# SPECIFICATION AND BILL OF QUANTITIES

(WITH ENGINEERS' ESTIMATE)

PROJECT:

BUILDING FOR GURED HOUSE

CLIENT: SHASHAMANEE CITY (POLISE OFFICE)

CONSULTANT:

TEL-
e-mail:

LOCATION:

SHASHAMANEE
ETHIOPIA

Prepared by:S J (NOV-2015)

# SUMMARY

## A-SUB STRUCTURE

| | | | |
|---|---|---|---|
| 1 | EXCAVATION AND EARTH WORK..... | BIRR | 32,263.02 |
| 2 | CONCRETE WORK..... | BIRR | 0.00 |
| 3 | MASONARY WORK..... | BIRR | 19,654.32 |
| | **SUB TOTAL A.....** | **BIRR** | **51,917.34** |

## B-SUPER STRUCTURE

| | | | |
|---|---|---|---|
| 1 | CONCRETE WORK..... | BIRR | 768,401.53 |
| 2 | BLOCK WORK..... | BIRR | 161,525.62 |
| 3 | ROOFING WORK..... | BIRR | 97,910.04 |
| 4 | CARPENTRY WORK..... | BIRR | 186,805.07 |
| 5 | METAL WORK..... | BIRR | 555,499.50 |
| 7 | FINISHING WORK..... | BIRR | 880,111.73 |
| 8 | GLAZING WORK..... | BIRR | 123,000.00 |
| 9 | PAINTING WORK..... | BIRR | 129,931.20 |
| 10 | SANITARY INSTALLATION WORK..... | BIRR | 218,632.00 |
| 11 | ELECTRICAL INSTALLATION..... | BIRR | 166,485.00 |
| | **SUB TOTAL B.....** | **BIRR** | **3,288,301.69** |
| | **TOTAL A+B.....** | **BIRR** | **3,340,219.03** |

**Proje** Kafteria — **Block:Fance Work**

**Client:**

**S.Contractor: DAGNACHEW**

| Qty | L/W/D | Product | Description & Sketches | Qty | L/W/D | Product | Description & Sketches |
|---|---|---|---|---|---|---|---|
| | | | **A - SUBSTRUCTURE** | | | | *C/Around Footing Pad* |
| | | | **1. EXCAVATION & EARTHWORKS** | | | 337.5 | Total Volume of Exc 2.5*2.5*3*18=337.5 |
| | | | 1.1/ Site Clerance | | | | deduct volume concrete |
| 0.00 | 0.00 | | average depth d=0.20m | | | -5.1 | Volom of Pad=2*2*0.4*18=28.80 |
| | 0.00 | **0.00** | **m²** | | | -3.04 | Volum of column=0.25*0.25*2.6*18=3.0 |
| 1.00 | 0.00 | | 1.2/ Bulck Excavation | | | **0.00** | **m³** |
| | 0.00 | | | | | **0.00** | **m³,TOTAL** |
| | 0.00 | 0.00 | | | | | 1.6 Cart away |
| | | **0.00** | **m³** | | | | Total Volume of Excavation |
| | | | 1.3/ Trench excavation in ordinary | | | **0.00** | Iteam 1.1 |
| 4.00 | 27.00 | | soil to average depth d=1.50m | | | **0.00** | Iteam 1.2 |
| | 0.70 | | length =50.9 | | | **0.00** | Iteam 1.3 |
| | 1.50 | 113.40 | width=0.5+2*.1=0.70m, Depth=1.5m | | | **0.00** | Iteam 1.4 |
| 4.00 | 11.00 | | | | | **0.00** | **m³** |
| | 0.70 | | | | | -893.96 | deduct back fill |
| | 1.50 | 46.20 | | | | **-893.96** | **m³** |
| 1.00 | 0.00 | | | | | | |
| | 0.70 | | | 1.00 | 26.00 | | 1.6 Hard Core |
| | 1.50 | 0.00 | | | 10.00 | **260.00** | **m²** |
| | | **159.60** | **m³** | | | | **2. CONCRETE WORKS** |
| 18.00 | 2.50 | | 1.4 Pit excavation | | | | 2.1 50mm thick lean concrete under |
| | 2.50 | | to average depth d=3.00m | 18.00 | 2.00 | | A/Footing Pad |
| | 3.00 | 337.50 | L=2+2*0.25=2.50m | | 2.00 | **72.00** | **m²** |
| | | **337.50** | **m³** | 2.00 | 27.00 | | B/Masonary & Gread beam |
| | | | 1.5 Back Fill | | 0.50 | 27.00 | |
| 1.00 | 26.00 | | **a/Under Hard Core* | 2.00 | 11.00 | | |
| | 10.00 | | | | 0.50 | 11.00 | |
| | 0.75 | 195.00 | | 1.00 | 67.00 | | |
| | | **195.00** | **m³** | | 0.50 | 33.50 | |
| 2.00 | 27.00 | | *B/Around Masonary Treanchl* | | | **71.50** | **m²** |
| | 0.20 | | | 1.00 | 26.50 | | *C/Under Hard Core* |
| | 1.50 | 16.20 | m³ | | 10.50 | **278.25** | **m²** |
| 2.00 | 11.00 | | | | | | 2.2/ C-25 Reinforced concret: |
| | 1.50 | | | 18.00 | 2.00 | | a) In Footing Pad |
| | 0.20 | 6.60 | m³ | | 2.00 | | |
| 1.00 | 31.00 | | | | 0.40 | **28.80** | **m³** |
| | 1.50 | | | 18.00 | 0.25 | | b) In elevation column |
| | 0.20 | 9.30 | m³ | | 0.25 | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | **32.10** | **m³** | | | 2.60 | **2.93** | **m³** |

