

# Architecture is Life...

•Camp

·Camp Impact

By David E. Snider

•Community

Sustainability

...Life is Architecture



# Architecture is Life...

·Camp

·Camp Impact

Community

"What is Architecture anyway? Is it the vast collection of the various buildings which have been built to please the varying taste of the various lords of mankind? I think not. No, I know that Architecture is life; or at least it is life itself taking form and therefore it is the truest record of life as it was lived in the world yesterday, as it is lived today or ever will be lived. So Architecture I know to be a great spirit. It can never be something which consists of the buildings which have been built by man on earth ... mostly now rubbish or soon to be ... Architecture is that great living creative spirit which from generation, from age to age, proceeds, persists, creates, according to the nature of man, and his circumstances as they change. That is really Architecture." -F.L.W. from an Organic Architecture 1939

Sustainability

# ...Life is Architecture

"Yet these were the developments of men who were simply responding to their environment, creating simple durable structures with the materials at hand to protect themselves from the weather."

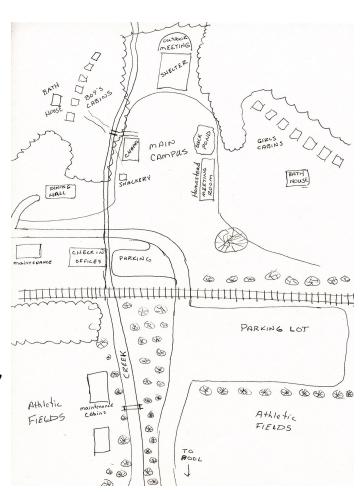
Ted Benson

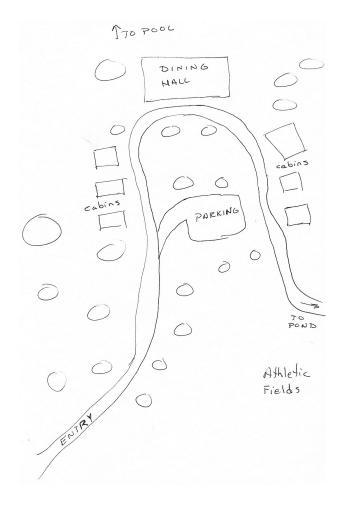


·Camp Impact

Community

Sustainability







## Camp Impact

- History
  - Christ Community Church
  - · Mission to the world
  - · United States 1986
  - · Bluefield, WV 1990
  - Fairmont, WV 1994
  - Families or Groups
  - Repair dilapidated homes





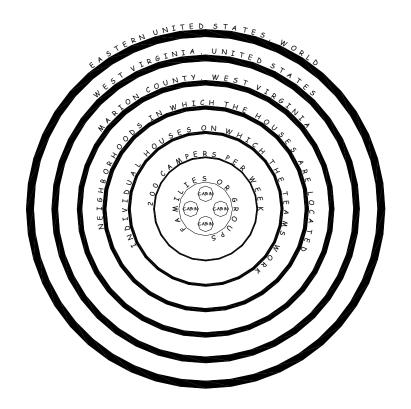


#### ·Camp Impact

- Vision
  - · Leasing 4-H camp
  - Purchase property and build
  - Cabins
  - Bathhouses
  - Dining hall
  - Lodge
  - Outdoor meeting area
  - Pool and athletic fields
  - R. V. park



