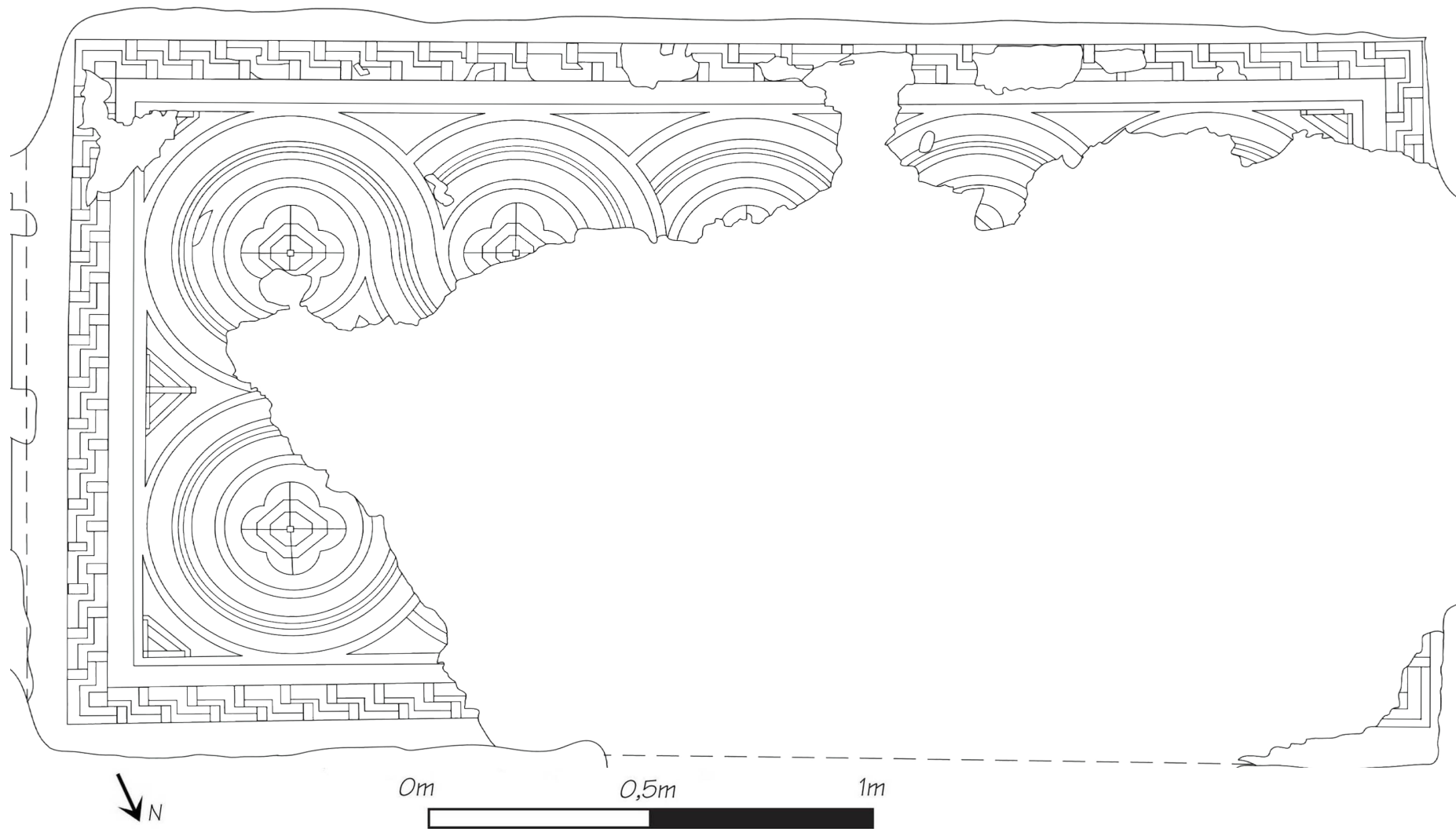
Tracing a mosaic on paper
over a photograph

The steps



Amel Chabbi 2005 Ermanno Carbonara 2012 © J. Paul Getty Trust





ID: HE/H2P/25

BASE MADE ON: 06/2005

TITLE:

DATE:

PREPARED BY:

