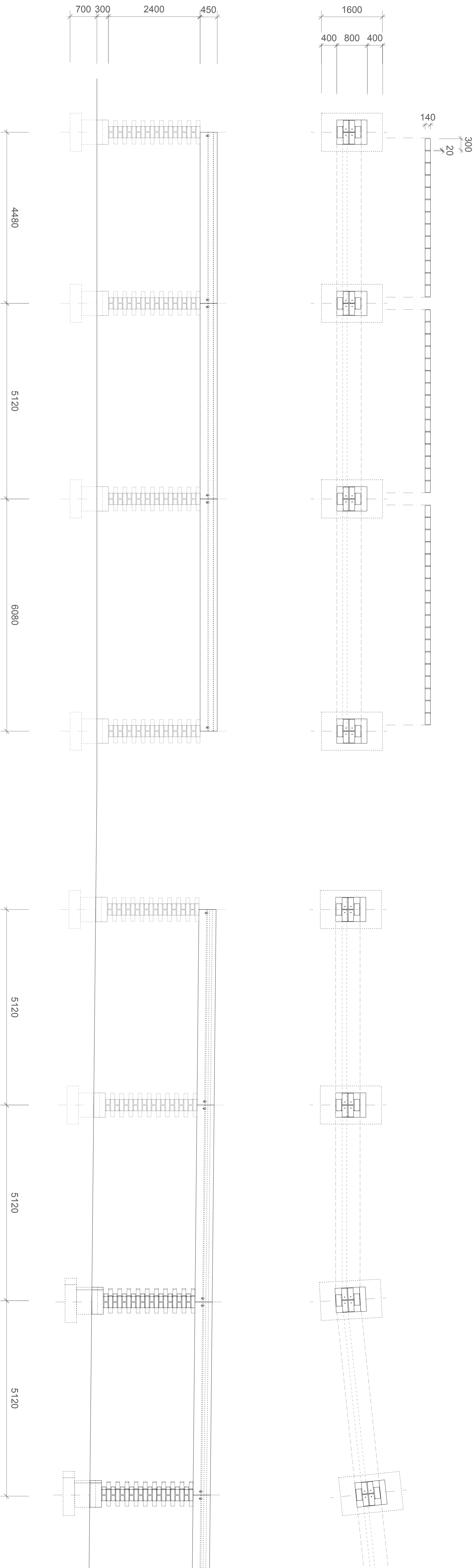


AQUEDUCT CONSTRUCTION MANUAL

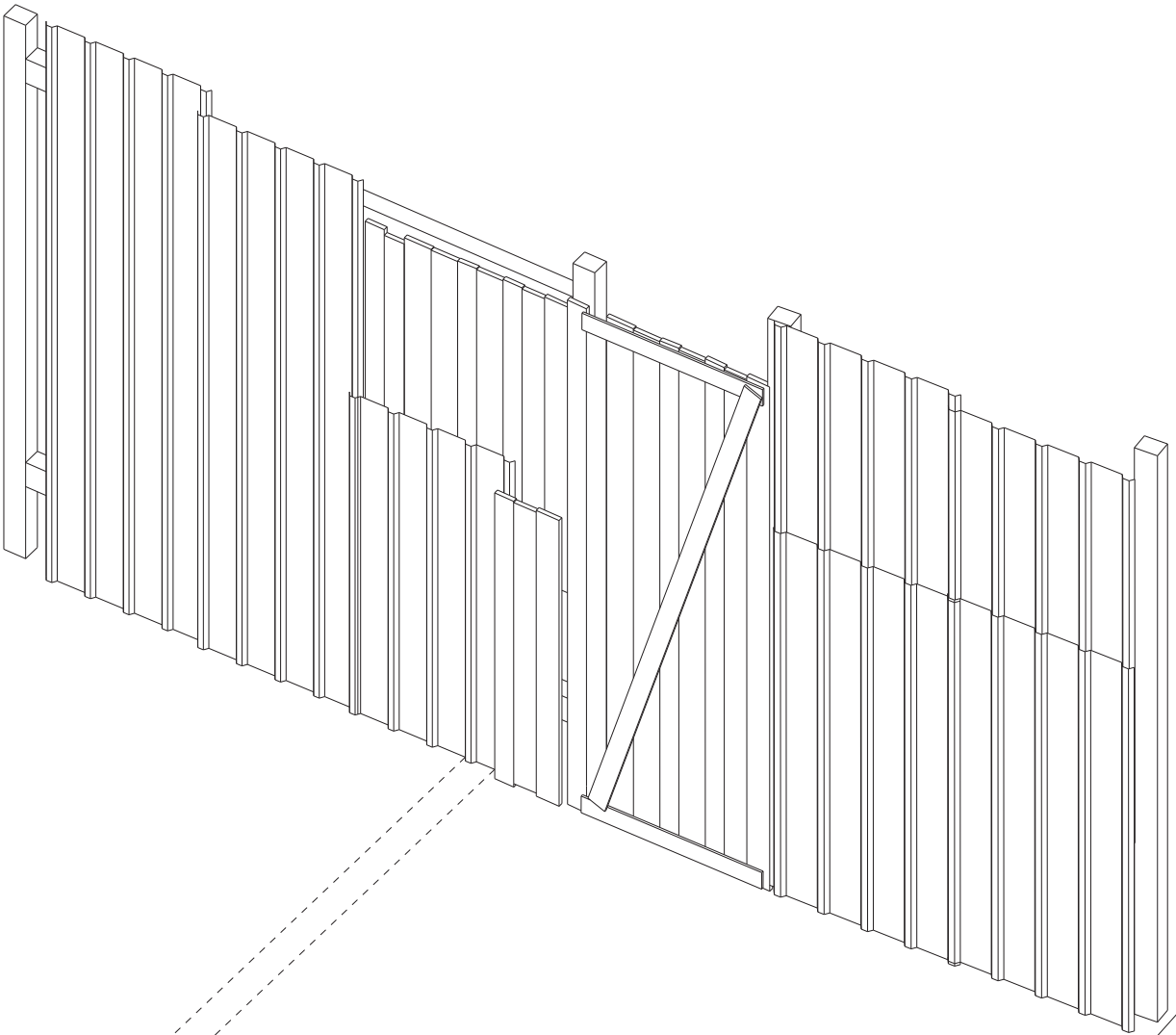
from housing
to urban scenarios
in latin america

PDM EPFL 2015 - Damien Magat
Pr. Dietz, Pr. Bolay, Charlotte Erckrath, Fabienne Hoelzel