- Camp Impact
- Idea



#### EASTERN UNITED STATES, WORLD

WEST VIRGINIA, UNITED STATES

MARION COUNTY, WEST VIRGINIA

NEIGHBORHOODS IN WHICH THE HOUSES ARE LOCATED

INDIVIDUAL HOUSES ON WHICH THE TEAMS WORK

200 CAMPERS PER WEEK

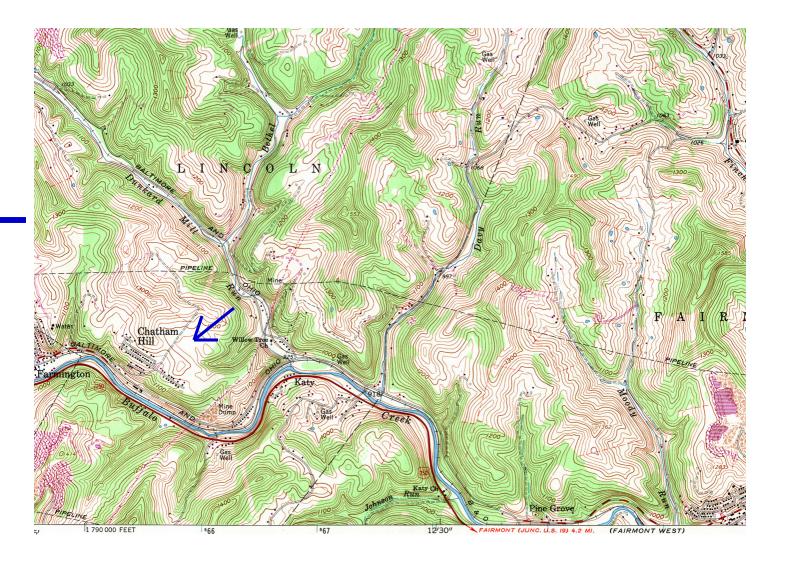
FAMILIES OR GROUPS

CABINS



## Camp Impact

Location





- •Camp
- Camp Impact
- Video









Site Entry Video



- Camp Impact
- Video





Cabin Location 1 Video



Cabin Location 2 Video



·Camp Impact

EASTERN UNITED STATES, WORLD

WEST VIRGINIA, UNITED STATES

MARION COUNTY, WEST VIRGINIA

NEIGHBORHOODS IN WHICH THE HOUSES ARE LOCATED

INDIVIDUAL HOUSES ON WHICH THE TEAMS WORK

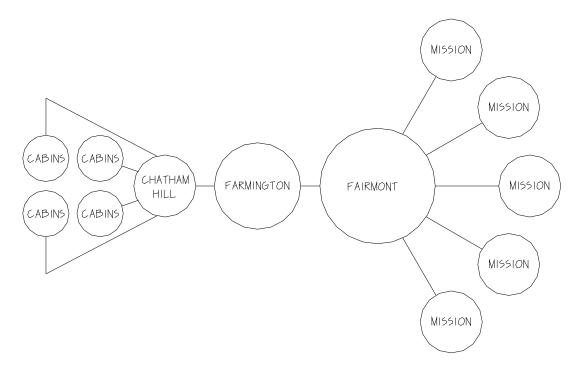
200 CAMPERS PER WEEK

FAMILIES OR GROUPS

CABINS

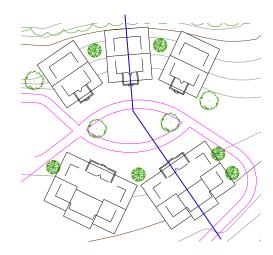
#### Community

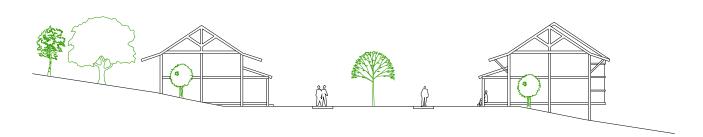
Scales





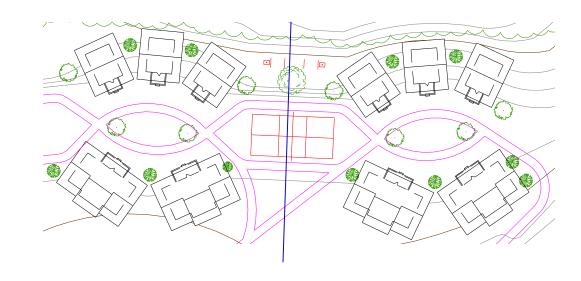
- •Camp
- •Camp Impact
- Community
- Cabin cluster
  - Sharing
  - Public Space
  - Private Space

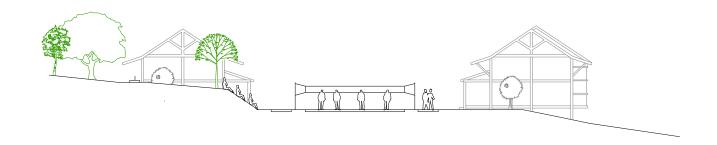






- •Camp
- •Camp Impact
- Community
- 2 Cabin Clusters
  - Volleyball Court
  - Grass Bank
  - Horseshoe Pit



