Architecture is Life...

• Camp

• Camp Impact

• Community

• Sustainability

By David E. Snider

...Life is Architecture
Architecture is Life...

“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

...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

• Camp Impact

• Community

• Sustainability
Camp

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

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

• Camp Impact

• Idea
Camp

Camp Impact

Location
Camp

Camp Impact

- Video

Road to Entry Video

Site Entry Video
Camp

Camp Impact

Video

Cabin Location 1 Video

Cabin Location 2 Video
• Camp

• Camp Impact

• 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

• Camp Impact

• Community
  • 3 Cabin clusters
• Camp

• Camp Impact

• Community
  • 6 Cabin clusters
• Camp

• 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
Camp

Camp Impact

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

• Camp Impact

• Community

• Sustainability
  • Drawings
    • Enclosure Details
• Camp

• Camp Impact

• Community

• Sustainability
  • Photovoltaic panels
    • Beside nature
    • In nature
    • Abuse nature
    • Site beauty
Fluorescent lights

2-way lights

Total lights

Calculations

- Photovoltaic panels
- Sustainability
- Community
- Camp Impact

width of cell
length of cell
cell s.f.
number of cells
number of P.V. cells/cabin
s.f. of P.V. cells/cabin
total s.f. of P.V. cells/cabin
total s.f. of cabins
number of cabins
21" x 48" panel size = 75 watts
420 watts/75 watts per cell = 5.6 cells
4200/10 hours = 420 watts
21" x 48" panel size = 75 watts
420 watts/ballast
watts
miscellaneous watts
watts
hours daily usage
watt hours

105/106x
3x
1400
4x
200

16x
28
12
Camp

- Camp Impact

Community

Sustainability
- Photovoltaic panels
  - Calculations

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<tr>
<td>minutes/shower</td>
<td>10</td>
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<tr>
<td>number of people</td>
<td>250x</td>
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<tr>
<td>minutes of shower</td>
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<td>gallons/minute</td>
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<td>gallons/day</td>
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<td>miscellaneous gallons/day</td>
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<td>total gallons/day</td>
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<tr>
<td>days/year</td>
<td>28x</td>
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</tr>
<tr>
<td>total gallons/year</td>
<td>140,000</td>
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- hot water temp. deg.  | 110            |
- well water temp. deg.  | 55-            |
- water temp. rise deg.  | 55             |
- annual collector production | 200         |
- S. F. cells from chart | 700            |
- C. F. storage tank from chart | 80          |
• Camp

• Camp Impact

• Community

• Sustainability
  • Photovoltaic panels
    • Locations
Camp

Camp Impact

Community

Sustainability

- Natural Ventilation
  - Al-Din Muwaggi, 1350 AD
  - Malkalf
  - Water fountain
  - Tower
  - Low pressure area
inlet to outlet ratio 1 to 1
percentage of floor area for openings 5

total square feet of building 1080
percentage of floor area for inlet .05 x
inlet opening square feet 54

total square feet of building 1080
percentage of floor area for outlet .05 x
outlet opening square feet 54

width of window 1 2'-2"
height of window 1 2'-0" x
window s.f. 2.1667
awning window allowance .50 x
total s.f. of window inlet 1.08
number of windows 28 x
total s.f. of window 1 inlets 30.24

width of window 2 5'-0"
height of window 2 3'-5" x
window s.f. 17.05
awning window allowance .50 x
total s.f. of window inlet 8.53
number of windows 2 x
total s.f. of window 2 inlets 17.05

Natural Ventilation

Climatic conditions
total s.f. of window 1 inlets 30.24
total s.f. of window 2 inlets 17.05+
total s.f. of window inlets 47.29

Rest & retreat
width 1 side of cupola opening 9'
height 1 side of cupola opening 2' x
s.f. of opening 18
numbers of sides of cupola 4 x
total s.f. of cupola outlet 72

Calculations
• Camp

• Camp Impact

• Community

• Sustainability
  • Natural Ventilation
    • Design scheme
• Camp

• 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 6 Cupola Video

Wind tunnel 7 Negative Pressure Video
• Camp

• Camp Impact

• Community

• Sustainability

Discussion