**Proje** **Market Center (G+2)** **Block:-G+2 Building**

**Client:** **Micro Interpirize**

**S.Contractor:**

| Qty | L/W/D | Product | Description & Sketches | Qty | L/W/D | Product | Description & Sketches |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | c) In grade beam | | | | 3.2/ 50cm thick masonry Above NGL |
| 1 | 223.00 | | Width=0.3 m, Depth=0.50 m | 1 | 152.00 | | Total length=152m |
| | 0.30 | | Total length=27*5+11*8=223 m | | 0.5 | | Avge depth=0.50m |
| | 0.50 | 33.45 | | | 0.5 | 38.00 | width= 0.50m |
| | | **33.45** | **m³** | | | **38.00** | **m³** |
| | | | D)10cm Ground Floor Slab | | | **21.00** | 3.3/ Stone masonary for steps |
| 1.00 | 26.50 | | | | | | |
| | 10.50 | **278.25** | **m²** | | | | **B - SUPPER STRUCTURE** |
| | | | | | | | **1. CONCRETE WORKS** |
| | | | | | | | 1.1 C-25 Reinforced concret: |
| | | | 2.3/Form Work for: | | | | a) In elevation column |
| | | | A/Footing Pad | 18 | 3.20 | | Small Column |
| 18.00 | 8.00 | | permeter=4*2=8 | | 0.25 | | |
| | 0.40 | **57.60** | **m²** | | 0.25 | **3.60** | |
| | | | B/Elevation Column | | | | |
| 18.00 | 2.60 | | permeter=4*0.25=1 | | | | b) In Intermdet & Top Tie beam |
| | 1.00 | **46.80** | **m²** | 2 | 149.00 | | Total length=27.5*3 +11*6=149 m |
| | | | C/Gread Beam | | 0.3 | | Width=0.25 m, Depth=0.25m |
| 5.00 | 27.50 | | permeter=2*0.3=0.6 | | 0.25 | 22.35 | |
| | 0.60 | 82.50 | m² | | | **22.35** | **m³** |
| 8.00 | 11.00 | | | 1 | 27.50 | | c) In 15cm thick solid slab |
| | 0.60 | 52.80 | m² | | 11 | | |
| 1.00 | 0.00 | | | | 0.15 | 45.38 | |
| | 0.60 | 0.00 | m² | | | **45.38** | **m³** |
| | | **135.30** | **m²** | | | | d) In stair case & Landing |
| | | | 2.3/ Steel Reinforcement | 4 | 3.00 | | Flight |
| | | | a) Dia. 6mm plain bar | | 1.5 | | |
| | 0 | 0.00 | See annexed rebar schedule sheet | | 0.15 | 2.70 | |
| | | | b) Dia. 12 mm deformed bar | | | | Steps 9 going & 9 riser |
| | 0.00 | 0.00 | See annexed rebar schedule sheet | 36 | **0.03** | **1.22** | A=0.5*0.3*0.15*1.5=0.03375 |
| | | | c) Dia. 14 mm deformed bar | 2 | 2.25 | | Landing |
| | 0.00 | 0.00 | See annexed rebar schedule sheet | | 2.75 | | |
| | | **0.00** | **kg** | | 0.15 | 1.86 | |
| | | | | | | **5.77** | **m³** |
| | | | | | | | **1.2 Form Work For** |
| | | | **3. MASONRY WORKS** | | 0.3 | | a) elevation column |
| | | | 3.1/ 50cm thick masonry Below NGL | 18.00 | 3.20 | | permeter=4*0.25=1 |
| 1 | 0.00 | | Total length=27*4+11*4=152 m | 2.00 | 4.00 | **138.24** | **m²** |
| | 0.5 | | Avge depth=1.50m | | | | b) In Top Tie beam |
| | 0.00 | 0.00 | width= 0.50m | | | | permeter=2*0.3+0.25=0.85 |
| | | **0.00** | **m³** | 2.00 | 149.00 | | Total length=149 m |
| | | | | | 0.85 | **253.30** | **m²** |
| | | | | 1.00 | 27.50 | | c) In 15cm thick solid slab |
| | | | | | 11.00 | **302.50** | **m²** |

**Proje** **Kafteria** **Block** **Building**
**Client:**
**S.Contracto** -

| Qty | L/W/D | Product | Description & Sketches | Qty | L/W/D | Product | Description & Sketches |
|---|---|---|---|---|---|---|---|
| | 11.00 | | d) In stair case & Landing | | | | |
| | 0.60 | 0.00 | | 36.00 | 3.90 | | |
| | | | | | 3.00 | 421.20 | m² |
| | | | | | | **784.80** | **m² Total** |
| | | | | | | | **3. Roof Work** |
| | | | | 1.00 | 28.00 | | 3.1/ G-30 CIS roof cover |
| | | | | | 12.00 | 336.00 | m² |
| | | | | | | **336.00** | **m²** |
| | | | | 2 | 28.00 | 56.00 | 3.2/ G-30 Gutter |
| | | | **2. Block Work** | | | **56.00** | **ml** |
| | | | 2.1/ 20 cm thick HCB wall : | | | | 3.3/ down pipe |
| 6.00 | 2.63 | | | 12 | 9.00 | 108.00 | |
| | 3.00 | 47.34 | m² | | | **108.00** | **ml** |
| 24.00 | 2.70 | | | | | | |
| | 3.00 | 194.40 | m² | | | | |
| 12.00 | 2.75 | | | | | | **4. Eculuptus Truss** |
| | 3.00 | 99.00 | m² | | | | a/ 12cm upper & Lower |
| 6.00 | 1.30 | | | | | | no of truss=28/0.9+1=33 |
| | 3.00 | 23.40 | m² | | | | L=(6+6.3)*2*33=811.8 |
| | | **364.14** | **m²** | | | **811.80** | **ml** |
| | | | **diduct door & Window** | | | | b/ 10cm Vertical & Diag |
| -48.00 | 0.90 | | | | | | 15x1.5x33=742 |
| | 3.00 | -129.60 | m² | | | **742.00** | **ml** |
| -48.00 | 1.63 | | | | | | c/ 5x7cm zigba purlin |
| | 2.00 | -156.48 | m² | 16 | 29 | **464.00** | **ml** |
| -6.00 | 0.60 | | | | | | 4. 2 .2.5x20 facial board |
| | 0.60 | -2.16 | m² | 2 | 29 | **58.00** | **ml** |
| | | **-288.24** | **m²** | | | | **5. Metal Work** |
| | | **75.90** | **m² Total** | | | | main post 40x40x2.5mm RHS Section |
| | | | 2.2/ 15 cm thick HCB wall : | | | | h=1m c/c 150cm |
| 12.00 | 5.15 | | | | | | no=(27.5/1.5+1)*2=39 |
| | 3.00 | 185.40 | m² | | | | no=(11/1.5+1)*2=17 |
| 12.00 | 3.75 | | | | | | total=56x1=56 |
| | 3.00 | 135.00 | m² | | | | weight/m=2.92 |
| | | | | 56 | 2.92 | 163.52 | **Kg** |
| | | | | | | | horizontal frame 30x30x2.5mm RHS Sect |
| 6.00 | 1.20 | | | | | | no=1/0.4+1=4 c/c 40cm |
| | 3.00 | 21.60 | m² | | | | weight/m=2.14 |
| 12.00 | 0.60 | | | | | | |
| | 3.00 | 21.60 | m² | | | | vertical fram c/c 40cm |
| | | **363.60** | **m² Total** | | | | |
| | | | | | | | weight/m=1.43 |