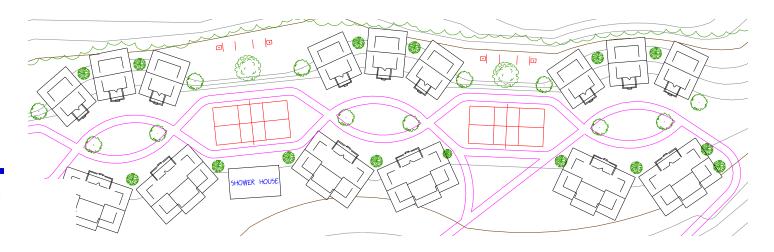




•Camp Impact

## Community

3 Cabin clusters





- •Camp
- •Camp Impact
- Community
- 6 Cabin clusters

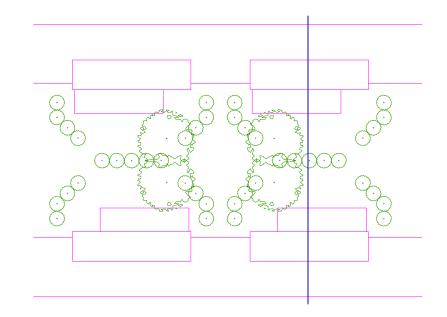


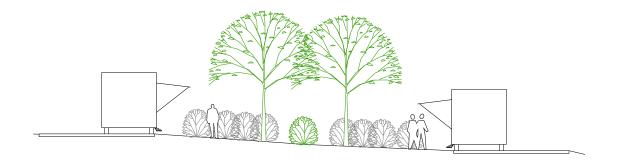


•Camp Impact

## Community

- R.V. Park
  - Popularity
  - Creature comforts
  - Cramped space
  - Public space
  - Private space

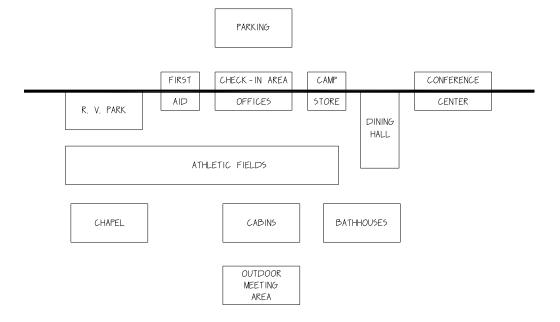






·Camp Impact

- Community
- · The line
  - Everyday life/Retreat
  - Program items

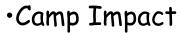




- •Camp
- •Camp Impact
- Community
- The line
  - The ridge line
  - Landscape
  - Plantings
  - Informal/formal
  - · Chatham Hill







Community

- Sustainability
- Permanence/longevity
  - Timber frame
  - Grooved & post





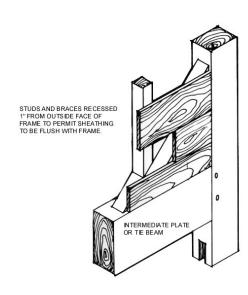


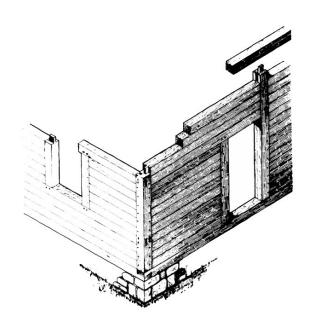




- •Camp
- ·Camp Impact
- Community
- Sustainability
- Permanence/longevity
  - Sheathing
  - Grooved & post