MODULAR GRID DIMENSIONS 1:50



EXISTING SITUATION
1:33

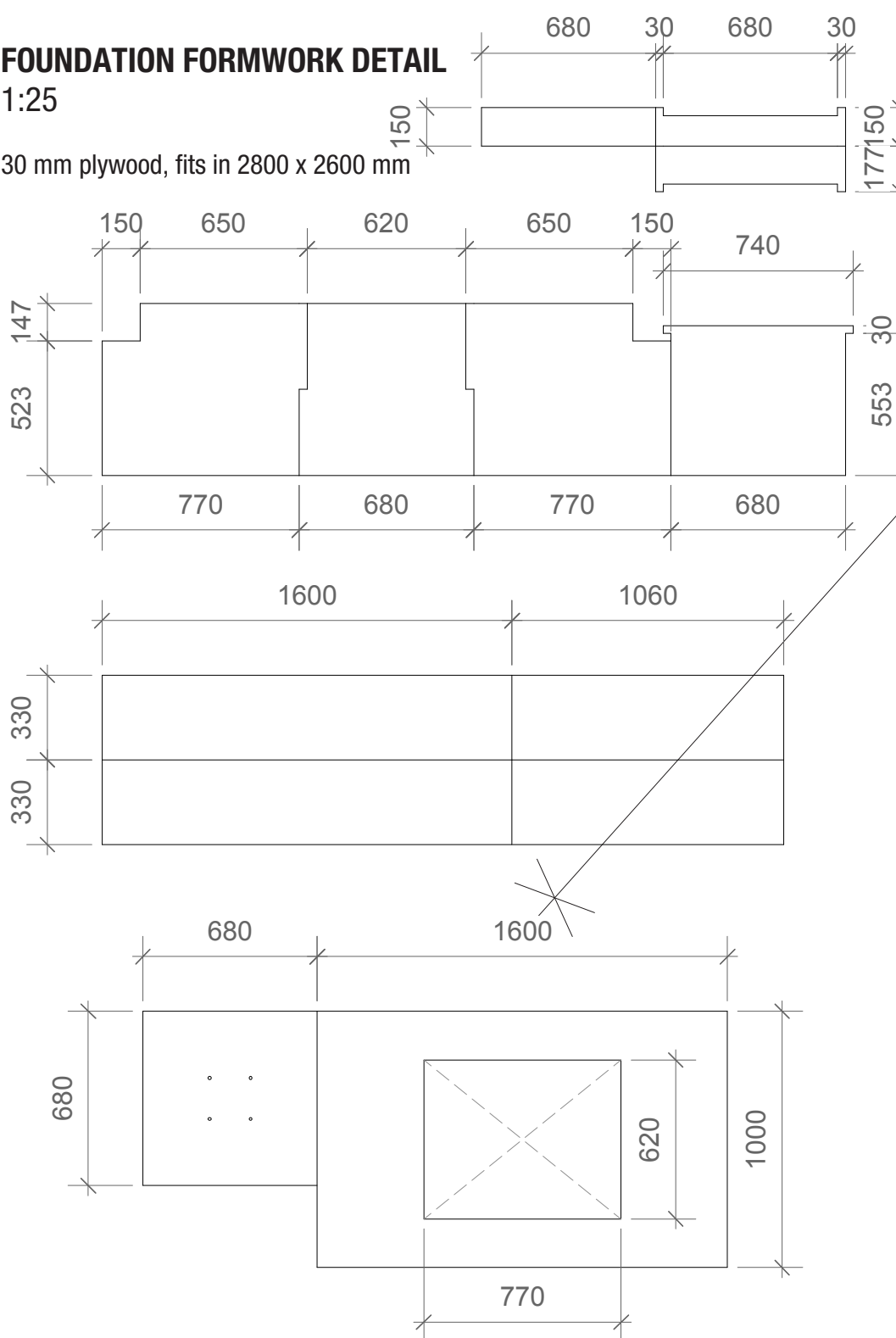


FOUNDATION EXCAVATION
1:33

excavation made with a small
mechanical shovel

FOUNDATION FORMWORK DETAIL
1:25

30 mm plywood, fits in 2800 x 2600 mm



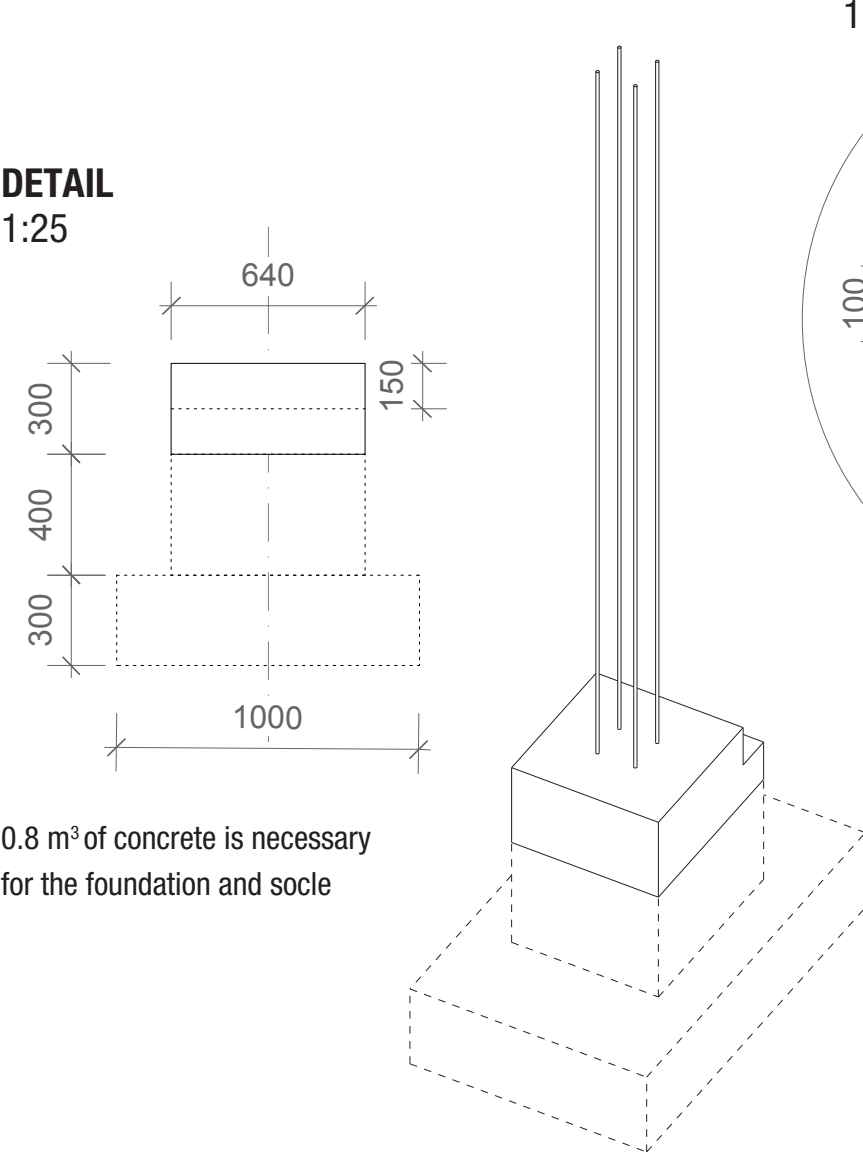
FORMWORK INSTALLATION
WITH ARMATURE
1:33

the formwork is re-usable
the excavation is backfilled on
the foundation after 20 days