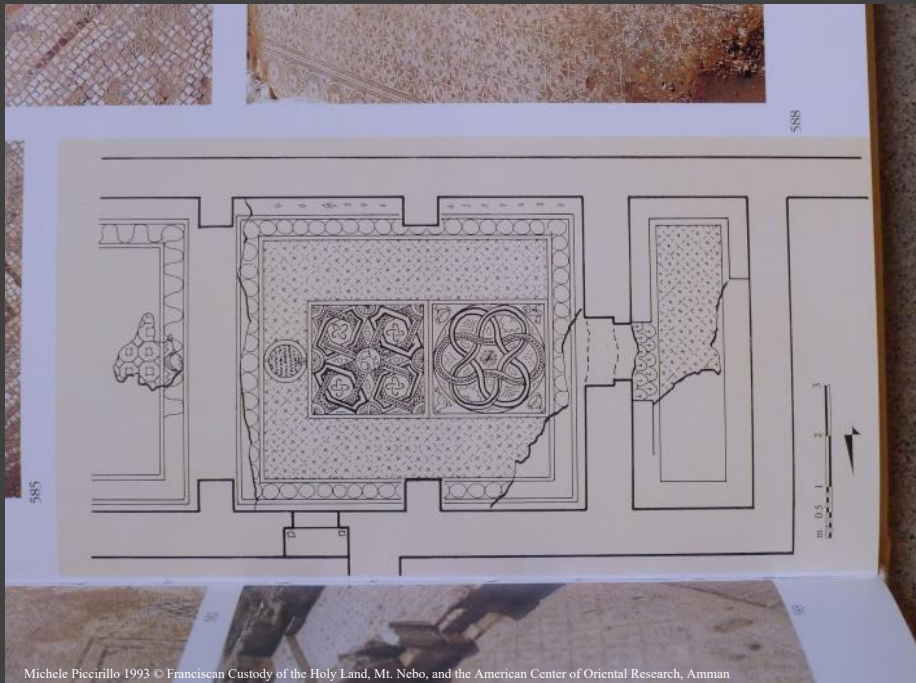
Creating a base drawing

Make a copy of a drawing of a mosaic taken
from a book or an archive

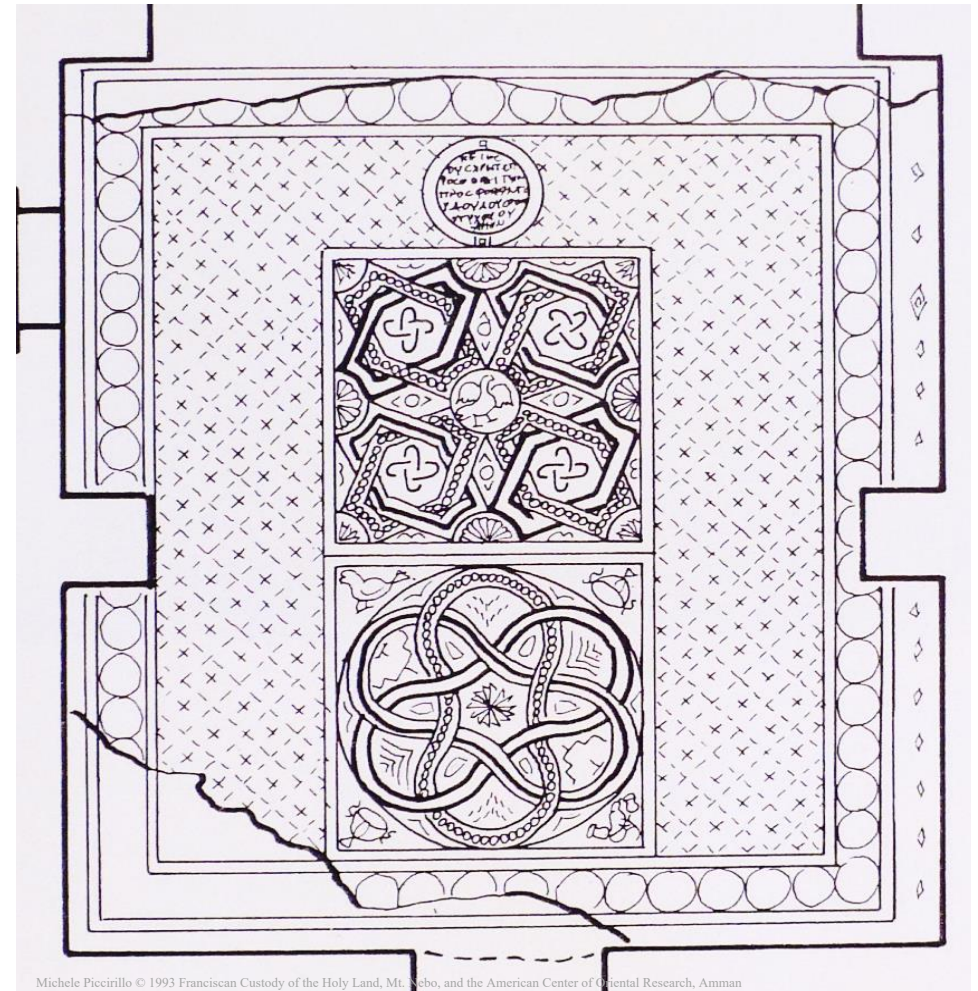
The steps



Livia Alberti 2012 © J. Paul Getty Trust



Michele Piccirillo 1993 © Franciscan Custody of the Holy Land, Mt. Nebo, and the American Center of Oriental Research, Amman