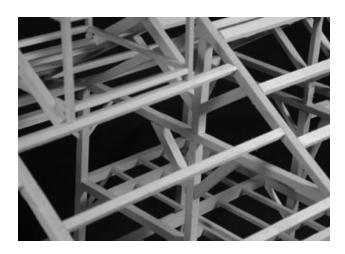


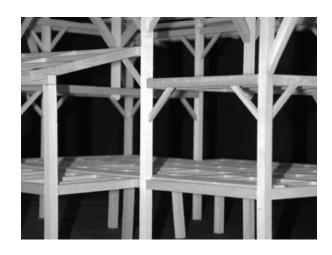


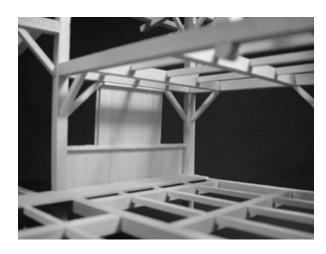


- ·Camp
- ·Camp Impact
- Community
- Sustainability
- Timber frame model
  - · Cantilever
  - King post





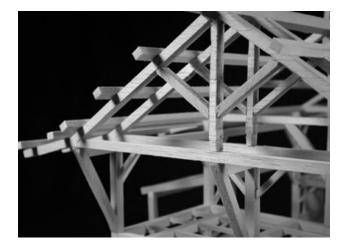


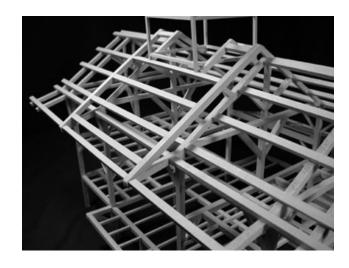


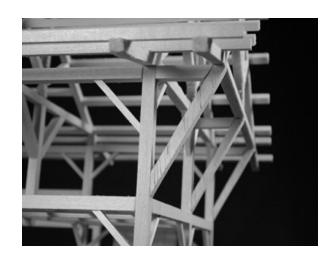
"...Architecture which is really good architecture proceeds from the ground and somehow the terrain, the native industrial conditions, the nature of materials and the purpose of the building, must inevitably determine the form and character of any good building" - F.L.W.

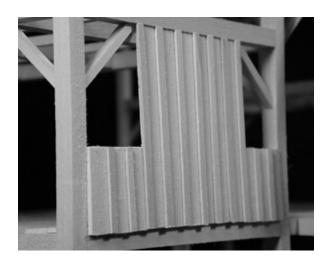


- ·Camp
- ·Camp Impact
- Community
- Sustainability
- Timber frame model
  - Basic concepts
  - Knee braces





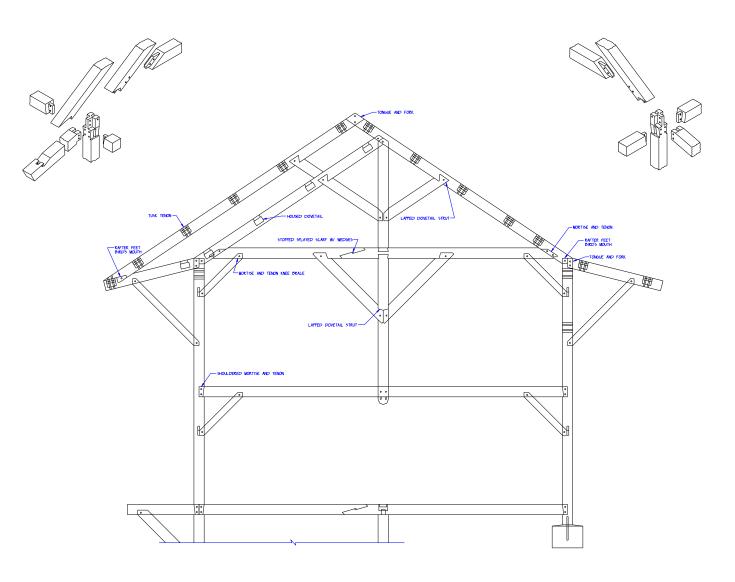


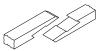


"Behind the lines etched into this timber are decisions: about a position in a living framework, about joints that will be strong, and about wood that will be seen in a house that was built to last." - Ted Benson



