

Dormitory Overview

In order to house 200+ students, we have designed dorm buildings that would house around 56 students per building, each being larger but similar in design to recent teacher homes that we have constructed. Thus the following summary should cover the needs for two dorms and a bath house for the girls, and the same for the boys:

Materials for 4 dorm buildings:	\$9,900	x	4	=	\$39,600
Labor for 4 dorm buildings:	\$3,000	x	4	=	\$12,000
Materials for 2 bath houses:	\$12,300	x	2	=	\$24,600
Labor* for 2 bath houses:	\$1,900	x	2	=	\$3,800
					<u><u>\$80,000</u></u>

**The labor for building the bath house is our estimate, based on the fact that it is a single floor and involves much less construction. We plan to use the same builder as for the dorm buildings and will contact him as soon as possible for a firm quote.*

The reasons we wish to replace our bamboo dorms with these new buildings include the following:

- The old dormitories are not hygienic, being too close to the ground and very difficult to clean.
- Bamboo floors and walls do not stand up well to heavy traffic and lively students.
- The leaf roofing requires annual maintenance to avoid serious leaks. Every two or three years, the entire roof must be replaced.
- The mold and termite activity in the bamboo and leaf roofs causes many respiratory problems.
- The dorms were built for fewer students than we currently have, resulting in overcrowded conditions.



Girls' Dorm



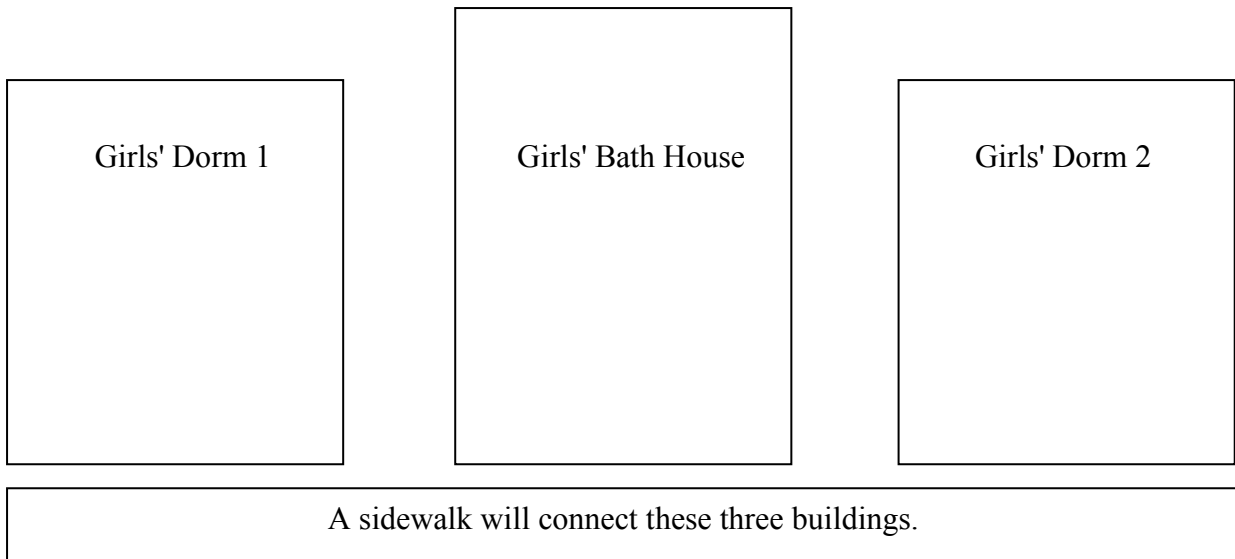
Boys' Dorm



Staff house near completion (view from back side)