Michele Piccirillo © 1993 Franciscan Custody of the Holy Land, Mt. Nebo, and the American Center of Oriental Research, Amman



KM/Ch1/1

BASE MADE ON: 06/2014

TITLE:

DATE:

PREPARED BY:

TYPE OF BASE

Base photograph

METHODS TO PRODUCE A BASE

Take a single photograph of the mosaic and rectify it, if possible.

Photograph the mosaic by sectors and make a photomontage.

Obtain a copy of a photograph of the mosaic taken from a book or an archive.

Creating a base photograph

Take a single photograph of the mosaic

The steps

Take a photo of the mosaic from a high vantage point, with a metric scale as part of the image, and print the photo as it is to obtain a photographic base.



ID: HE/H2P/25

BASE MADE ON: 06/2015

TITLE:

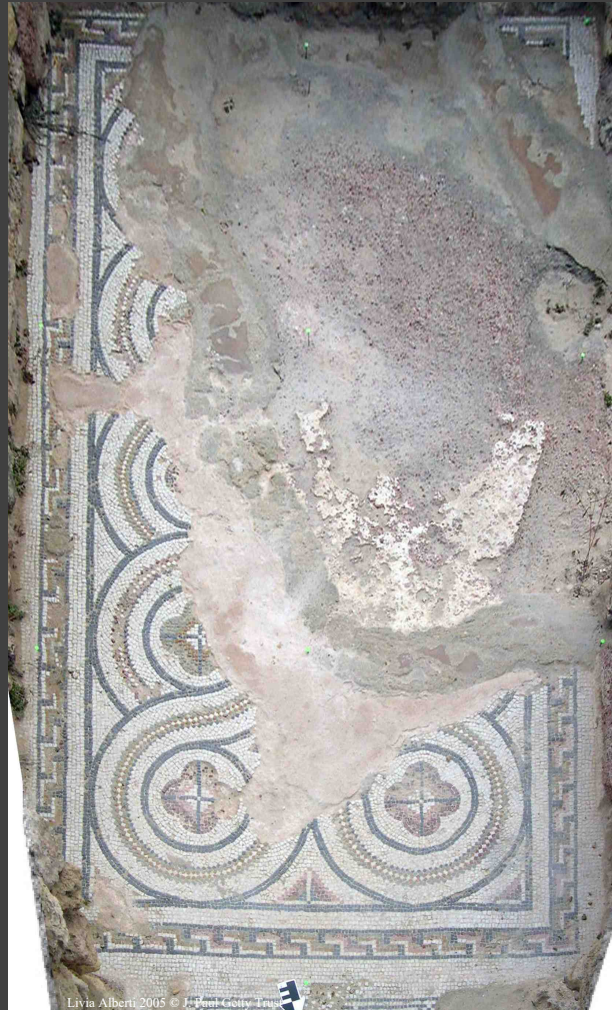
DATE:

PREPARED BY:

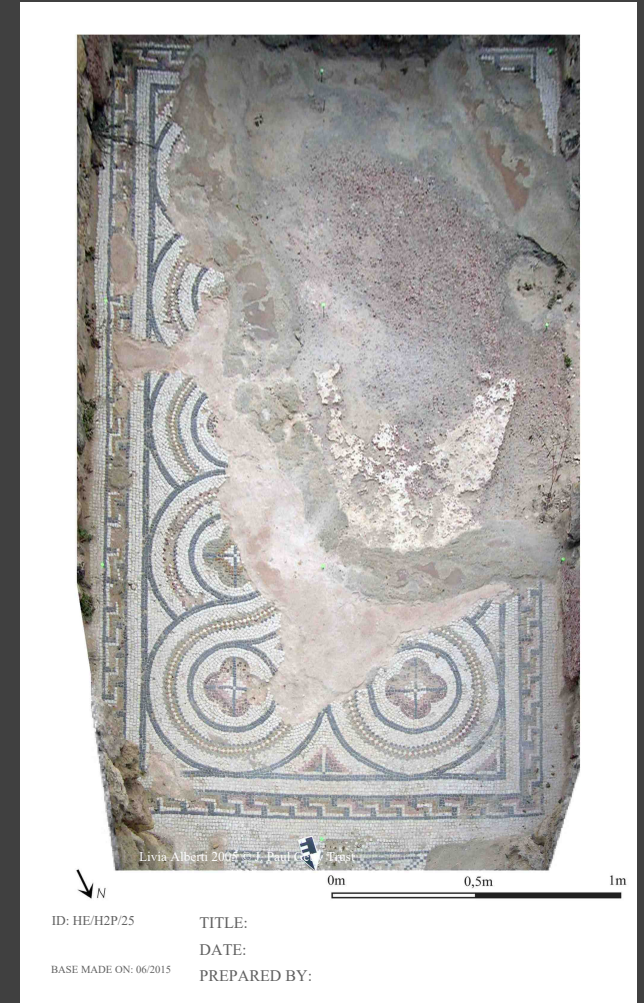
If possible, rectify the photo by computer to obtain a more correct image and make the photographic base.