- •Camp
- ·Camp Impact
- Community
- Sustainability
- Drawings
  - Joints





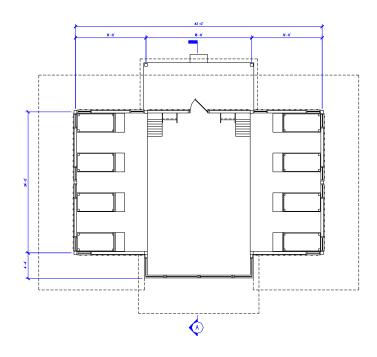


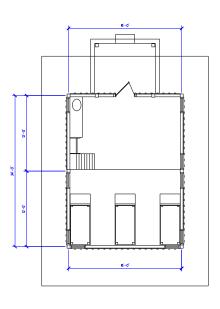






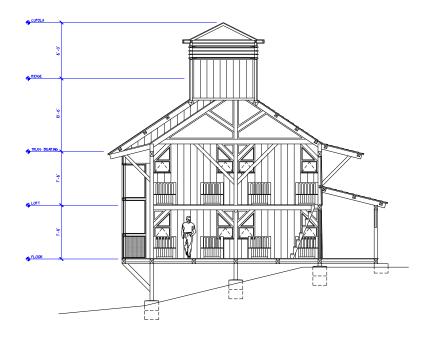
- ·Camp
- •Camp Impact
- Community
- Sustainability
- Drawings
  - Cabin plan





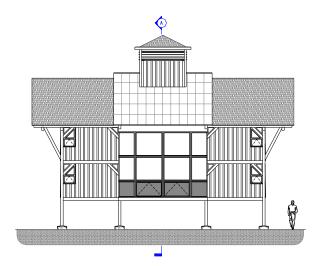


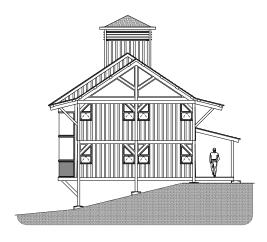
- ·Camp
- •Camp Impact
- Community
- Sustainability
- Drawings
  - Cabin section

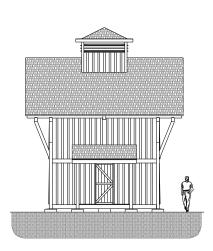


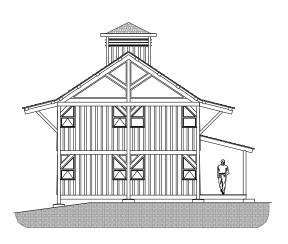


- •Camp
- •Camp Impact
- Community
- Sustainability
- Drawings
  - Cabin elevations



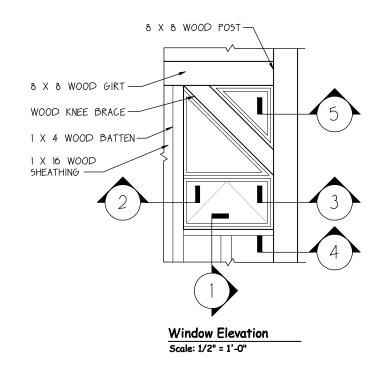


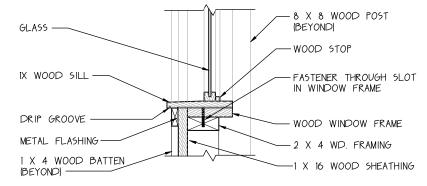


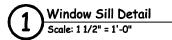




- ·Camp
- ·Camp Impact
- Community
- Sustainability
- Drawings
  - · Enclosure Details









·Camp Impact

WOOD WINDOW FRAME

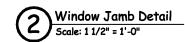
WOOD STOP

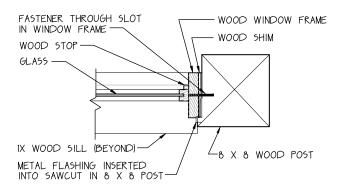
2 X 4 WD. FRAMING

IX 4 WOOD BATTEN

IX 16 WOOD SHEATHING

IX WOOD SILL (BEYOND)

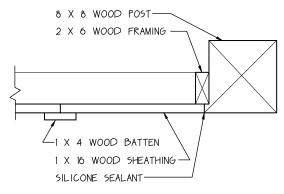




Window Jamb Detail
Scale: 1 1/2" = 1'-0"