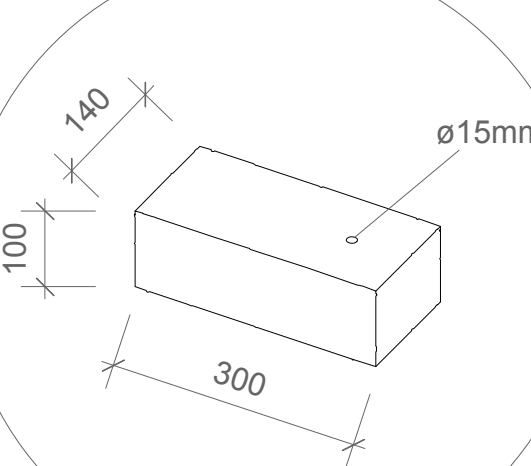
FOUNDATION AND CONCRETE SOCLE
1:33

DETAIL
1:25

0.8 m³ of concrete is necessary
for the foundation and socle



BRICK DETAIL
1:33



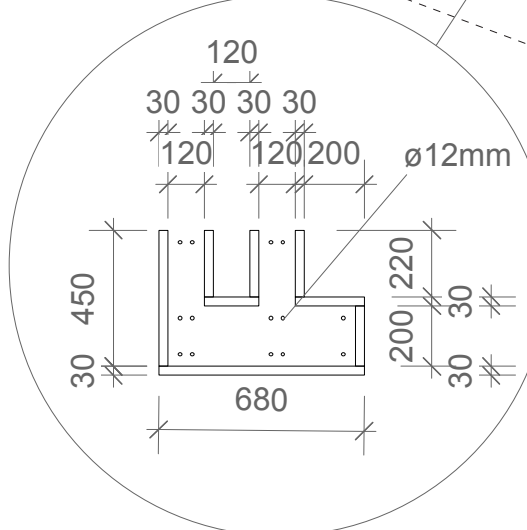
bricks are made with stabilized
compressed earth in the community
brick factory (cf. 1.1 in project plans).
there are two modules, one full and on
with a perforation to let a reinforcement
bar pass through.

REINFORCE BRICK COLUMN
1:33

