



UNICEF
P.O. BOX 25141
SHU'FAT, EAST JERUSALEM
PHONE: +972-2-5840400
+972-2-583-0013/14
FAX: +972-2-583-1690
+972-2-5830806
Jerusalem@unicef.org
<http://www.unicef.org/oPt/index.html>



Project Title
WADI ABU HINDI SCHOOL
LOW ENVIRONMENTAL IMPACT REHABILITATION

Object
REHABILITATION OF ABU HINDI SCHOOL
Interventions for two classrooms and the courtyard
October 2012

Organization
VENTO DI TERRA N.G.O.
via Franchi Maggi, 94
20089 - Rozzano (MI), Italy
ventoditerra@ventoditerra.org
www.ventoditerra.org



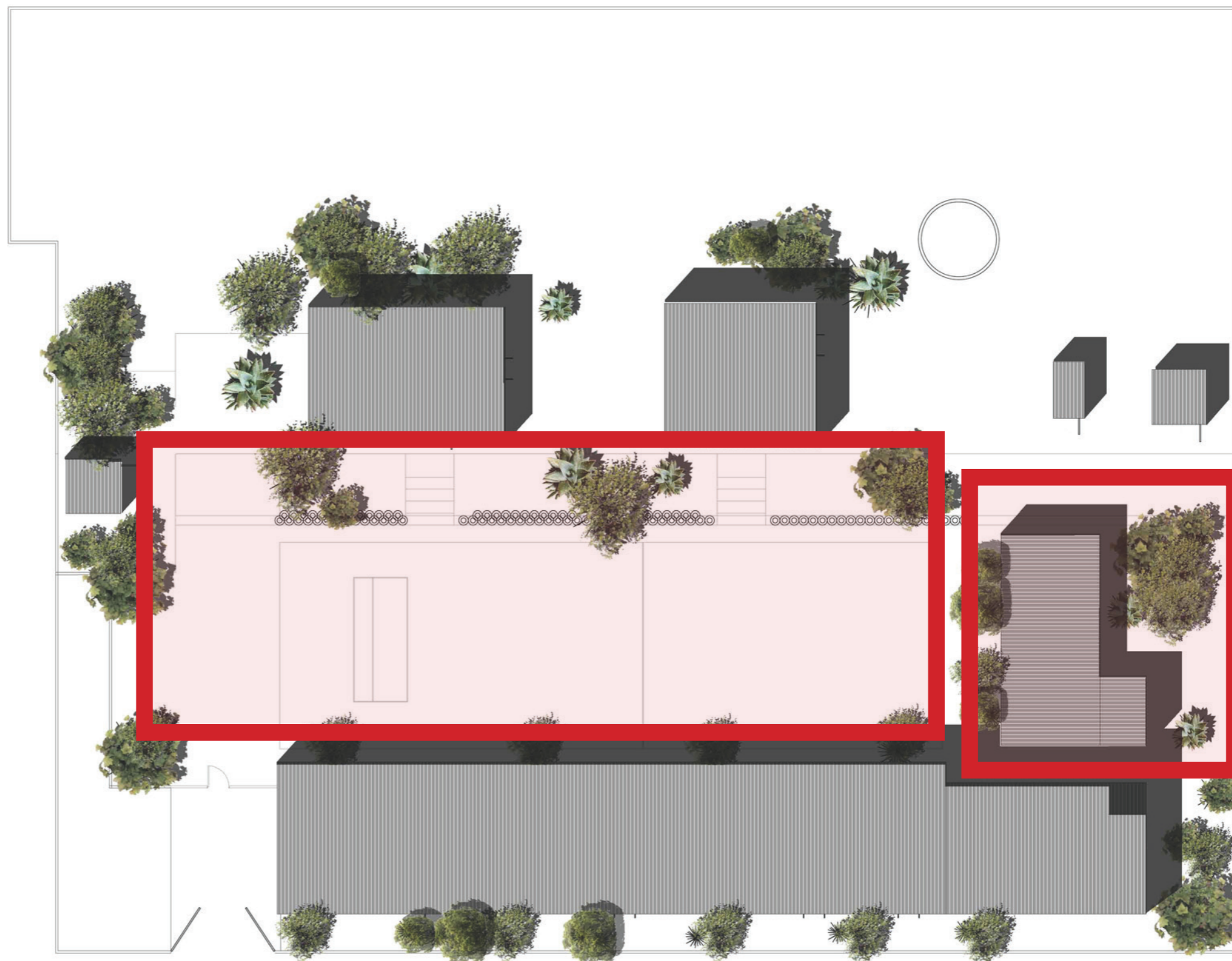
Architectural Design
ARCò - Architettura e Cooperazione
Società Cooperativa
Via Lamarmora, 2
20122 - Milano, Italy
info@ar-co.org
www.ar-co.org