**Proje** **Kafteria** **Block** **Building**
**Client:**
**S.Contracto** -

| Qty | L/W/D | Product | Description & Sketches | Qty | L/W/D | Product | Description & Sketches |
|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | **3. Plastering Work** | | | | 3.7/ 3cm thick cement concrete window sill |
| | | | 3.1/ Three coats of plastering to all internal surface: | 48 | 1.63 | **78.24** | **ml** |
| 24.00 | 5.15 | | | | | | 3.8/ apply ceramic tile ff |
| | 3.00 | 370.80 | m² | 6.00 | 2.63 | | |
| 48.00 | 1.63 | | | | 3.90 | 61.54 | m² |
| | 1.00 | 78.24 | m² | 24.00 | 2.70 | | |
| 6.00 | 1.30 | | | | 3.90 | 252.72 | m² |
| | 3.00 | 23.40 | m² | 12.00 | 2.75 | | |
| 96.00 | 3.90 | | | | 3.90 | 128.70 | m² |
| | 3.00 | ### | m² | 12.00 | 2.65 | | |
| | | **###** | **m² Total** | | 3.90 | 124.02 | m² |
| | | | 3.2/ ditto but to external surface: | 6.00 | 11.00 | | |
| 48.00 | 1.63 | | | | 1.50 | 99.00 | m² |
| | 1.00 | 78.24 | m² | 6.00 | 28.00 | | |
| 6.00 | 1.30 | | | | 1.50 | 252.00 | m² |
| | 3.00 | 23.40 | m² | | | **917.98** | **m² Total** |
| 1 | 11.00 | | | | | | 3.9/ 10cm hight terrazo tile skirting |
| | 3.00 | 33.00 | m² | 96 | 3.9 | 374.40 | ml |
| | | **134.64** | **m² Total** | 48 | 1.63 | 78.24 | ml |
| | | | 3.3/ ditto but to solid slab | 48 | 1.63 | 78.24 | ml |
| 2 | 12.00 | | | | | **530.88** | **ml** |
| | 28.00 | 672.00 | m² | | | | 3.10/ lay 110cm wide & 15cm thick pavement around building |
| | | **672.00** | **m² Total** | 2.00 | 11.00 | | |
| | | | 3.4/ apply 3 coat of rendering | | 1.20 | 26.40 | m² |
| 2 | 11.00 | | | 2.00 | 27.50 | | |
| | 3.00 | 66.00 | m² | | 1.20 | 66.00 | m² |
| 2 | 28.00 | | | | | | |
| | 3.00 | 168.00 | m² | | | **92.40** | **m² Total** |
| | | **234.00** | **m² Total** | 2 | 11 | 22.00 | 3.11/ half open ditch |
| | | | 3.5/ apply 8mm thick plastic ceiling | 2 | 28 | 56.00 | ml |
| 1 | 12.00 | | | | | **170.40** | **ml** |
| | 28.00 | 336.00 | m² | | | | |
| | | **336.00** | **m² Total** | | | | |
| | | | 3.6/ ditto but to eave | | | | |
| 2 | 11.00 | | | | | | |
| | 1.50 | 33.00 | m² | | | | |
| 2 | 27.50 | | | | | | |
| | 1.50 | 82.50 | m² | | | | |
| | | **115.50** | **m² Total** | | | | |

**Proje** Kafteria **Block** **Building**
**Client:**

**S.Contracto** -

| Qty | L/W/D | Product | Description & Sketches | Qty | L/W/D | Product | Description & Sketches |
|---|---|---|---|---|---|---|---|
| | | | 1.3/ Steel Reinforcement | | | | **2. Block Work** |
| | | | a) Dia. 6mm plain bar | | | | 2.01/ 20 cm thick HCB wall around the fance: |
| | 0 | 0.00 | See annexed rebar schedule sheet | 1 | 608.22 | | Total length=608.22 m, height=1.20 m |
| | | | b) Dia. 12 mm deformed bar | | 1.20 | 729.86 | **m²** |
| | 0.00 | 0.00 | See annexed rebar schedule sheet | | | | **3. Plastering Work** |
| | | | c) Dia. 14 mm deformed bar | | | | 3.01/ Three coats of plastering for elevation columns: |
| | 0.00 | 0.00 | See annexed rebar schedule sheet | | | | |
| | | **0.00** | **kg** | 186 | 2.80 | | a) To elevation column-Small |
| | | | | | 0.20 | 104.16 | **m², Height of col.=2.8m,Width=0.20m** |
| | | | **2. Block Work** | 186 | 1.60 | | Height=2.80m-1.20m =1.60m |
| | | | 2.01/ 20 cm thick HCB wall around the fance: | | 0.20 | 59.52 | **m²** |
| | | | | 8 | 2.80 | | b) To elevation column-Big Col. |
| | | | | | 0.40 | 8.96 | **m²,** Height of col.=2.8m,Width=0.20m |
| | | | | 8 | 1.60 | | Height=2.80m-1.20m =1.60m |
| | | | | | 0.40 | 5.12 | **m²** |
| | | | | | | **177.76** | **m² Total** |
| | | | | | | | c) Making Sharp Corners to elev. Columns |
| | | | | 388 | 2.80 | 1,086.40 | **ML,** Numbers of Col.=97 pcs,H=2.80m |
| | | | | | | **###** | **ML** |
| | | | | | | | **4. Metal Work** |
| | | | 2.04/Reinforcement Work: | | | | 4.01/ RHS Giril work b/n elev. Columns as per the Drawings: |
| | | | a) Dia. 6mm plain bar | | | | Number of Girills=93 pcs |
| | 0 | 0.00 | See annexed rebar schedule sheet | 1 | 93.00 | **93.00** | **Pcs** |
| | | | b) Dia. 12 mm deformed bar | | | **93.00** | **Pcs** |
| | 0.00 | 0.00 | See annexed rebar schedule sheet | | | | |
| | | **0.00** | **kg** | | | | HC |
| | | | | 4 | 1.35 | | |
| | | | | | 1.35 | 7.29 | m² |
| | | | | 4 | 1.35 | | |
| | | | | | 3.70 | 19.98 | m² |
| | | | | 8 | 1.35 | | |
| | | | | | 5.10 | 55.08 | m² |
| | | | | 2 | 1.35 | | |
| | | | | | 2.60 | 7.02 | m² |
| | | | | 8 | 3.75 | | |
| | | | | | 5.10 | 153.00 | m² |
| | | | | 2 | 3.70 | | |
| | | | | | 2.60 | 19.24 | m² |
| | | | | | | **261.61** | **m² Total** |