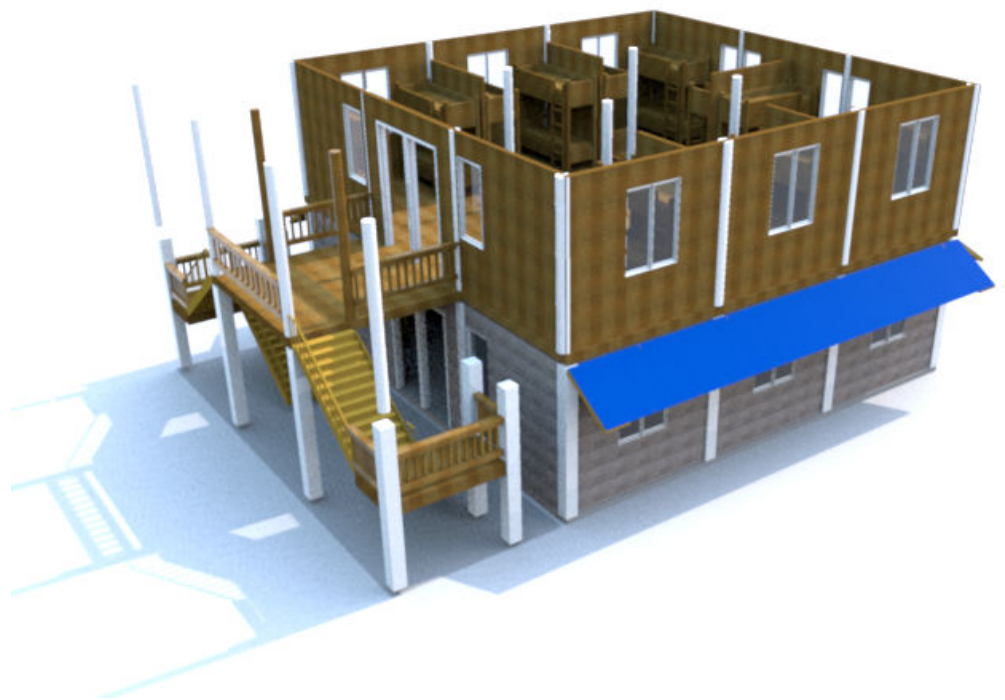
The proposed dorm design is similar to the new staff house shown to the left. The ground floor would have block walls and windows, permitting 28 students to sleep on each floor (56 in total in one dorm building).

A rough layout of the three buildings composing the girls' dorm complex would look like this:



The same plan would be followed for the boy's dorm complex.

Here are 3D models of the dorm buildings:



Detailed floor plan for 1 floor of dormitory building. (Entry is at bottom.)

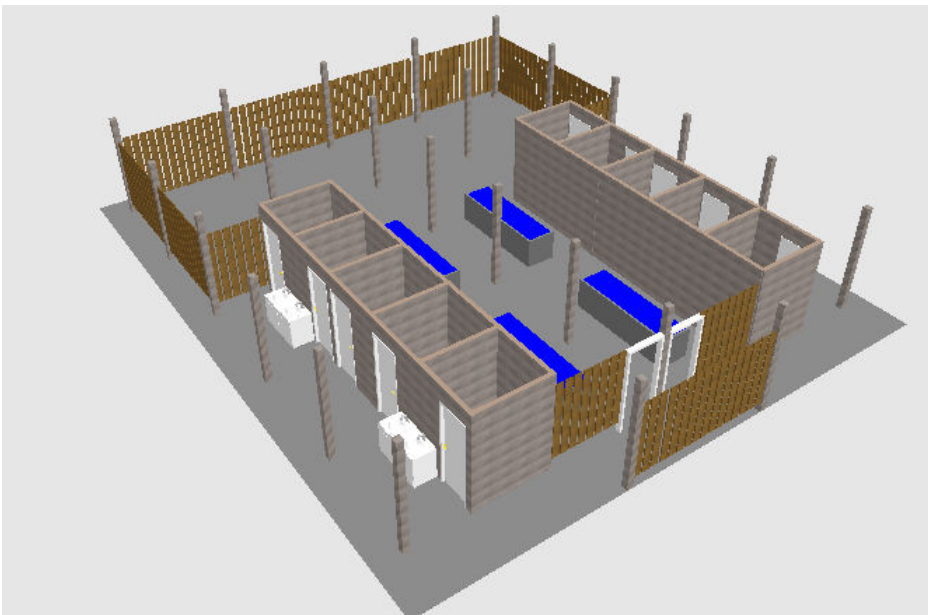


Materials List for 1 Dormitory Building:

