**LABOR COST EXAMPLE: Narrow-walled adobe #1000 (see Supplementary Figure 2)**

Recorded information:

ELONG = 0.38

EWIDE = 0.54

FACTOR = 0.0

IPAREA = 0.31

PBEAM = 1

PDBACK = 2.82

PDENTRY = 2.82

PDFRONT = 2.82

PDSIDE = 2.82

PLLENGTH = 0

PLTHICK = 0

PLWIDTH = 0

PROLONG = 5

PROWIDE = 3.82

SUPPNUM = 2

WFACTOR = 1.5

WWIDE = 10

ADOBE CALCULATIONS

**PERIMETER** =(PROLONG x 2) + (PROWIDE x 2) – EWIDE + (ELONG x 2)

(5 x 2) + (3.82 x 2) – 0.54 + (0.38 x 2) = 17.86

**WADOBE** = [(17.86 x 10 x 1.8)/100] – 0 = 3.21

**RAREA** =[PROLONG + (WWIDE/50)] x [PROWIDE + (WWIDE/50)]

[5 + (10/50)] x [3.82 + (10/50)] = 20.90

**RADOBE** = RAREA x .05

20.90 x .05 = 1.05

**FADOBE** =PLLENGTH x PLWIDTH x PLTHICK/100

0 x 0 x 0/ 100 = 0

**TOTADOBE** =WADOBE + RADOBE+ FADOBE

3.21 + 1.05 + 0 = 4.26

**MIXING** =TOTADOBE / .05

4.26/ .05 = 85.20

**DIGGING** = (PROLONG \* PROWIDE \* .30) / .52

(5 \* 3.82 \* .30) / .52 = 11.02

**ADOBELAB** = MIXING + DIGGING

85.20 + 11.02 = 96.22 person-hours

WOOD CALCULATIONS

**BIGWOOD** = (SUPPNUM + PBEAM) x 50

(2 + 1) x 50 = 150

**MIDWOOD** =[(PROLONG x PROWIDE) + 8] x 15

[(5 x 3.82) +8] x 15 = 406.50

**BACKPN** =PDBACK x PROLONG

2.82 x 5 = 14.10

**FRONTPN=** PDFRONT x (PROLONG – EWIDE)

2.82 x (5 – 0.54) = 12.58

**SIDEPN** =2 x PDSIDE x PROWIDE

2 x 2.82 x 3.82 = 21.54

**ENTRYPN** =2 x PDENTRY x ELONG

2 x 2.82 x 0.38 = 2.14

**TOTALPN** =BACKPN + FRONTPN + SIDEPN + ENTRYPN

14.10 + 12.58 + 21.54 + 2.14 = 50.36

**SMALLWOOD** = TOTALPN x 10

50.36 x 10 = 503.60

**CLOSING** = RAREA x 29

20.90 x 29 = 606.22

**IPWOOD** = IPAREA x 29

0.31 x 29 = 8.99

**WCLOSE** =PERIMETER x WFACTOR x 29

17.86 x 1.5 x 29 = 776.91

**TOTWOOD**= BIGWOOD + MIDWOOD + SMALLWOOD + CLOSING + IPWOOD **+** WCLOSE

150 +406.5 + 503.60 + 606.22 + 8.99 + 776.91 = 2452.22

**CUTTING** = TOTWOOD/ 50

2452.22 / 50 = 49.04

**TRANSPORT** = TOTWOOD / 96

2452.22 / 96 = 25.54

**WOODLAB** = CUTTING + TRANSPORT

49.04 + 25.54 = 74.58 person-hours

BUILDING CALCULATIONS

**WALLAREA** = PERIMETER x 1.8

17.86 x 1.8 = 32.15

**BUILD** = (RAREA+ WALLAREA+ IPAREA) x2.5

(20.90+ 32.15+ 0.31) x 2.5 = 133.41 person-hours

TOTAL AND RELATIVE COSTS

**TOTLAB** = WOODLAB + ADOBELAB + BUILD

74.58 + 96.22 + 133.41 = 304.21 person-hours

**RELCOST** = TOTLAB/ (PROLONG x PROWIDE)

304.21 / (5 x 3.82) = 15.93 person-hours/square meter