*BAR SCHEDULE*

*PROJECT Building G+2* *1*

*Client Micro Inter Prize Office*

***A SUB STRUCTURE***

| Location | Ø | Length (m) | # of bar | # of meber | Total Length(m) | Ø6 | Ø8 | Ø10 | Ø12 | Ø14 | Ø16 | Ø20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Footing Pad** | | | | | | | | | | | | |
| Main Bar | 20 | 2.6 | 22 | 18 | 1029.6 | | | | | | | 1029.6 |
| **Foundation Colu** | | | | | | | | | | | | |
| Main Bar | 16 | 4.54 | 8 | 18 | 653.76 | | | | | | 653.76 | |
| | | | | | | | | | | | | |
| **Stirrups for Col** | 8 | 0.9 | 16 | 18 | 259.2 | | 259.2 | | | | | |
| c/c 200 | | | | | | | | | | | | |
| **For Ground Floor** | | | | | | | | | | | | |
| c/c 250 | 8 | 11 | 109 | 1 | 1199 | | 1199 | | | | | |
| | 8 | 27 | 45 | 1 | 1215 | | 1215 | | | | | |
| **Stirrups** | | | | | | | | | | | | |
| **For Gread Beam** | 8 | 1.5 | 20 | 5 | 150 | | 150 | | | | | |
| **on axis 1,2 & 3** | 8 | 1.5 | 124 | 5 | 930 | | 930 | | | | | |
| | 8 | 1.5 | 18 | 5 | 135 | | 135 | | | | | |
| **on axis A,B,C,D,E & F** | | | | | | | | | | | | |
| c/c 180 | 8 | 1.5 | 20 | 8 | 240 | | 240 | | | | | |
| | 8 | 1.5 | 48 | 8 | 576 | | 576 | | | | | |
| **Gread Beam** | | | | | | | | | | | | |
| **on axis 1,2 & 3** | 14 | 10.2 | 2 | 5 | 102 | | | | | 102 | | |
| Main Bar | 14 | 8.86 | 2 | 5 | 88.6 | | | | | 88.6 | | |
| | 14 | 10.28 | 2 | 5 | 102.8 | | | | | 102.8 | | |
| | 14 | 12 | 3 | 5 | 180 | | | | | 180 | | |
| | 14 | 8.86 | 3 | 5 | 132.9 | | | | | 132.9 | | |
| | 14 | 8.3 | 3 | 5 | 124.5 | | | | | 124.5 | | |
| Negative Bar | 14 | 3.3 | 1 | 3 | 9.9 | | | | | 9.9 | | |
| | 14 | 3.6 | 2 | 3 | 21.6 | | | | | 21.6 | | |
| | 14 | 2.75 | 2 | 3 | 16.5 | | | | | 16.5 | | |
| **on axis A,B,C,D,E &** | 14 | 11.4 | 2 | 8 | 182.4 | | | | | 182.4 | | |
| Main Bar | 14 | 11.4 | 3 | 8 | 273.6 | | | | | 273.6 | | |
| Negative Bar | 14 | 1.8 | 2 | 6 | 21.6 | | | | | 21.6 | | |
| | 14 | 1.6 | 1 | 6 | 9.6 | | | | | 9.6 | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Total length in meter---------- | **0** | **4,704.20** | **-** | **0** | 1,266.00 | **653.76** | **1,029.60** |
| Weight per unit length in meter---------- | 0.222 | 0.395 | | 0.888 | 1.208 | 1.579 | 2.467 |
| **Total Weight in Kg----------** | ***0*** | ***1,858.16*** | **-** | ***0*** | **1,529.33** | **1,032.29** | **2,540.02** |

## *BAR SCHEDULE*

*PROJECT  Building G+2* *1*

*Client Micro Inter Prize Office*

***B SUPER STRUCTURE***

| Location | Ø | Length (m) | # of bar | # of meber | Total Length(m) | Ø6 | Ø8 | Ø10 | Ø12 | Ø14 | Ø16 | Ø20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Intermideat Beam** | | | | | | | | | | | | |
| **on axis 1,2 & 3** | 14 | 10.2 | 2 | 6 | 122.4 | | | | | 122.4 | | |
| Main Bar | 14 | 8.86 | 2 | 6 | 106.32 | | | | | 106.32 | | |
| | 14 | 10.28 | 2 | 6 | 123.36 | | | | | 123.36 | | |
| | 14 | 12 | 3 | 6 | 216 | | | | | 216 | | |
| | 14 | 8.86 | 3 | 6 | 159.48 | | | | | 159.48 | | |
| | 14 | 8.3 | 3 | 6 | 149.4 | | | | | 149.4 | | |
| Negative Bar | 14 | 3.3 | 1 | 6 | 19.8 | | | | | 19.8 | | |
| | 14 | 3.6 | 2 | 6 | 43.2 | | | | | 43.2 | | |
| | 14 | 2.75 | 2 | 6 | 33 | | | | | 33 | | |
| **on axis A,B,C,D,E &** | **F** | | | | | | | | | | | |
| Main Bar | 14 | 11.4 | 2 | 12 | 273.6 | | | | | 273.6 | | |
| | 14 | 11.4 | 3 | 12 | 410.4 | | | | | 410.4 | | |
| Negative Bar | 14 | 1.8 | 2 | 12 | 43.2 | | | | | 43.2 | | |
| | 14 | 1.6 | 1 | 12 | 19.2 | | | | | 19.2 | | |
| **top tie Beam** | | | | | | | | | | | | |
| **on axis 1,2 & 3** | 14 | 10.2 | 2 | 3 | 61.2 | | | | | 61.2 | | |
| Main Bar | 14 | 8.86 | 2 | 3 | 53.16 | | | | | 53.16 | | |
| | 14 | 10.28 | 2 | 3 | 61.68 | | | | | 61.68 | | |
| | 14 | 12 | 3 | 3 | 108 | | | | | 108 | | |
| | 14 | 8.86 | 3 | 3 | 79.74 | | | | | 79.74 | | |
| | 14 | 8.3 | 3 | 3 | 74.7 | | | | | 74.7 | | |
| Negative Bar | 14 | 3.3 | 1 | 3 | 9.9 | | | | | 9.9 | | |
| | 14 | 3.6 | 2 | 3 | 21.6 | | | | | 21.6 | | |
| | 14 | 2.75 | 2 | 3 | 16.5 | | | | | 16.5 | | |
| **on axis A,B,C,D,E &** | **F** | | | | | | | | | | | |
| Main Bar | 14 | 11.4 | 2 | 3 | 68.4 | | | | | 68.4 | | |
| | 14 | 11.4 | 3 | 3 | 102.6 | | | | | 102.6 | | |
| Negative Bar | 14 | 1.8 | 2 | 3 | 10.8 | | | | | 10.8 | | |
| | 14 | 1.6 | 1 | 3 | 4.8 | | | | | 4.8 | | |
| **Elevation Column** | | | | | | | | | | | | |
| | 14 | 4.02 | 12 | 18 | 868.32 | | | | | 868.32 | | |
| | 14 | 3.8 | 6 | 18 | 410.4 | | | | | 410.4 | | |
| **Strrup** | | | | | | | | | | | | |
| **For Inter & top Bea** | 8 | 0.9 | 20 | 9 | 162 | | 162 | | | | | |
| on axis 1,2 & 3 | 8 | 0.9 | 124 | 9 | 1004.4 | | 1004.4 | | | | | |
| | 8 | 0.9 | 18 | 9 | 145.8 | | 145.8 | | | | | |
| on axis A,B,C,D,E & F | | | | | | | | | | | | |
| c/c 180 | 8 | 0.9 | 20 | 9 | 162 | | 162 | | | | | |
| | 8 | 0.9 | 48 | 9 | 388.8 | | 388.8 | | | | | |
| **For Elev.Column** | | | | | | | | | | | | |
| c/c 200 | 8 | 0.9 | 48 | 18 | 777.6 | | 777.6 | | | | | |
| | | | | | | | | | | | | |
| **Slab** | c/c 200 | | | | | | | | | | | |
| Negative Bar | 8 | 2.67 | 139 | 2 | 742.26 | | 742.26 | | | | | |
| | 8 | 2.83 | 139 | 4 | 1573.48 | | 1573.48 | | | | | |
| | 8 | 3.3 | 56 | 4 | 739.2 | | 739.2 | | | | | |
| | 8 | 3.6 | 56 | 4 | 806.4 | | 806.4 | | | | | |
| | 8 | 2.77 | 56 | 4 | 620.48 | | 620.48 | | | | | |
| Bottom Rein | c/c 200 | | | | | | | | | | | |
| | 8 | 11 | 56 | 2 | 1232 | | 1232 | | | | | |
| top Rein | 8 | 29 | 139 | 2 | 8062 | | 8062 | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | Total length in meter---------- | | | 0 | **16,416.42** | **-** | 0 | 3,671.16 | **-** | **-** |
| | | | Weight per unit length in meter---------- | | | 0.222 | 0.395 | | 0.888 | 1.208 | 1.579 | 2.467 |
| | | | **Total Weight in Kg----------** | | | ***0*** | ***6,484.49*** | **-** | ***0*** | **4,434.76** | - | - |