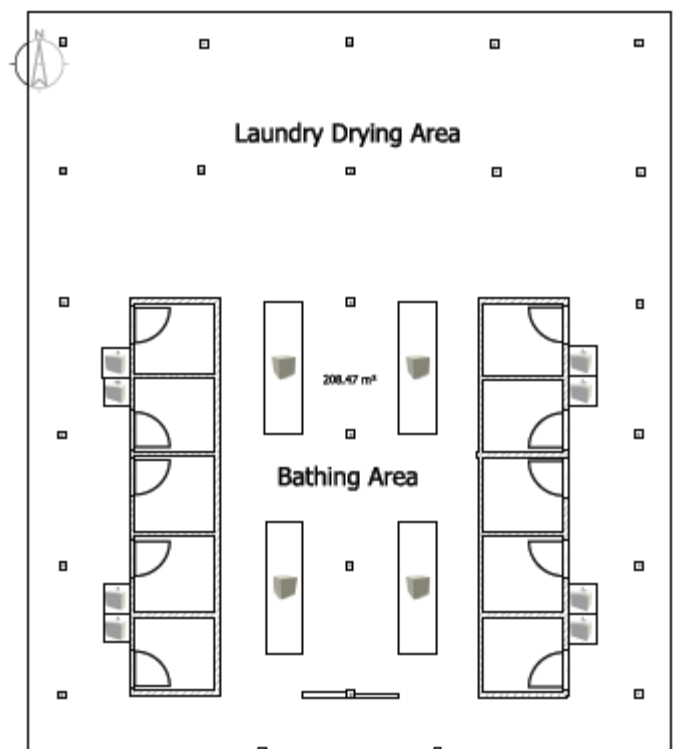
	Total Qty	Unit Price	Price (TB)	Price (\$)
concrete post (3 m)	20	815	16300	\$543.33
concrete footing (60cm)	20	180	3600	\$120.00
9' post (6 cubits)	10	200	2000	\$66.67
12' post (8 cubits)	10	300	3000	\$100.00
2X4, 9' (6 cubits)	212	120	25440	\$848.00
2X4, 12' (8 cubits)	22	200	4400	\$146.67
2X8, 9' (6 cubits)	80	250	20000	\$666.67
2X6, 9' (6 cubits)	28	180	5040	\$168.00
2X6, 12' (8 cubits)	26	300	7800	\$260.00
2X6, 14' (min. 9.6 cubits)	27	400	10800	\$360.00
2X10 (min. 6.5 cubits)	2	450	900	\$30.00
1X7, 9' (6 cubits)	507	120	60840	\$2,028.00
roof tile, clips, screws	631	80	50480	\$1,682.67
ridgecap	38	100	3800	\$126.67
rebar (6m, 9mm)	27	24.6	664	\$22.14
wire mesh roll	2.3	1775	4083	\$136.08
concrete (m)	10.57	2500	26429	\$880.97
concrete blocks + mortar	1000	12	12000	\$400.00
8" bolt	96	50	4800	\$160.00
nails	2.5	2000	5000	\$166.67
windows	18	1200	21600	\$720.00
doors	4	2000	8000	\$266.67
Total			296976	\$9,899.19

Bath House

Here are 3D models of the bath house:



Detailed floor plan for bath house. (Entry is at bottom.)



Materials list for 1 Bath House

Item	Dimensions	Qty	Unit	Price	Item Cost
Mix w/ truck	Total, incl. delivery	22	meters	2500	55000
Rebar	1/4" x 3500 ft / 1067 meters	270	meters	4.1	1103
Wire mesh	Roll of 1076 sq ft / 100 sq meters	3	rolls	1775	5325
Concrete block	8" x 16" (20cm x 40cm)	2000	blocks + mortar	10	20000
Concrete posts	8" x 2.5 meter	32	posts	815	26080
Entry doors	Standard wood door (80cm x 200cm)	4	Doors	1500	6000
Toilet doors	Toilet door (70cm x 200cm BATHIC)	10	Door	360	3600
Tile	12" x 12" tile; 11 per box (7106 sq ft)	2350	Tile	12.00	28200
Toilets	Standard "squat pot" toilet	10	Toilet	199	1990
Sinks	Handwashing sink	8	Sink	1200	9600
Plumbing	Misc. pipe & connections	1	Set	10000	10000
Roofing tile	Tile / 2'7" (2.55' / 0.78m) x 1'5" (1.4' / 0.42m) / 3.57 sq ft. ea.	750	Tile	70	52500
Tile hardware	Clips & screws	750	Tile	10	7500
Roofing tile	Ridgecap	39	Tile	100	3900
Roofing tile	25% Translucent tile upgraded	200	Tile	20	4000
Gutter	Rain gutter	105	feet	65	6825
Gutter	Downspout	40	feet	65	2600
1 x 8	7.5 ft (5 cubits) long	168	pieces	180	30240
2 x 4	9 ft (6 cubits) long	25	pieces	120	3000
2 x 4	10.5 ft (7 cubits) long	40	pieces	160	6400
2 x 4	10.5 ft (7 cubits) long	120	pieces	160	19200
2 x 6	3m / 10.5 ft (7 cubits) long	60	pieces	250	15000
2 x 6	3.5m / 12 ft (8 cubits) long, ripped to 2x3	48	pieces	300	14400
2 x 6	4m / 13.5 ft (9 cubits) long	60	pieces	350	21000
Fuel, etc	Transport building materials	10	deliveries	1000	10000
Wire	2.5mm 3-conductor copper	1	90-meter roll	2500	2500
Controls	Light switches	2	Switches	20	40
Lights	4-foot flourescent light	12	lights	230	2760
Outlets	Outlets	4	outlets	17	68

\$12,294.35