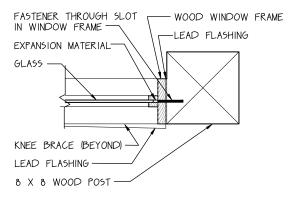
Community

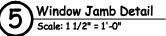
- Sustainability
- Drawings
  - · Enclosure Details



Sheathing / Structure Detail

| Scale: 1 1/2" = 1'-0"







- •Camp
- ·Camp Impact
- Community
- Sustainability
- Photovoltaic panels
  - Beside nature
  - In nature
  - Abuse nature
  - Site beauty









·Camp Impact

Community

- Sustainability
- Photovoltaic panels
  - Calculations

Fluorescent lights	12
2 way lights	<u>16×</u>
Total lights	28
watts	<u>32x</u>
watts	896
watts/ballast	<u>1.06x</u>
watts	945
miscellaneous watts	<u>455+</u>
watts	1,400
hours daily usage	<u>3x</u>
watt hours	4,200

4200/10 hours = 420 watts 21" x 48" panel size = 75 watts 420 watts/75 watts per cell = 5.6 cells

width of cell	21"
length of cell	48"x
Cell s.f.	7
number of cells	<u>5.6x</u>
s.f. of P.V. cells/cabin	39.2
Miscellaneous s.f.	10.8+
total s.f. of P.V. cells/cabin	50
number of cabins	<u>5x</u>
total s.f. of P.V. cells/cabin cluster	<del>25</del> 0



·Camp Impact

minutes/shower 10 number of people 250x 2,500 minutes of shower gallons/minute 1.5x gallons/day 4,000 miscellaneous gallons/day 1,000+ total gallons/day 5,000 days/year 28x 140,000 total gallons/year

700

80

· Community

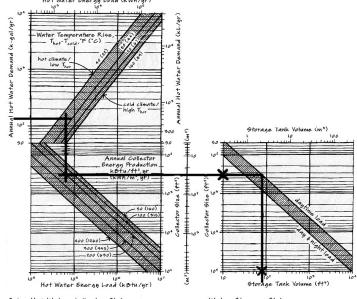
Sustainability

Photovoltaic panels

· Calculations

hot water temp. deg. 110
well water temp. deg. 55water temp. rise deg. 55
annual collector production 200