*BAR SCHEDULE*

*PROJECT  Building G+2* *1*

*GRADE BEAMS AND ELEVATION COLUMNS BAR SCHEDULE*

***A SUPER STRUCTURE***

| Location | Ø | Length (m) | # of bar | # of meber | Total Length(m) | Ø6 | Ø8 | Ø10 | Ø12 | Ø14 | Ø16 | Ø20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

## *BOQ G+2 Micro Cluster Main Building*

| ITEM | DESCRIPTION | UNIT | QTY. | RATE | AMOUNT |
|---|---|---|---|---|---|
| | **A. SUB STRUCTURE** | | | | |
| | **1. EXCAVATION & EARTH WORK** | | | | |
| 1.1 | Excavate over site to remove all objectionable | | | | |
| | materials to an average depth of 20cm. Area | | | | |
| | of excavation includes pavement around | | | | |
| | building. | $M^2$ | 0.00 | - | - |
| 1.2 | Bulk excavation in ordinary soil from the reduce | | | | |
| | level to an average depth of 50cm below | $M^3$ | 0.00 | - | - |
| 1.3 | 50cm thick Trench excavation in ordinary | | | | |
| | soil for stone masonry foundation wall to depth | | | | |
| | of 250cm starting from reduced level. | $M^3$ | 0.00 | - | - |
| 1.4 | pit Excavation for Isolated footing Foundation. | | | | |
| | in ordinary soil to depthof 300cm starting | | | | |
| | from reduced level | $M^3$ | 0.00 | - | - |
| 1.5 | Back fill under hared core & around masonary | | | | |
| | tench & around isolated footing with good dry | | | | |
| | selected material not exceeding 25cm. | $M^3$ | 0.00 | - | - |
| 1.6 | Cart away surplus excavated material and | | | | |
| | deposit at a suitable distance. | $M^3$ | 893.96 | 36.09 | 32,263.02 |
| 1.7 | 25cm thick basaltic or equvalent stone hared core | | | | |
| | well rolled consolidated & blined with | | | | |
| | crushed stone. | $M^2$ | 0.00 | - | - |
| | **Total to Summary……** | | | | **32,263.02** |
| | **2. CONCRETE WORK** | | | | |
| 2.1 | 5cm thick lean concrete in C-5 with minimum | | | | |
| | cement content of 150Kg/$m^3$ | | | | |
| | a/under footing pad. | $M^2$ | 0.00 | - | - |
| | b/under Masonary & gread beam. | $M^2$ | 0.00 | - | - |
| | c/under Hard Core. | $M^2$ | 0.00 | - | - |
| 2.2 | Reinforced concrete quality C-25 with 360kg | | | | |
| | cement/$M^3$ of concrete filled in to formwork | | | | |
| | and vibrated around rod reinforcement bars. | | | | |
| | (Steel and form work measured separately) | | | | |
| | A/ Footing Pad | $M^3$ | 0.00 | - | - |
| | B) In foundation column | $M^3$ | 0.00 | - | - |
| | C) In Grade beam | M3 | 0.00 | - | - |
| | D) In 10cm thick Grouned Floor Slab | $M^2$ | 0.00 | - | - |
| 2.4 | Provide, cut and fix in position sawn Zigba | | | | |
| | wood or metal panel form work: | | | | |
| | A/ Footing Pad | M2 | 0.00 | - | - |

| | | | | | |
|---|---|---|---|---|---|
| | B) In foundation column | $M^2$ | 0.00 | - | - |
| | C) In Grade beam | M2 | 0.00 | - | - |
| 2.5 | Reinforcement bar according to structural | | | | |
| | drawings. Price includes cutting, bending, | | | | |
| | placing in position & tying wires. | | | | |
| | a/Diameter 8mm deformed bars | Kg | 0 | - | - |
| | b/Diameter 14mm deformed bars | Kg | 0 | - | - |
| | c/Diameter 16mm deformed bars | Kg | 0 | - | - |
| | d/Diameter 20mm deformed bars | Kg | 0 | - | - |
| | **Total to Summary……** | **Bir** | | | **-** |