Single photograph



Same photograph after computer rectification



ID: HE/H2P/25

TITLE:

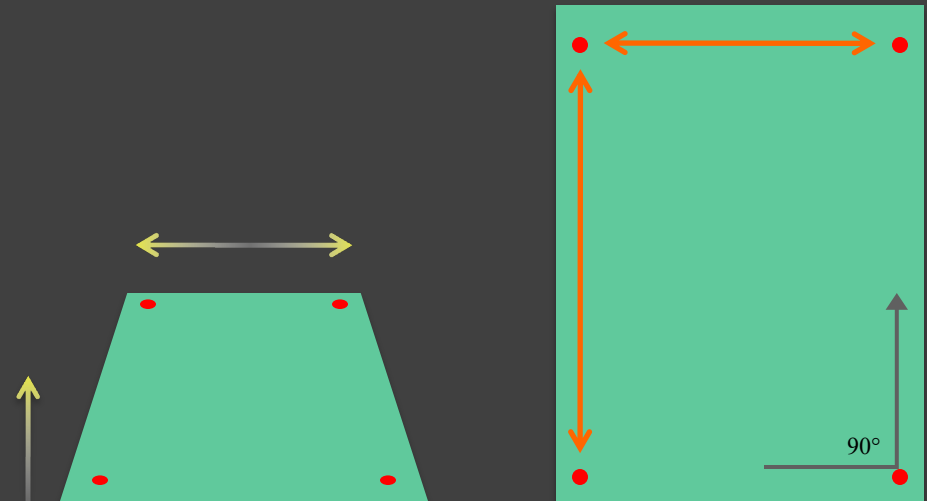
BASE MADE ON: 06/2015

DATE:

PREPARED BY:

Rectification of a single photo

Transform the photograph with an appropriate software.



With photo rectification, mosaic sides return to their correct proportion (3m x 2m) and angles to their correct degree.