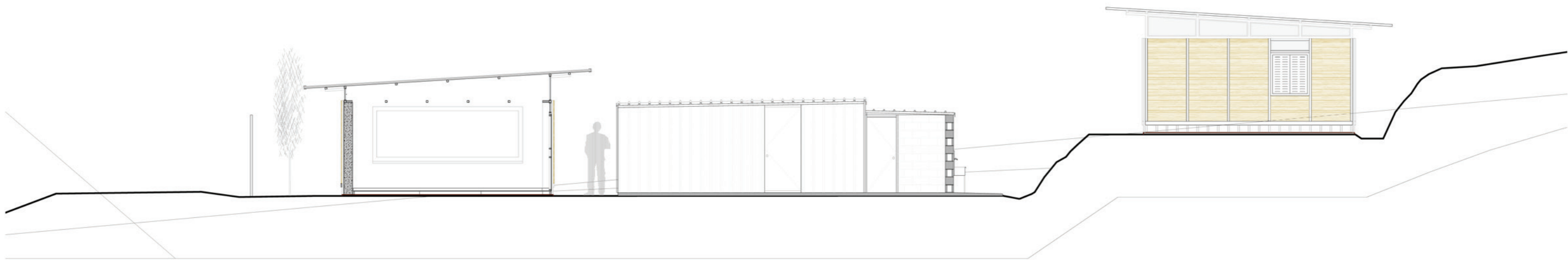
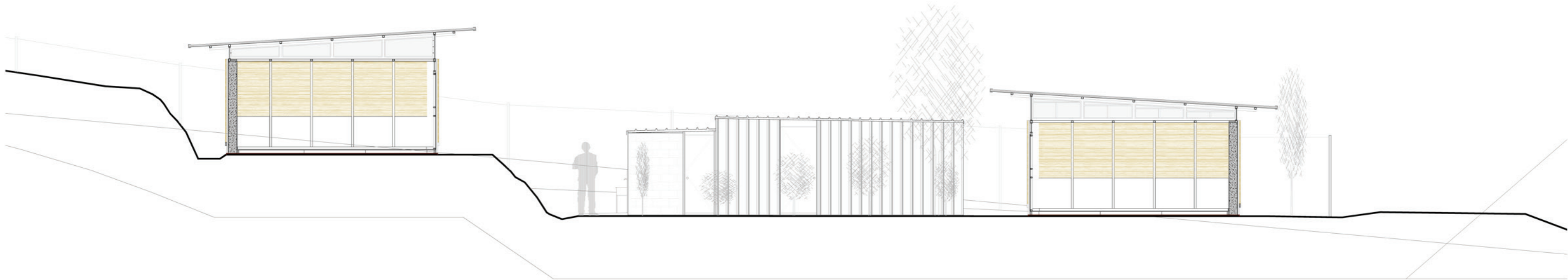


