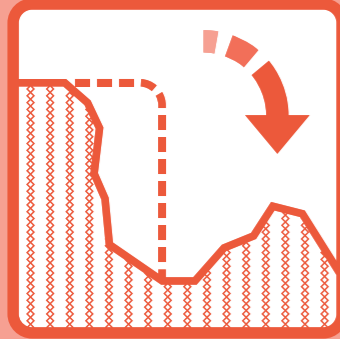
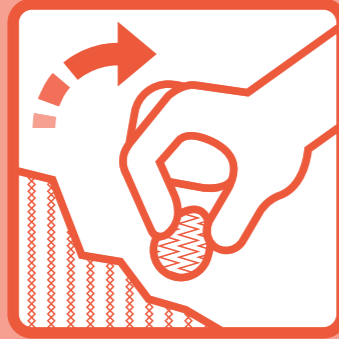


2 Soil for mud mortar



Collect soil of good quality.



Remove pebbles larger than 1cm.

3 Mortar mixture

for cement mortar



cement : sand
1 : 3

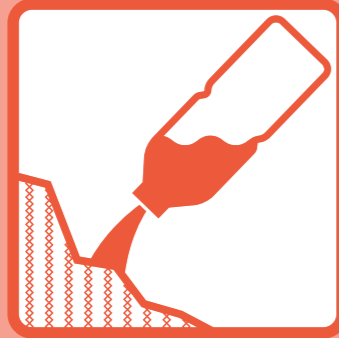
for mud mortar



water : soil
1 : 5

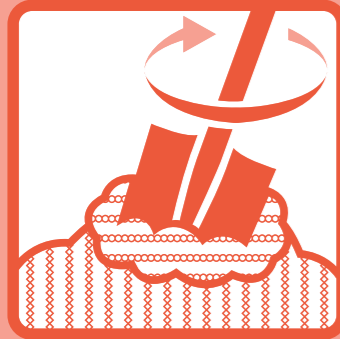


Mix cement and sand with appropriate amount of water.



Mix water to the soil.

4 Prepare for stone work



Mix the mortar properly.



Prepare to carry the mortar for stone work.

Test of hardness for mortar



Flow into a cup (V=273.6cm³)

Remove a cup

for cement mortar

for mud mortar

Checklist

I Material

- Is the stone size appropriate ?
- Was the mortar mixture found appropriate by the test ?

II Foundation

- Excavated 3 feet trench to construct a foundation ?
- Maintained appropriate overlapping length of the rebar for the footing? (It should be more than 3ft for the main rebar of the RC footing and more than 2ft for the vertical rebar)
- Placed vertical rebars at all the necessary locations ?
- Maintained enough concrete cover for the RC foundation ? (It should be more than 3 inches)
- Was concrete filled up properly around the vertical rebar ?
- Kept the adequate concrete curing period ?

III RC band and post

- Maintained appropriate overlapping length ?(It shall be more than 3ft for the main rebar of the RC band and more than 2ft for the RC post)
- Maintained enough concrete cover for the RC band ? (It should be more than 2 inches)
- Was concrete filled up properly around the vertical rebar ?
- Kept the adequate concrete curing period ?

IV Stone work

- Was the stone work done with good bonding ?
- Were through stones and corner stones located in appropriate spacing ?
- Were the gabion boxes arranged in a staggered pattern ?

Publication information

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Supervision Prof. Takayoshi Aoki, Nagoya City University
 Producer Prof. Junko Mori, Nagoya City University
 Design M.A.E Yuki Okuno, Nagoya City University
 Contents Asst.Prof. Junko Mukai, Nagoya City University
 Pema, Executive Engineer,
 Department of Culture and Dzongkha Development, MoHA
 Yadav Lal Bhattarai, Executive Engineer,
 Department of Infrastructure Development, MoIT
 Kunzang Tenzin, Deputy Executive Engineer,
 Department of Culture and Dzongkha Development, MoHA

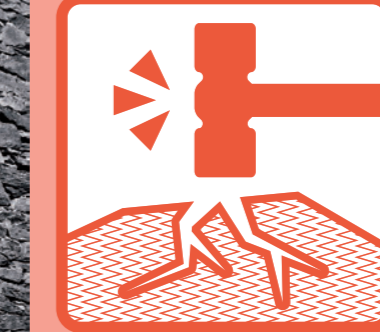
For more details, visit: <http://doc.gov.bt/> and <http://moit.gov.bt/>