Rectification of a single photo

 Area of greatest image distortion



Schematic representation of mosaic photographs taken at three different heights



Effects of the photo rectification

Different techniques to take a photograph from a high vantage point



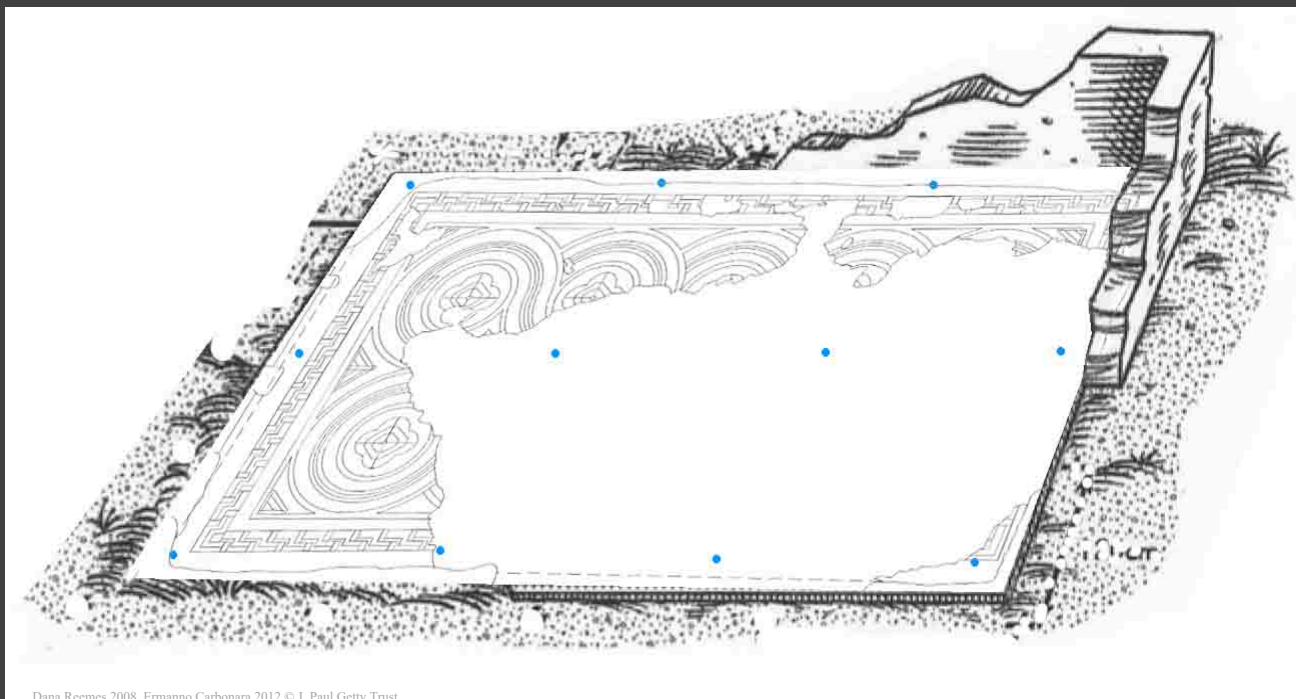
Creating a base photograph

Take photographs by sectors and create a
montage of the photographs

The steps

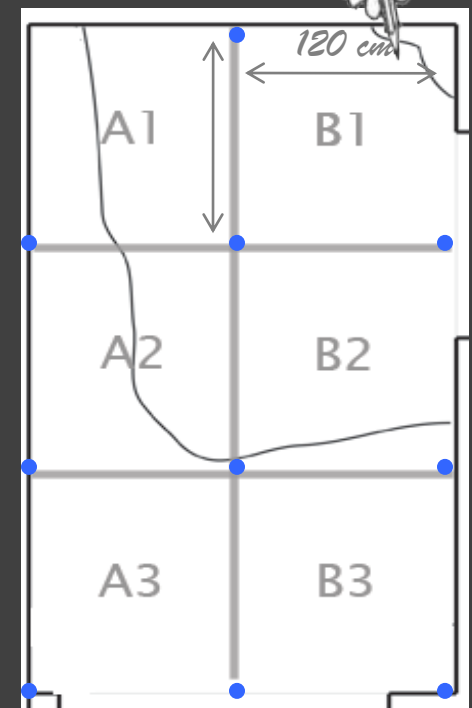
Divide the entire mosaic surface in square or rectangular sectors, of identical size, marking on the mosaic surface the sector corners with adhesive labels.

Make a schematic drawing of the mosaic with the sectors and note their numbers and dimensions.



Dana Reemes 2008, Ermanno Carbonara 2012 © J. Paul Getty Trust

Mosaic sectors marked with adhesive labels



Schematic drawing with sectors and their dimensions

Photograph each mosaic sector from a high vantage point, including in the frame the complete area with at least a border width of 20 cm. To obtain a good photo for the photomontage, maintain a height of 2 m from the surface of the mosaic.