WADY ABU HINDI

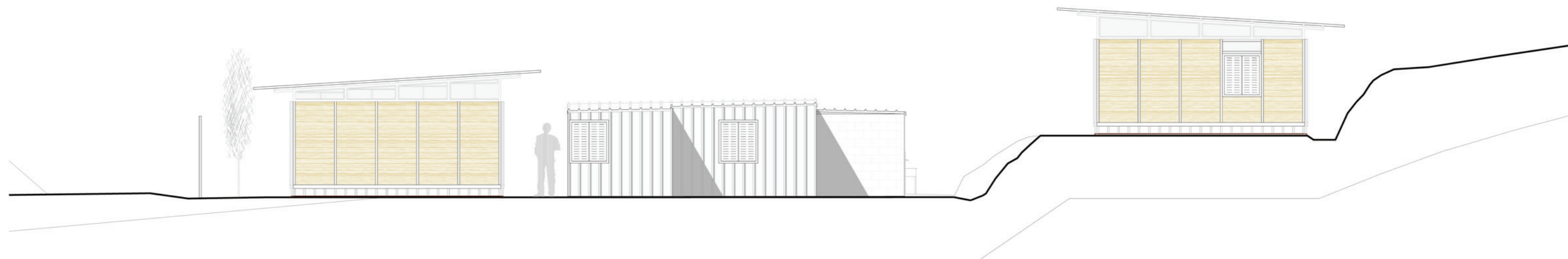
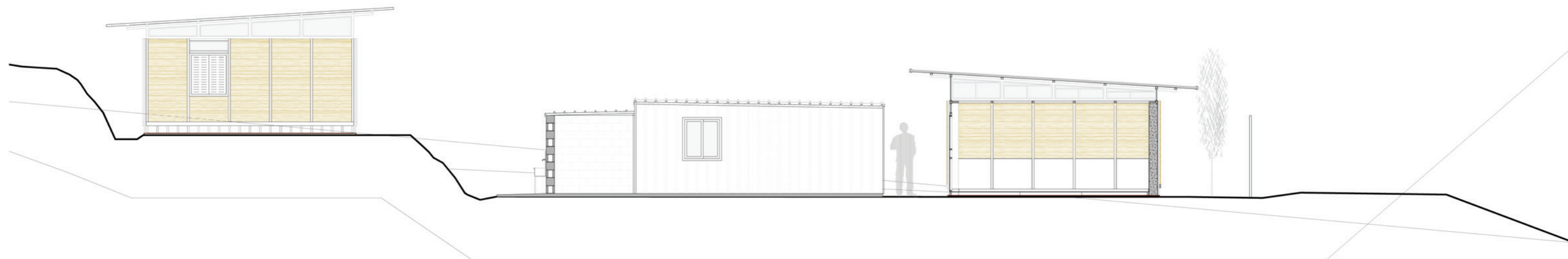