| | | | | | |
|---|---|---|---|---|---|
| | **3. MASONRY WORK** | | | | |
| 3.1 | 50 cm thick hard trachitic or equivalent stone | | | | |
| | masonry foundation wall bedded in cement | | | | |
| | mortar (1:4) below natural ground level. | $M^3$ | 0.00 | - | - |
| 3.2 | ditto (1:4) above natural ground level. | $M^3$ | 0.00 | - | - |
| 3.3 | ditto (1:4) but for steps | $M^3$ | 21.00 | 935.92 | 19,654.32 |
| | **Total to Summary.....** | | | | **19,654.32** |
| | **B. SUPER STRUCTURE** | | | | |
| | **1. CONCRETE WORK** | | | | |
| | Particular attention is to be given to the | | | | |
| | following remarks along with the technical | | | | |
| | specification and method of measurement. | | | | |
| | **Ingredients for concrete work :** | | | | |
| | The quality of materials and workman ship must | | | | |
| | fulfill the requirements and concrete | | | | |
| | **Concrete :** | | | | |
| | **Reinforcement bar :** | | | | |
| | The specified yield strength and other | | | | |
| | related properties of reinforcement bar | | | | |
| | must be confirmed either by manufacturer's | | | | |
| | catalogue/manual or / and by laboratory test. | | | | |
| 1.1 | Reinforced concrete quality C-25 with 360kg | | | | |
| | cement/$M^3$ of concrete filled in to formwork | | | | |
| | and vibrated around rod reinforcement bars. | | | | |
| | (Steel and form work measured separately) | | | | |
| | a. In elevation column | $M^3$ | 4.00 | 1,871.07 | 7,484.28 |
| | b) Intermideate & top tie beam | $M^3$ | 23.00 | 1,871.07 | 43,034.61 |
| | c) 15cm thick solid slab | $M^3$ | 45.38 | 1,872.07 | 84,945.18 |
| | d) Stair Case & Landing | $M^3$ | 5.77 | 1,871.07 | 10,798.41 |
| 1.2 | Provide, cut and fix in position metal panel or | | | | |
| | sawn Zigba wood form work | | | | |
| | a. In elevation column | $M^2$ | 138.24 | 118.11 | 16,327.53 |
| | b) Intermideate & top tie beam | $M^2$ | 270.00 | 118.11 | 31,889.70 |
| | c) 15cm thick solid slab | $M^2$ | 302.50 | 118.11 | 35,728.28 |
| | d) Stair Case & Landing | $M^2$ | 80.00 | 118.11 | 9,448.80 |
| 1.3 | Reinforcement bar according to structural | | | | |
| | drawings. Price includes cutting, bending, | | | | |
| | placing in position & tying wires. | | | | |
| | a/Diameter 8mm deformed bars | Kg | 6,485.00 | 40.69 | 263,874.65 |
| | b/Diameter 10mm deformed bars | Kg | 65 | 42.79 | 2,781.35 |
| | c/Diameter 12mm deformed bars | Kg | 720 | 42.79 | 30,808.80 |
| | d/Diameter 14mm deformed bars | Kg | 4435 | 42.79 | 189,773.65 |
| | e/Diameter 16mm deformed bars | Kg | 970 | 42.79 | 41,506.30 |
| | **Total to Summary** | **Birr** | | | **768,401.53** |
| | **2. BLOCK WORK** | | | | |
| | In addition to strength, size, and other specified | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | requirements HCB blocks must satisfy the weight | | | | |
| | requirements specified in EBCS - 1, 1995. | | | | |
| 2.1 | 20cm thick class-B H.C.B wall bedded and | | | | |
| | Joined in cement mortar mix 1:3 both sides | | | | |
| | left for plaster. | $m^2$ | 75.90 | 174.98 | 13,280.98 |
| 2.2 | ditto but 15cm thick class-B H.C.B wall bedded | $m^2$ | 996.00 | 148.84 | 148,244.64 |
| | **Total to Summary…….** | | | | **161,525.62** |
| | **3.ROOFIG WORKIG** | | | | |
| 3.1 | C-30 Roof cover in corrigated galvanized iron sheet (CIS)), fixed to wooden purlins with dome headed nails. Price shall include ridge cap. (Purlins measured and roof measured in horizontal projection with all acceessory). | $m^2$ | 336.00 | 226.20 | 76,003.20 |
| 3.2 | Supply and fix G-30 galvanized flat metal sheet gutter as per the detail drawing. Price shall include all necessary accessories, metal bracket suspenders, one coat of antirust paint and two coat of synthetic enamel paint. | ml | 56.00 | 120.75 | 6,762.00 |
| 3.3 | down pipe fixed to RC column with metal strap | | | | |
| | c/c 100cm | ml | 108.00 | 140.23 | 15,144.84 |
| | **Total to Summary…….Birr** | | | | **97,910.04** |
| | **4. CARPENTERY & JOINRY WORK** | | | | |
| | All structural members shall be paint 2 coats of | | | | |
| | anti termite paint well seasoned and each truss | | | | |
| | shall be fixed to RC beam with 0.6mm plain bar. | | | | |
| | Truss spacing is shown in the drawing. | | | | |
| 4.1 | **EUCALYPTUS TRUSS** | | | | |
| | a/12cm upper & lower chord. | ml | 811.80 | 47.57 | 38,617.33 |
| | b/ø10cm diagonal & vertical members. | ml | 742.00 | 46.89 | 34,792.38 |
| | c/ø5x7cm zigba wood purlin. | ml | 464.00 | 37.49 | 17,395.36 |
| 4.2 | Supply & fix flash wooden door with tid wood | | | | |
| | frames & both side coverd with best quality 4mm | | | | |
| | thick plywood price includes all the nessasary | | | | |
| | accessories | | | | |
| | D1 Size 70cmx210cm | pcs | 12 | 8,000.00 | 96,000.00 |
| | **Total to Summary…….Birr** | | | | **186,805.07** |
| | **5. METAL WORK** | | | | |
| 5.1 | supply & fix metal door & window made of emitation | | | | |
| | profile with Grill shall be fabricated from | | | | |
| | manufactured tabular steel profile and aproved, | | | | |
| | quality of cylindarical lock as per drawing | | | | |
| | price includes all the necessary work. | | | | |
| | **DOORS** | | | | |
| | D1 Size 90cmx300cm | pcs | 6 | 2,288.68 | 13,732.08 |
| | DW1 Size 253cmx300cm (door & Window in one) | pcs | 48 | 6,433.73 | 308,819.04 |
| | FD1 Size 375cmx300cm | pcs | 6 | 9,536.17 | 57,217.02 |

| | | | | | |
|---|---|---|---|---|---|
| | FD2 Size 165cmx300cm | pcs | 6 | 4,195.91 | 25,175.46 |
| 5.2 | supply & fix metal window made of emitation | | | | |
| | profile with Grill complete worke with all | | | | |
| | accessories as shown. This work includes | | | | |
| | 1 coat of anti rust & 2 coat of synthetic paint | | | | |
| | **WINDOWS** | | | | |
| | Type W-1,size 60x 60cm | pss | 6.00 | 305.15 | 1,830.90 |
| 5.3 | supply & fix metal blustrade for corridor to fit the | | | | |
| | schedule the main post shall be 40x 40x2.5mm | | | | |
| | RHS section fixed to slab by cement grouting at | | | | |
| | every 1.5m c/c and the main horizontal frame shall | | | | |
| | be 30x 30x2.5mm RHS section fixed | | | | |
| | to column by cement grouting by vertical stand | | | | |
| | every 40cm c/c.the centeral panel | | | | |
| | fixed with RHS 25x 25x2mm price can include | | | | |
| | cutting,welding the joints proprily & paint 3 coat | | | | |
| | of synthtic paint on an anti rust coat primer. | | | | |
| | a/ RHS 40x 40x2.5mm | kg | 530.00 | 45.00 | 23,850.00 |
| | b/ RHS 30x 30x2.5mm | kg | 1320.00 | 45.00 | 59,400.00 |
| | c/ RHS 25x 25x2mm | kg | 800.00 | 45.00 | 36,000.00 |
| 5.4 | supply & fix metal blustrade with kararo wood | | | | |
| | handrail for stair case | | | | |
| | a/ RHS 40x 40x2.5mm | kg | 120.00 | 45.00 | 5,400.00 |
| | b/ RHS 30x 30x2.5mm | kg | 260.00 | 45.00 | 11,700.00 |
| | c/ Kararo wooden handrail size 40x60mm screwed | | | | |
| | every 30cm c/c to RHS section. | ml | 155.00 | 45.00 | 6,975.00 |
| | d/15x 2.5cm nicely planed & polished kararo | | | | |
| | wood strings | ml | 108.00 | 50.00 | 5,400.00 |
| | **Total to Summary…….. Birr** | | | | **555,499.50** |
| | **6. FINISHING WORK** | | | | |
| | Finishing work shall include all surface | | | | |
| | pre-cleaning preparation application of finish, | | | | |
| | polishing and cleaning at the end of finishing | | | | |
| | work. | | | | |
| 6.10 | Apply three coats of plaster in cement mortar | | | | |
| | mix 1:3 up to fine finish.to all internal surface, | | | | |
| | exposed concret column and beam. | $m^2$ | 1595.64 | 105.91 | 168,994.23 |
| 6.20 | ditto but to external wall surface. | $m^2$ | 134.64 | 105.91 | 14,259.72 |
| 6.30 | ditto but to solid slab. | $m^2$ | 672.00 | 105.91 | 71,171.52 |
| 6.40 | Apply three coats of tyrolline rendearing to exteri | | | | |
| | or surface **(Use Machine rendering)** | $m^2$ | 234.00 | 20.11 | 4,705.74 |
| 6.50 | supply & fix plastic ceiling to 4x5cm | | | | |
| | zigba wood buttons placed at c/c 60cm in both way. | | | | |
| | price includes includes celling button & angulare. | $m^2$ | 336.00 | 337.46 | 113,386.56 |
| 6.60 | 30cm treade and 20cm riser Marble for stair case | Ml | 115.50 | 120.00 | 13,860.00 |