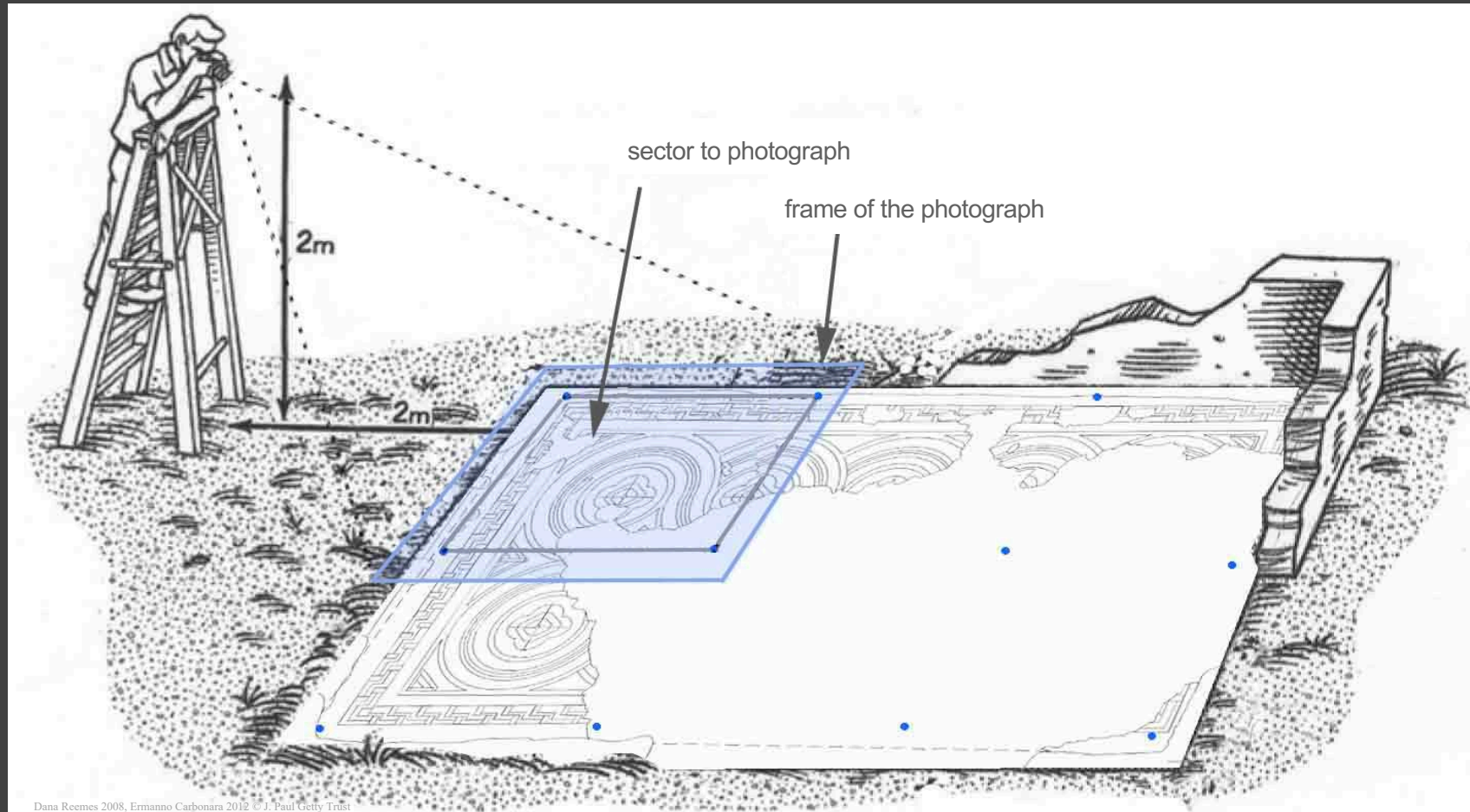
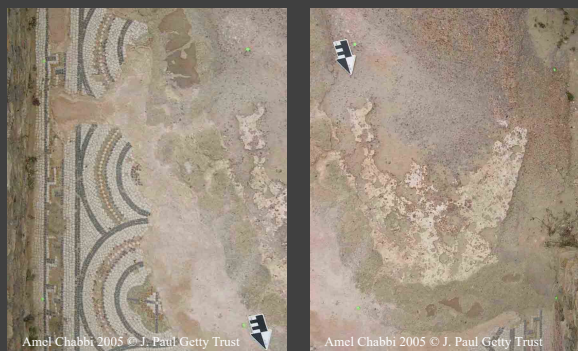
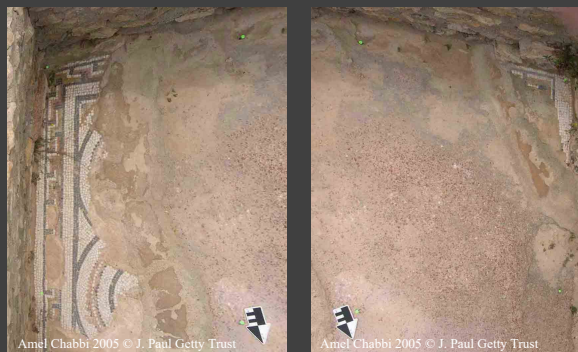
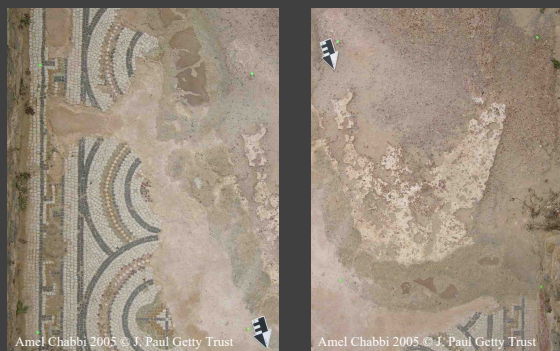
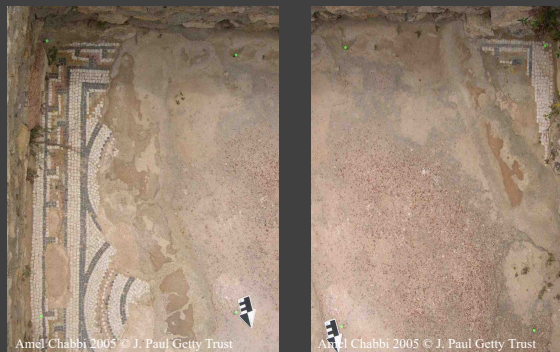