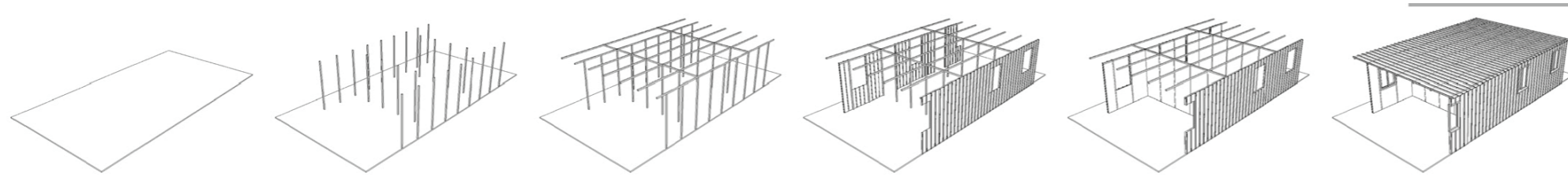
DIRECTOR ROOM



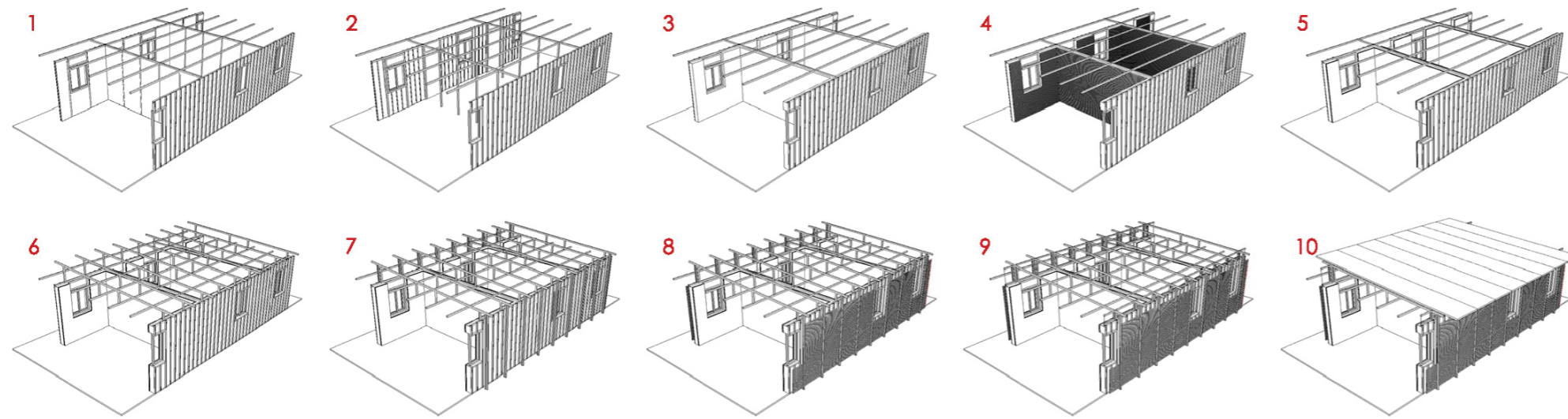
DIRECTOR ROOM



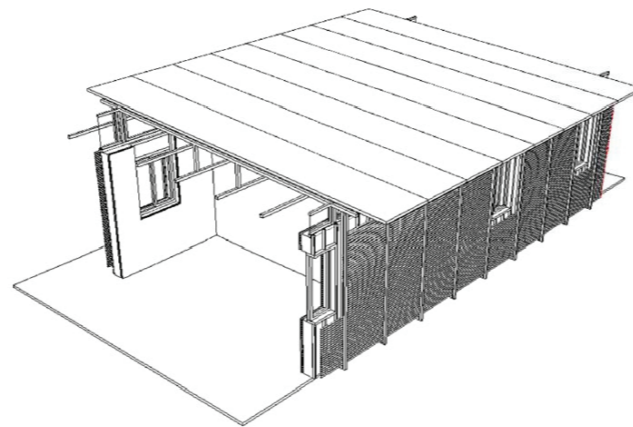
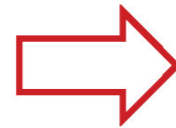
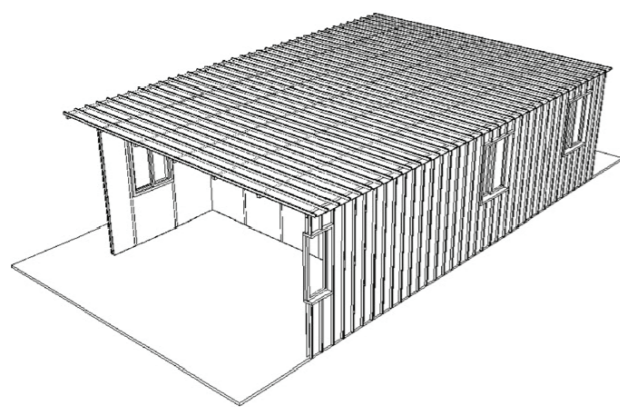