for one column:
100 bricks are necessary
as well as mortar and
four 15 mm reinforcement
bars of 3.5 m

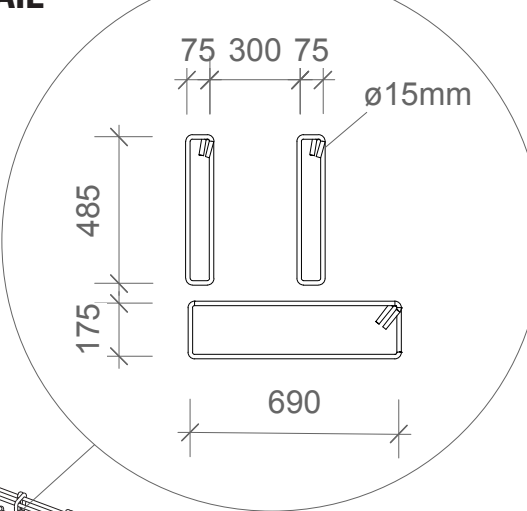
BEAM FORMWORK
INSTALLATION AND
REINFORCEMENT
1:33

FORMWORK
SECTION DETAIL
1:25



BEAM STIRRUPS DETAIL
1:25

the stirrups are the same
on all the beams and can
be prefolded



for one beam of 5120 mm:
1m³ of concrete is necessary
as well as 14 bars of 12 mm by 5.5 m
and 28 stirrups (cf. above)