Image framing while taking the photos

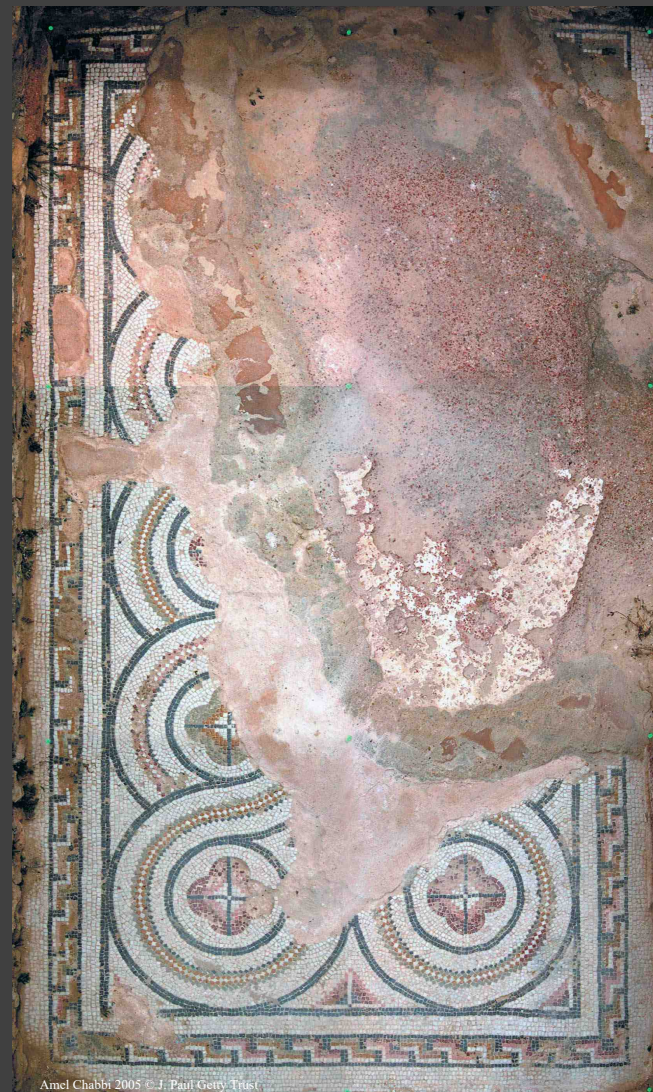
Photographic montage



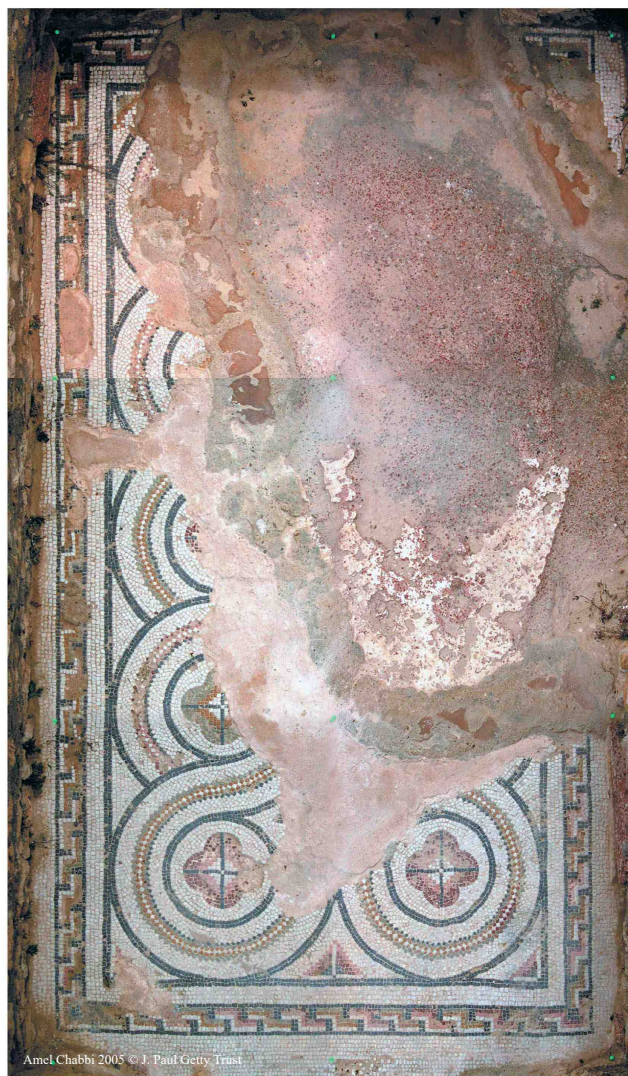
All mosaic sectors before
photo rectification