WORKING PHASES OF THE EXISTING SCHOOL
FASI COSTRUTTIVE DELLA SCUOLA ESISTENTE



WORKING PHASES OF THE REHABILITATION PROCESS
FASI COSTRUTTIVE DEL PROCESSO DI RIQUALIFICAZIONE



SANDWICH PANELS

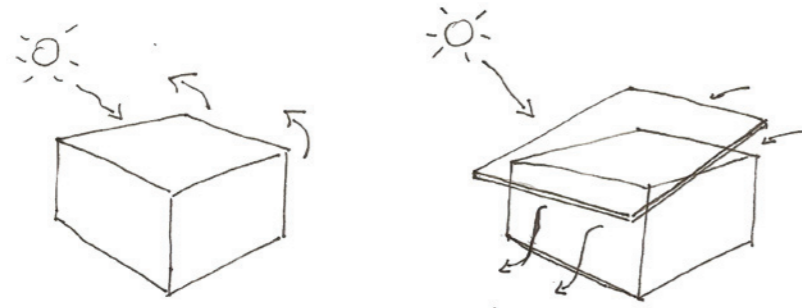


Example: whadi abu hindi - classrooms
 Wadi Abu Hindi
 West Bank, Palestine

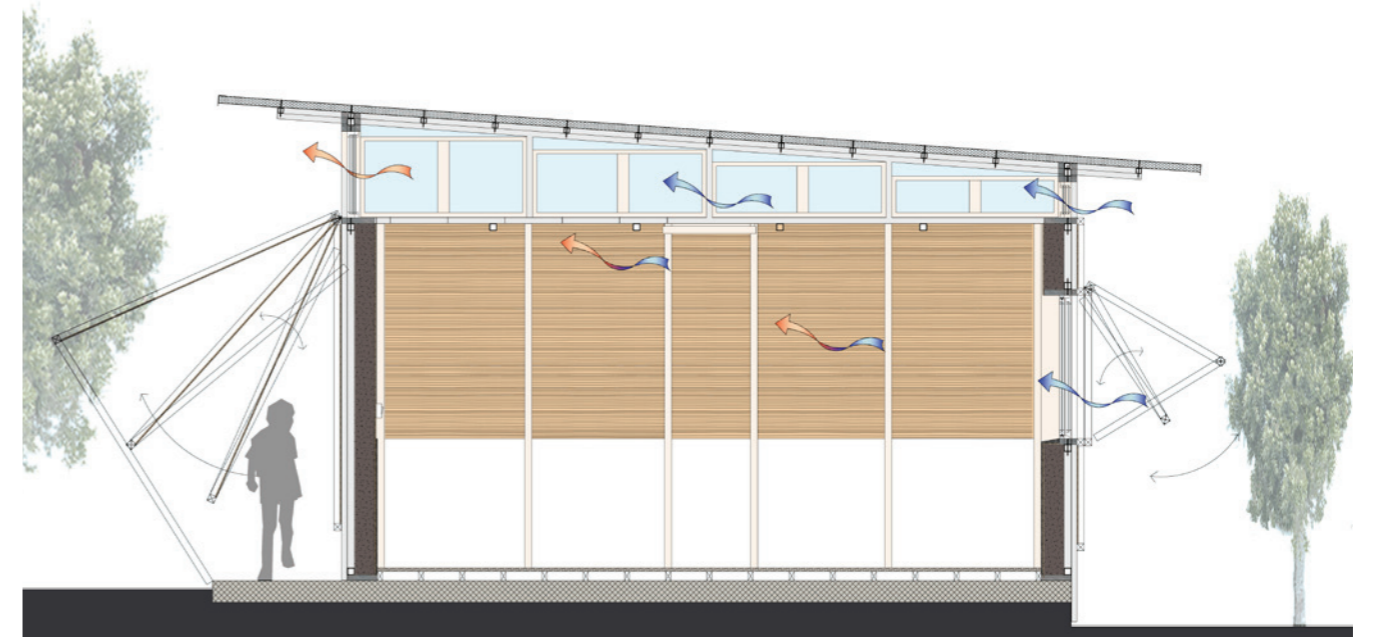


Sandwich panels are used in facades, roofs, compartmenting structures, partition walls and ceilings. Sandwich panel is a cost-efficient prefabricated element that has two colour-coated steel sheet layers with an inner insulation core between them. The insulating core can be mineral wool, polyurethane, polyisocyanurate or polystyrene.

CROSS VENTILATION



Example: Abu Hindi School
Wadi Abu Hindi
West Bank, Palestine



Cross ventilation is a principle on bioclimatic architecture which relies on wind to force cool exterior air into the building through an inlet (window, door, etc.) and to force warm interior air out of the building through an outlet (window, door, etc.) placed opposite to the inlet, so that the air stream covers homogeneously all the interior spaces of the building. Its efficiency has to do with the correct proportion between the inlet-outlet elements size and the surface of the interior space, the orientation of the openings, and the main wind stream directions on the location.

PISÈ WALLS - STRAW, MUD AND BAMBÙ



TOOLS



PAY ATTENTION TO THE HORIZONTALITY OF THE BAMBOO CANS



WHEN YOU HAVE WELL FIXED THEM, AND MADE A PANEL AROUND 1/2 METER HIGH START PUTTING THE MIXTURE OF MUD, WATER AND STRAW YOU HAVE PREPARED