| | | | | | |
|---|---|---|---|---|---|
| 6.70 | 3cm thick marble window sill 30cm | | | | |
| | wide bedded in cement and sand morter mix (1:3) | ml | 78.24 | 75.00 | 5,868.00 |
| 6.80 | Supply and Fix 30x30cm Ceramic tile floor finish bedded & | | | | |
| | joints grunted in cement and sand morter mix (1:3) | | | | |
| | morter beddeding.for varrandaha,stair & Lobby non slipery | $m^2$ | 917.98 | 300.00 | 275,394.60 |
| 6.9 | ditto but Ceramic wall for shawor Room 15x15cm | $m^2$ | 106.00 | 300.00 | 31,800.00 |
| 6.10 | ditto but cement concret terrazo tile floor finish | $m^2$ | 475.00 | 200.00 | 95,000.00 |
| 6.11 | 10cm high Ceramic tile skirting stuck down with | | | | |
| | cement and sand morter mix (1:3) | ml | 530.88 | 70.00 | 37,161.60 |
| 6.12 | Supply & lay 110cm wide & 10cm thick mass | | | | |
| | concret C-15 pavement around the building including | | | | |
| | creshed &10cm thick compacted red ash. | $m^2$ | 92.40 | 295.40 | 27,294.96 |
| 6.13 | Supply & fix open ditch & half cement concret pipe | | | | |
| | d=40cm bedded & joint in 1:3 morter | | | | |
| | ,price includes selected material fill | ml | 170.40 | 124.50 | 21,214.80 |
| | **Total to Summary……** | **Birr** | | | **880,111.73** |
| | **7. Glazing Work** | | | | |
| 7.1 | Supply & fix 6mm thick ordinary glass quality clear | | | | |
| | sheet glass & glazing to metal casment with putty | $m^2$ | 410.00 | 300.00 | 123,000.00 |
| | **Total to Summary……** | **Birr** | | | **123,000.00** |
| | **8. Painting** | | | | |
| | Prepare the surface and apply three coats | | | | |
| | of plastic emulsion paint of chosen type | | | | |
| | and clour to: | | | | |
| 8.1 | Internal plastered surface and exposed | $m^2$ | 1595.64 | 40.00 | 63,825.60 |
| | concret column and beam. | | | | |
| 8.2 | ditto but to external plastered wall surface. | $m^2$ | 134.64 | 40.00 | 5,385.60 |
| 8.3 | ditto but to rendearing wall | $m^2$ | 156 | 40.00 | 6,240.00 |
| 8.4 | ditto but to Qaurtize paint to external wall | $m^2$ | 336 | 40.00 | 13,440.00 |
| 8.5 | ditto but to sold slab | $m^2$ | 616.00 | 40.00 | 24,640.00 |
| 8.6 | ditto but synthtic paint to metal door & windaw. | $m^2$ | 410 | 40.00 | 16,400.00 |
| | **Total to Summary……** | **Birr** | | | **129,931.20** |
| | **9.SANITARY INSTALLATION** | | | | |
| | **A. Interior Installation** | | | | |
| | **Water Supply Pipes & fittings** | | | | |
| 9.1 | Supply and install galvanized steel pipes | | | | |
| | from elevatedwater tank to cold and hot water | | | | |
| | distibution to all santitary fixtures as shown on . | | | | |
| | the drawing | | | | |
| | Diameter 15 mm | ml | 60 | 50.00 | 3,000.00 |
| | Diameter 20 mm | ml | 40 | 60.00 | 2,400.00 |