All mosaic sectors after
photo rectification



Mosaic image after the montage of all
the photographs



Amel Chabbi 2005 © J. Paul Getty Trust



0m 0,5m 1m

ID: HE/H2P/25

TITLE:

DATE:

BASE MADE ON: 06/2015

PREPARED BY:

Base photograph from a photographic montage

Three different base photographs



ID: HE/H2P/25

TITLE:

DATE:

PREPARED BY:

BASE MADE ON: 06/2015



ID: HE/H2P/25

TITLE:

DATE:

PREPARED BY:

BASE MADE ON: 06/2015



ID: HE/H2P/25

TITLE:

DATE:

PREPARED BY:

BASE MADE ON: 06/2015

From a single photo

From a rectified single photo

From a photographic montage

Creating a base photograph

Obtain a copy of a photograph of the mosaic from
a book or an archive

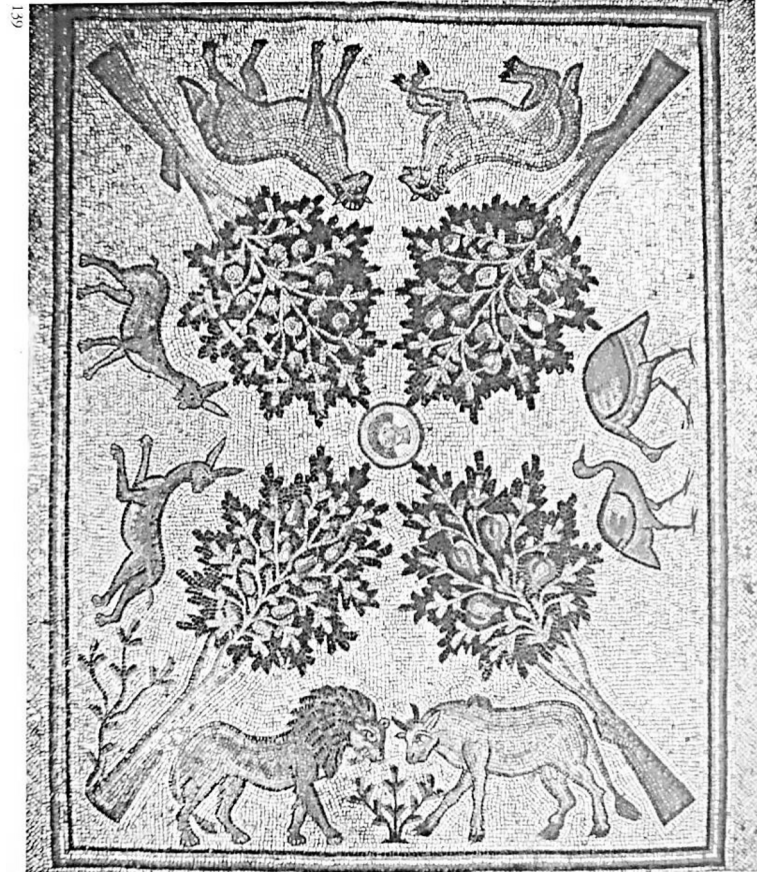
The steps



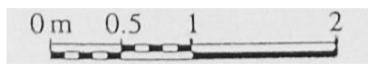
Livia Alberti 2012 © J. Paul Getty Trust



Michele Piccirillo 1993 © Franciscan Custody of the Holy Land, Mt. Nebo, and the American Center of Oriental Research, Amman



Michele Piccirillo © 1993 Franciscan Custody of the Holy Land, Mt. Nebo, and the American Center of Oriental Research, Amman



Md/AM/6

TITLE:

BASE MADE ON: 06/2014

DATE:

PREPARED BY:

Getty



MOSAIKON is a partnership of four institutions: the Getty Conservation Institute, the Getty Foundation, ICCROM, and ICCM. The aims of the project are to strengthen the network of professionals concerned with the conservation, restoration, maintenance, and management of mosaic heritage in the southern and eastern Mediterranean region; provide training to a variety of individuals involved in mosaics conservation and, more generally, with the management of archaeological sites and museums with mosaics; work with national and international bodies to provide a more favorable legislative, regulatory, and economic environment for the conservation of mosaics in the Mediterranean; and promote the dissemination and exchange of information.