TOOLS



Example: Wadi Abu Hindi School

Wadi Abu Hindi
West Bank, Palestine

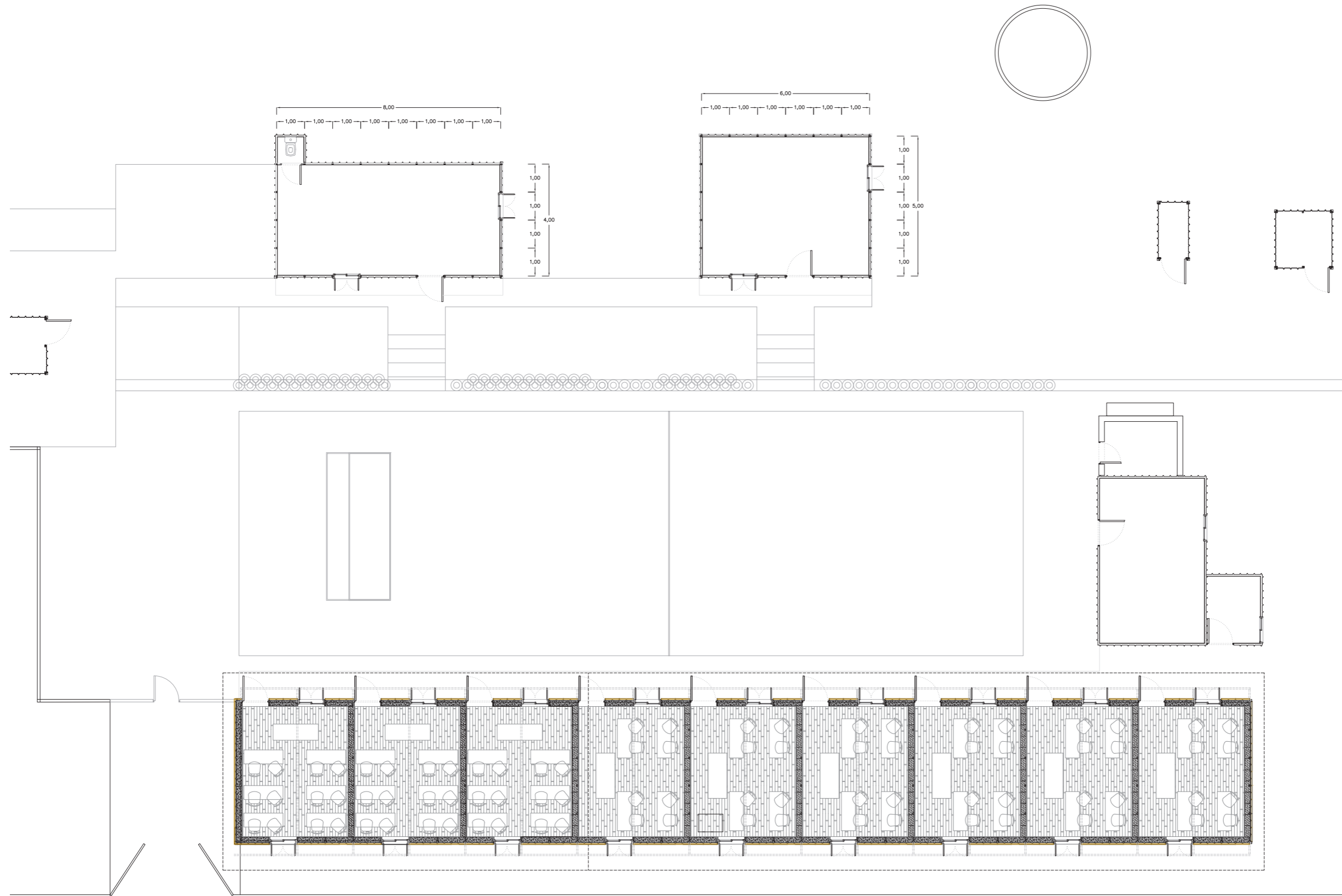
Rammed earth, or pisé (de terre) (French), is a technique for building walls using the raw materials of earth, chalk, lime and gravel. Rammed-earth walls are simple to construct, noncombustible, thermally massive, strong, and durable. The availability of useful soil and a building design appropriate for local climatic conditions are the factors that favour its use. A possible solution is a mix of straw and mud and a finishing made of bambù.

WOODEN FLOOR



Example: Um al Naser child center
Um al Nasser
Gaza Strip, Palestine

Wooden floorboards provide an acceptable thermal insulation and contribute then to regulate the temperature of the interior spaces, as it contributes as well to the interior atmosphere warmth. The specific technique of installation will depend on the characteristics of the original floor or ground, and the wood must be treated properly against changes in humidity, also gravel or concrete layers may be needed underneath.