| | | | | | |
|---|---|---|---|---|---|
| 9.2 | Supply and install gate valves made of brass | | | | |
| | completewith rubber gaskets, hand wheels and | | | | |
| | connecting pieces such as unions etc, for all fixtures | | | | |
| | Diameter 15 mm | Pcs | 14 | 25.00 | 350.00 |
| | Diameter 20 mm | Pcs | 10 | 27.00 | 270.00 |
| | **Elevated water tank** | | | | |
| 9.3 | Supply and mount 8m$^3$ fibre glass water tank on | | | | |
| | roof complete with all the necessary accessories | | | | |
| | a) Size of water tank = 4 x 2 m | Pc | 1 | 15,000.00 | 15,000.00 |
| | b)Diameter 32mm brass gate valve for outlet pipe | Pcs | 1 | 200.00 | 200.00 |
| | c)Diameter 32mm brass gate valve for drain pipe | Pcs | 1 | 200.00 | 200.00 |
| | d)Diameter 32mm brass gate valve for inlet pipe | Pcs | 1 | 150.00 | 150.00 |
| | e)Diameter 40mm PVC float valve | Pcs | 1 | 200.00 | 200.00 |
| | f)Diameter 50 mm PVC vent pipe with vent cap | | | | |
| | length of pipe 30 cm | Pcs | 1 | 250.00 | 250.00 |
| | g)Diameter 32mm drain and over flow galvanized | | | | |
| | steel pipe | Ml | 45 | 70.00 | 3,150.00 |
| | h)Roto Stand made of Concrete pole & Slab | Lump | 1 | 10,000.00 | 10,000.00 |
| | **Sanitary Fixtures** | | | | |
| 9.4 | Supply and install low level water closet | | | | |
| | white glazed vitreous China WC pan of approved | | | | |
| | quality complete with all the necessary accessories | Pcs | 12 | 2,000.00 | 24,000.00 |
| 9.5 | Supply and install hand wash basins made | | | | |
| | of white vitreous China with two tap holes | | | | |
| | complete with all the necessary accessories | | | | |
| | Size :- 500 x 405 mm | Pcs | 12 | 3,500.00 | 42,000.00 |
| 9.6 | Supply & install white glazed steel cast-iron shawor | | | | |
| | tray with slip resistance base,15mm chrome plated | | | | |
| | shower mixer with cold & hot taps,concealed riser tube | | | | |
| | chrome plated shower arm tube & swivel spray head, | | | | |
| | 38mm brass shower tray waste drain hole with chrome | | | | |
| | plated grated,dia 38mm uPVC trap. | | | | |
| | size 900x900mm | Pcs | 12 | 3,500.00 | 42,000.00 |
| 9.7 | Supply and install single tubular chrome plated swing | | | | |
| | towel hanger,with chrome plated fastening screws | | | | |
| | completed with all the necessary accessories | Pcs | 2 | 200.00 | 400.00 |
| 9.8 | Supply and fix toilet paper holder in white vitreous | | | | |
| | China complete with all the necessary accessories | Pcs | 12 | 150.00 | 1,800.00 |
| 9.9 | Supply and fix crystal glass mirror 500 x 400 mm | | | | |
| | including chrome plated brass clips and screws | Pcs | 6 | 1,500.00 | 9,000.00 |
| | **Waste water & Ventilation Pipe** | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 9.1 | Supply and fix water heater complete with all | | | | |
| | neccessories. | | | | |
| | a/Capacity 25 litters | Pcs | 6 | 4,500.00 | 27,000.00 |
| 9.1 | Supply and install , waste and vent pipe in | | | | |
| | horizontal branches and vertical stacks made | | | | |
| | of PVC including the necessary fittings such as | | | | |
| | bends, branches tees, elbow etc. All horizontal | | | | |
| | branches should be laid at a slope of 2% . | | | | |
| | Diameter 50 mm | ml | 106 | 52.00 | 5,512.00 |
| 9.1 | Supply and install vent caps made of PVC | | | | |
| | at vent pipes fitted with PVC pipe roof weathering | | | | |
| | slate at roof level. | | | | |
| | Diameter 50 mm | Pc | 25 | 50.00 | 1,250.00 |
| | **B. Site Sanitary Work** | | | | |
| 9.1 | Construct sanitary manholes on a domestic sewer | | | | |
| | lines in double brick wall on a base of mass | | | | |
| | concrete slab 150mm thick with proper slope for | | | | |
| | smooth flow and with 80 mm R.C slab cover and | | | | |
| | steel bar handle as shown on the detaildrawing. | | | | |
| | Size:- 60 x 60 cm | Pc | 2 | 2,000.00 | 4,000.00 |
| | Avg. depth =60 cm | | | | |
| 9.14 | Supply and lay hard plastic pipe for sewerage | | | | |
| | according to the drawing | | | | |
| | Diameter 150 mm | Ml | 210 | 120.00 | 25,200.00 |
| 9.15 | Supply and install galvanized steel pipe from main | | | | |
| | line to roof fibre glass water tank complete with | | | | |
| | all the necessary accessories. | | | | |
| | Diameter 32mm | Ml | 20 | 65.00 | 1,300.00 |
| | **Total to Summary.....** | **Birr** | | | **218,632.00** |
| | **10. ELECTRICAL INSTALLATION** | | | | |
| | **1.Power Intake** | | | | |
| | **1.1 Under Ground Ducts/pipes** | | | | |
| | A/PVC pipe of 50mm diameter | ml | 15 | 500.00 | 7,500.00 |
| | **1.2. Manhole** | | | | |
| | A/Construct manhole in brick & with concrete | | | | |
| | base internally of 600x600x600mm including concret | | | | |
| | cover with lifting hole | N° | 1 | 2,500.00 | 2,500.00 |
| | **2. Low Voltage System Earthing** | | | | |
| 2.1 | 2400x16mm coper clad earthing rod inside | | | | |
| | 600x600x600mm pit measured elsewhere) | N° | 1 | 2,000.00 | 2,000.00 |
| 2.2. | 1x16 sq.mm bare copper bonding conductor | | | | |
| | from earth bar to MLPP-TP3 earthing terminal | ml | 15 | 500.00 | 7,500.00 |
| | **3. Distribution Board** | | | | |
| 3.1 | Flush Mounted distribution board LPP-TF (the boar | | | | |
| | name shall be identified using plastic engrayed | | | | |
| | tags screw fastened) in sheet steel structure with | | | | |
| | locable door & including bus bars of 63Amp 3phase | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | with all accessaries fixing & connecting accessaries | | | | |
| | 2pcs 10A MCB,1phase 6KA | | | | |
| | 10pcs 16A MCB,1phase 10KA | | | | |
| | 1pcs main 32A MCB,3phase 10KA | | | | |
| | and with 25% reserve pitch. | N° | 1 | 6,000.00 | 6,000.00 |
| 3.2 | Flush mounted sub distribution board MDB with lockable door, phase-bar rating of 400A/3ph and with all its accessories consisting of :- | | | | |
| | 1pc m.c.c.b. of 320A/3ph Icu=16ka | | | | |
| | 5 pcs m.c.b. of 63A/3ph Icu=10ka | | | | |
| | 8 pcs m.c.b. of 25A/3ph Icu=10ka | | | | |
| | and with 20% reserve space. | N° | 3 | 4,000.00 | 12,000.00 |
| | **4. Feeder Cable & PVC pipe** | | | | |
| | Installed PVC power cable type NYY0.6/1kv or | | | | |
| | equvalent to be drawn inside riser shaft or PVC | | | | |
| | conduit | | | | |
| | **Cables** | | | | |
| 4.1 | 5x10 sq.mm from MLPP-TP3 to Lpp-LF | ml | 2300 | 15.00 | 34,500.00 |
| | **PVC pipes** | | | | |
| 4.2 | 32 diameter | ml | 54 | 500.00 | 27,000.00 |
| | **5.LIGHT POINTS** | | | | |
| 5.1 | Light points fed through PVC insulated conductor | | | | |
| | of.2 x 2.5 sq.mm.in thermoplastic conduit of diam | | | | |
| | 16mm in/under surface including junction boxes | | | | |
| | screw type connectors with insulating caps and | | | | |
| | cover including all accessories | N° | 111 | 300.00 | 33,300.00 |
| | **6.SWITCH** | | | | |
| 6.1 | Flush mounted Legrand Suno range switch or | | | | |
| | equivalent with non circular corresponding box:- | | | | |
| | a. Single pole | N° | 111 | 60.00 | 6,660.00 |
| | b. Double pole | N° | 111 | 75.00 | 8,325.00 |
| | **7.SOCKET OUTLET POINT** | | | | |
| 7.1 | Socket outlets points for flush mounting fed | | | | |
| | through PVC conductor of 3 x 2.5 sq.mm | | | | |
| | in thermoplastic conduit of diameter 16mm | | | | |
| | in/under surface including junction boxes,screw | | | | |
| | type connectors and cover all complete | | | | |
| | Ditto but fed through PVC coductor of 3x4 | | | | |
| | sq.mm in diameter 21 mm. | N° | 48 | 200.00 | 9,600.00 |
| 10.4 | **TELEPHONE POINT:-** | | | | |
| | Telephone point:- Only conduit of diameter 19 - | | | | |
| | 29mm, outlet box, pull wire and tele terminal | | | | |
| | box as per ETC rules and regulations | N° | 48 | 200.00 | 9,600.00 |
| | **Total to Summary** | | **Birr** | | **166,485.00** |
| | **GRAND TOTAL** | | | | **3,340,219.03** |

# GRAND SUMMARY

**Project : G+2 MICRO CLUSTER**

**Location : SHASHEMENE BURKA GUDINA**

**Client : SHASHEMENE JOB CREATION & FOOD SECURITY OFFICE**

**Contractor :**

**Consultant :**

| ITEM NO | DESCRIPTIONS | AMOUNT (BIRR) |
|---|---|---|
| | Main building | *3,340,219.03* |
| | Septic tank & manhole | *205,979.37* |
| | ***Total*** | *3,546,198.40* |
| | *Profit* | *248,233.89* |
| | *Overhead* | *248,233.89* |
| | *Toal sum* | *4,042,666.17* |
| | *VAT 15%* | *606,399.93* |
| | ***Grand total with VAT15%*** | ***4,649,066.10*** |
| | | |