I Material



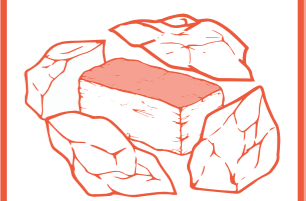
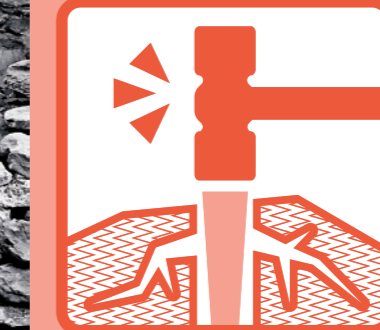
1 Stone dressing



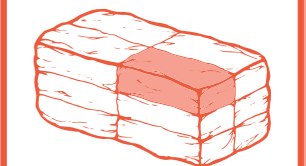
Use hammer which weighs around 5kg to hit the boulder along the grains to break into two halves.



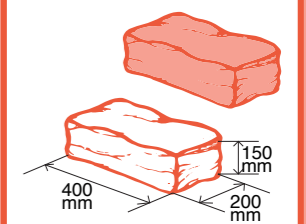
Break the rock in to two



Cut on 6 sides



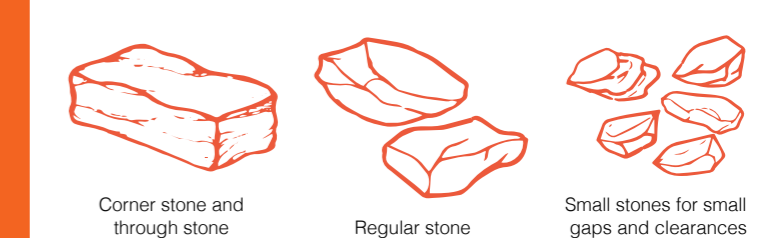
Divide evenly



Prepared stone

Using 1kg hammer, required sizes of stones are made.

Use of stone



Corner stone and through stone

Regular stone

Small stones for small gaps and clearances

The Manual for Construction of STONE MASONRY



II Foundation

MASON



1 Earth work

1 week

2 Concrete foundation

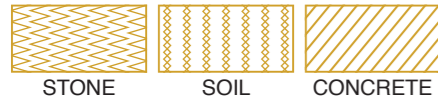
4 days

Curing concrete

1 week

3 Stone foundation

2 week



STONE SOIL CONCRETE

1 Earth work

Dig a trench 3ft deep and 4ft wide. Provide soling.

2 RC strip footing

Arrange 3 nos of main rebars with stirrups, and erect vertical rebars. Cast M20 concrete 7.2 inches thick.

3 RRM wall footing

Construct stone footings 3ft wide and 1.5ft high. Build stone walls up to the plinth level.

Set a PVC pipe around a vertical rebar before placing stones.

Cast M20 concrete in the pipe and then pull out the pipe.

Rebar Location

Wall corner T-junction Both side of window and door
Addition to the above, at every 4ft

III RC band and post

MASON

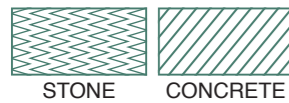


1 Construction of a band

4 days

Curing concrete

1 week



STONE CONCRETE

1 RC band

Construct RC band on the plinth level and below cham on each floor.

Rebar arrangement

Band Size 2ft wide x 9 inches high
Concrete M20 (1:1.5:3)
Concrete Cover more than 2 inches

2 RC post

Cast M20 concrete around a vertical rebar in the same process for the stone foundation.

RC roof band
RC floor band
RC plinth band (2ft x 9 inches)
RC post
RRM wall footing (3ft x 1.5ft)
RC strip footing (4ft x 7.2 inches)

Design: Kunzang Dorji

IV Stone work

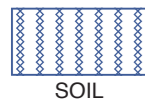
a. Stone wall construction with cement mortar (for each floor)

5 weeks

b. In gabion boxes with mud mortar (for each floor)

8 weeks

MASON



SOIL

a With cement mortar

1 Through stone

Through stone (150x600x150)

Maximum spacing between through stones shall be 4ft horizontally and 2ft vertically.

2 Corner stone

b With mud mortar

1 Gabion box

Prepare gabion boxes and fill them with stones applying mud mortar.

2 Gabion box layout

Arrange the boxes in a staggered pattern.

Roof anchoring

Anchor a roof to the ground. Do not anchor to the RC band.