PASSAGES
MADE OF CONCRETE BLOCKS

PRINCIPAL PLAY GROUND
MADE OF STABILIZED EARTH

BB CC

COURTYARD

SECONDARY
PLAY GROUND

DIRECTOR
ROOM

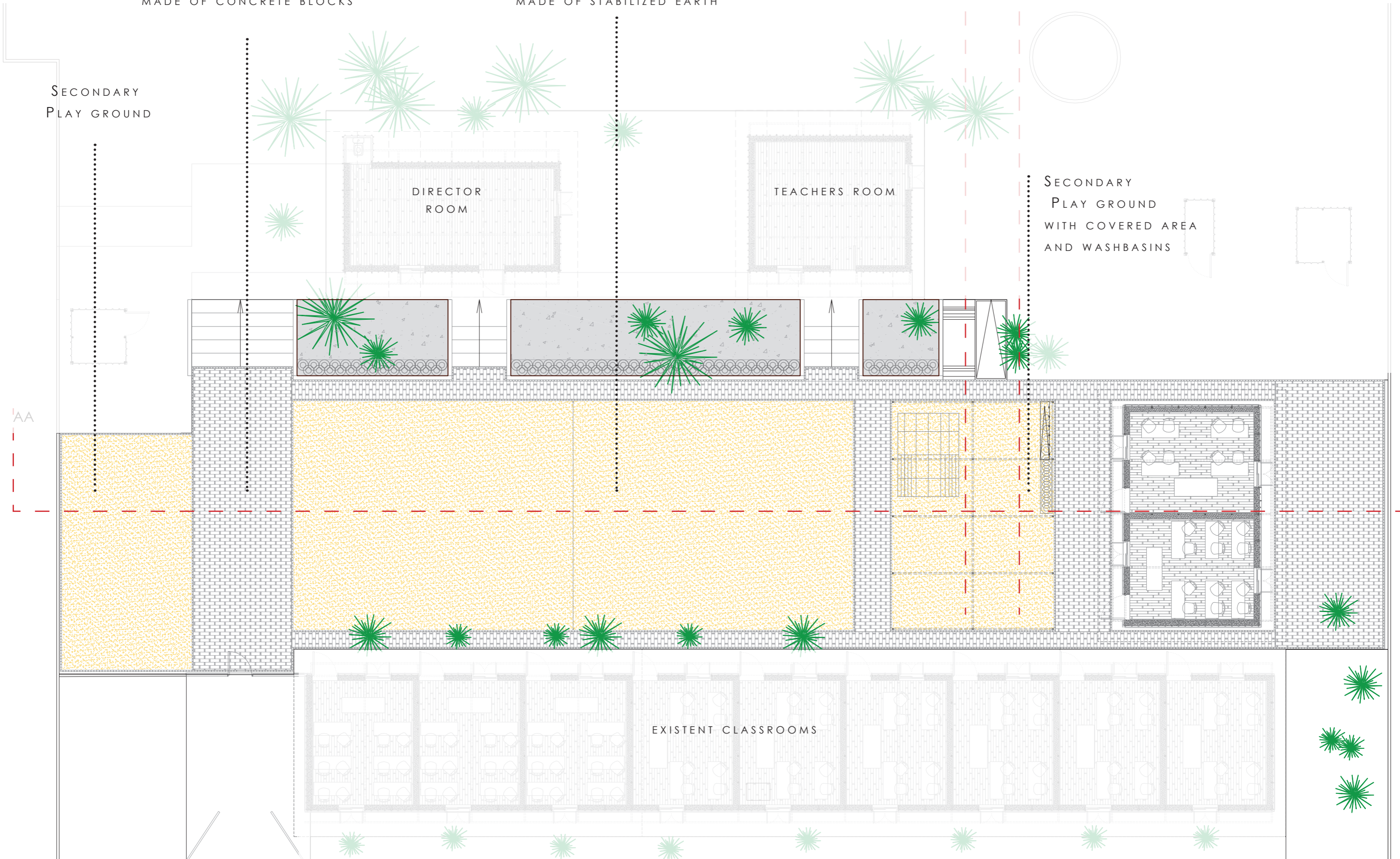
TEACHERS ROOM

SECONDARY
PLAY GROUND
WITH COVERED AREA
AND WASHBASINS

AA

EXISTENT CLASSROOMS

REHABILITATION OF ABU HINDI SCHOOL - INTERVENTIONS FOR TWO CLASSROOMS AND THE COURTYARD - ARCÒ SOCIETÀ COOPERATIVA



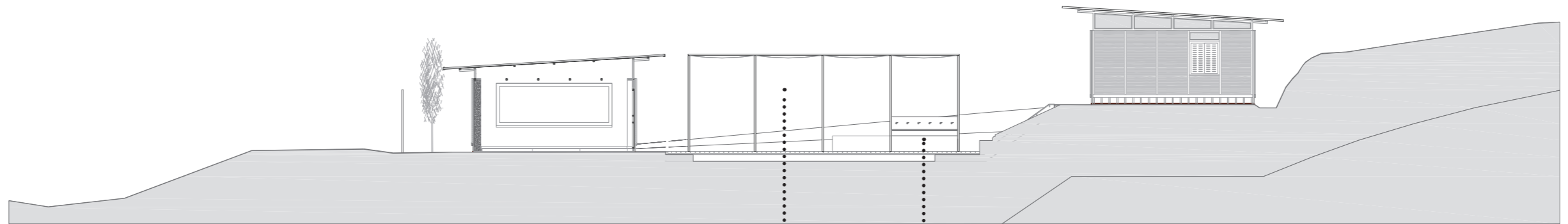


SECONDARY FREE PLAY GROUND

PRINCIPAL PLAY GROUND
MADE OF STABILIZED EARTH

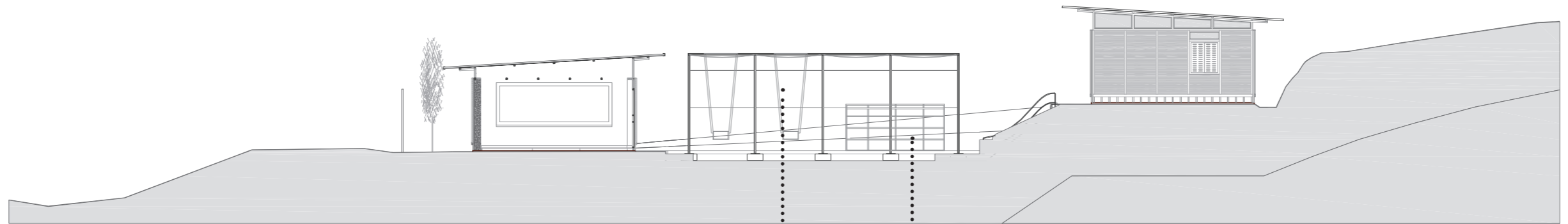
SECONDARY PLAY GROUND
WITH COVERED AREA
AND WASHBASINS