S. F. cells from chart C. F. storage tank from chart

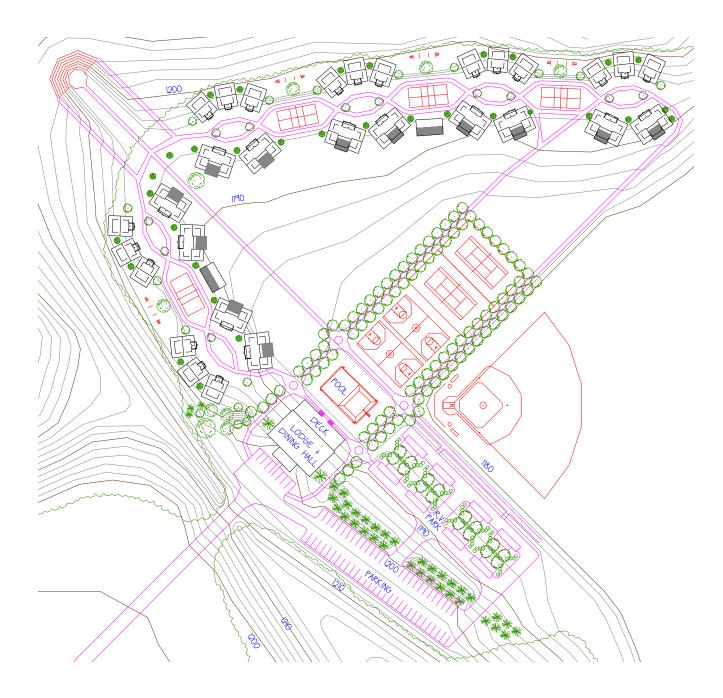


Golar Hot Water Collector Sizing

Water Storage Sizing



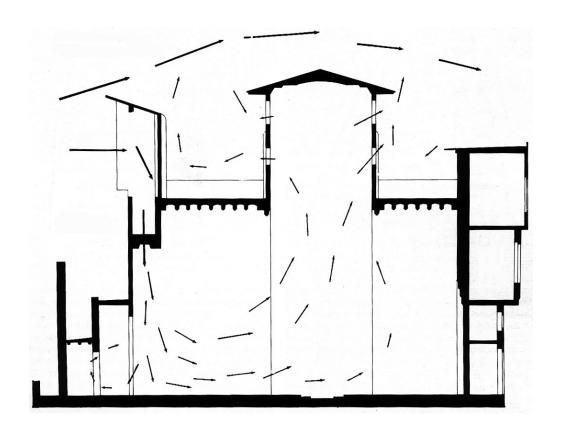
- •Camp
- •Camp Impact
- Community
- Sustainability
- Photovoltaic panels
  - Locations





- •Camp Impact
- Community
- Sustainability
- Natural Ventilation
  - · Al-Din Muwaggi, 1350 AD
  - Malkalf
  - Water fountain
  - Tower
  - · Low pressure area







· Cam	p
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·Camp Impact

Community

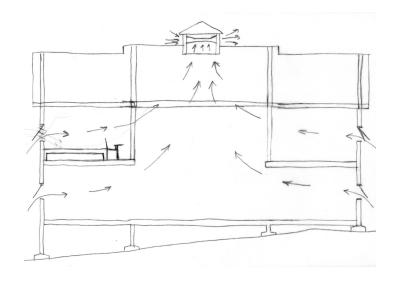
## Sustainability

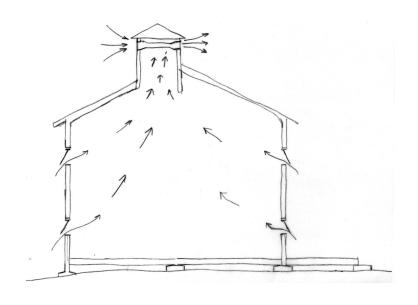
- · Natural Ventilation
  - Climatic conditions
  - · Rest & retreat
  - 5 weeks
  - Calculations

inlet to outlet ratio percentage of floor area for openings	1 to 1 5
total square feet of building percentage of floor area for inlet inlet opening square feet	1080 <u>.05 x</u> 54
total square feet of building percentage of floor area for outlet outlet opening square feet	1080 <u>.05 x</u> 54
width of window 1 height of window 1 window s.f. awning window allowance total s.f. of window inlet number of windows total s.f. of window 1 inlets	2'-2" 2'-0" × 2.1667 .50 × 1.08 28 × 30.24
width of window 2 height of window 2 window s.f. awning window allowance total s.f. of window inlet number of windows total s.f. of window 2 inlets	5'-0" 3'-5" x 17.05 .50 x 8.53 2 x 17.05
total s.f. of window 1 inlets total s.f. of window 2 inlets total s.f. of window inlets	30.24 17.05+ 47.29
width 1 side of cupola opening height 1 side of cupola opening s.f. of opening numbers of sides of cupola total s.f. of cupola outlet	9' 2'x 18 4x 72



- ·Camp
- •Camp Impact
- Community
- Sustainability
- · Natural Ventilation
  - Design scheme







·Camp Impact

Community

- Sustainability
- Natural Ventilation
  - Wind tunnel



Wind tunnel 1 Inlet Video



Wind tunnel 2 No Cupola Video



Wind tunnel 3 Side Outlet Video



Wind tunnel 4 Front Outlet Video



- •Camp
- •Camp Impact
- Community
- Sustainability
- Natural Ventilation
  - Wind tunnel



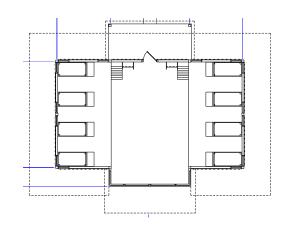
Wind tunnel 5 Inlet Video



Wind tunnel 7 Negative Pressure Video



Wind tunnel 6 Cupola Video





- •Camp
- Camp Impact
- Community
- Sustainability

# Discussion