SECTION AA



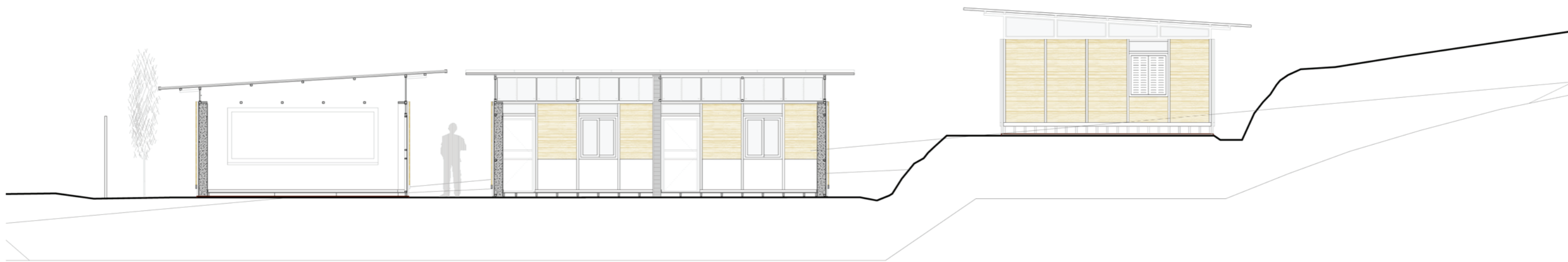
SECTION BB

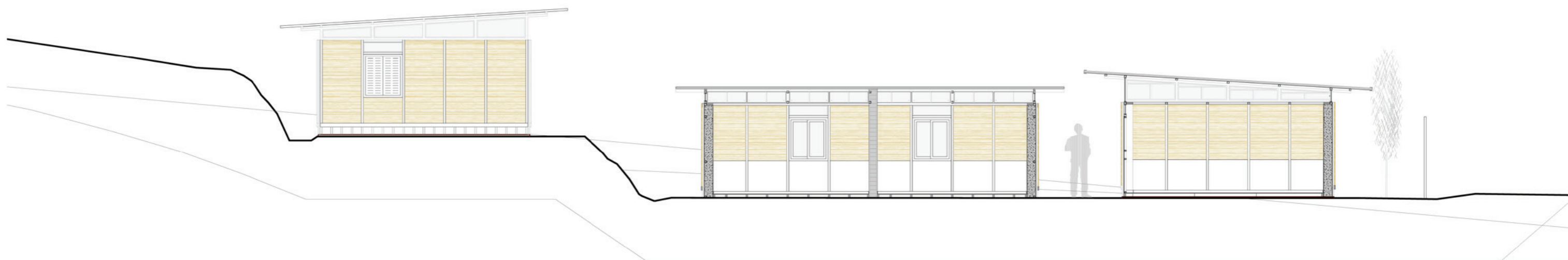
IRON STRUCTURE THAT COVER THE
SECONDARY PLAYGROUND
WASHBASINS



SECTION CC

TYRESWING
GAME STRUCTURE





REHABILITATION OF ABU HINDI SCHOOL

Interventions for two classrooms and the courtyard
October 2012

Organization

VENTO DI TERRA N.G.O.
via Franchi Maggi, 94
20089 - Rozzano (MI), Italy
ventoditerra@ventoditerra.org
www.ventoditerra.org



Architectural Design

ARCò - Architettura e Cooperazione
Società Cooperativa
Via Lamarmora, 2
20122 - Milano, Italy
info@ar-co.org
www.ar-co.org

