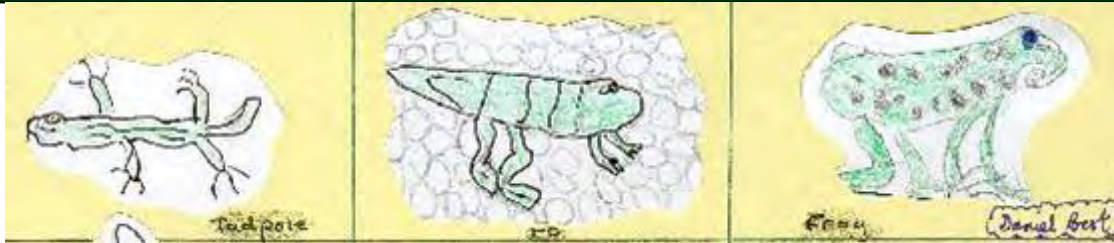


# Ironwood Elementary School Courtyard Re-Design



Presented by the Drachman Institute,  
University of Arizona, July 13, 2005

# Why schoolyards need our attention

Deteriorating state of schools

Costs of operation and maintenance

School crowding

Schools are educational not institutional

Connecting children to nature

- Equipping children to deal with environmental degradation
- Promote active/fit lifestyles
- Health and well-being of outdoors



# Dynamic spaces support learning



Multi-disciplinary educational opportunities

Hands-on experiential learning

Natural environments provide integrated contexts

Nature as a framework: general disciplinary knowledge, problem solving skills, basic life skills, cooperation & interpersonal communication

Student-teacher interaction

Participation from community members



# Design Premise

*Every part of the school should be a rich and rewarding learning experience. Both the interior and the exterior environments should support a high quality of life and sense of well-being.*



# Courtyard activities...



## 1. outdoor classroom

Create habitats: pollinator garden, butterflies, native birds

Employ scientific methods: data collection, observation, measurement, weather and climate

Plant studies, interrelationships

Food gardens, nutrition



# Courtyard activities...

## 2. enhance aesthetic of school

Demonstrate an “aesthetic of care”

Grow flower gardens

Make art, display art

Foster nurturing, creative environment

Provide connection to nature



# Courtyard activities...

## 3. Foster environmental literacy

water harvesting and conservation  
waste/composting  
demonstrate solar power  
use native plants/attract native birds  
ecology, hydrology, biology, energy

## 4. Create/enhance community

classroom garden plots, cooperation,  
interaction, social skills



# Courtyard activities...



## 5. Nourish cultural awareness

- create art
- cooking projects
- dance music venue
- read and write poetry
- storytelling
- study history



# Partnership Opportunities

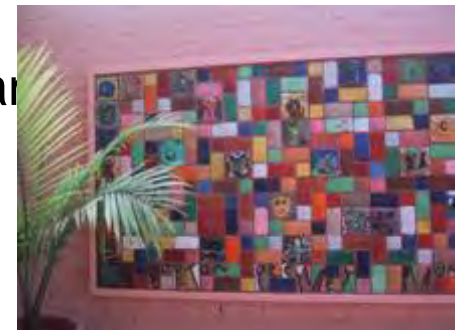


Involve **School community**: PTA, Classes, Parents, Clubs in design, implementation, maintenance, creation, display, and sponsorship

Utilize **Donated** goods, services and expertise

Expand **Grant opportunities** with multi-functional space

Garner **School District** support with low maintenance purpose space



# Opportunities

Large existing shade trees

Topography/slope is interesting, inviting, playful

Large space provides setting for many group sizes

Courtyard is protected from harsh climate

Courtyard is well-oriented

Buildings are visually attractive

Crowded school needs flexible space



# Constraints...



Limited Budget

Topography doesn't support activity or vegetation

Some trees are in decline

Turf not feasible over entire area

Design doesn't support actual circulation

Use of Amphitheater limited by lack of shade

Amphitheater has wrong orientation

Amphitheater/stage is too small

Busses pose safety hazard





**Circulation impeded**



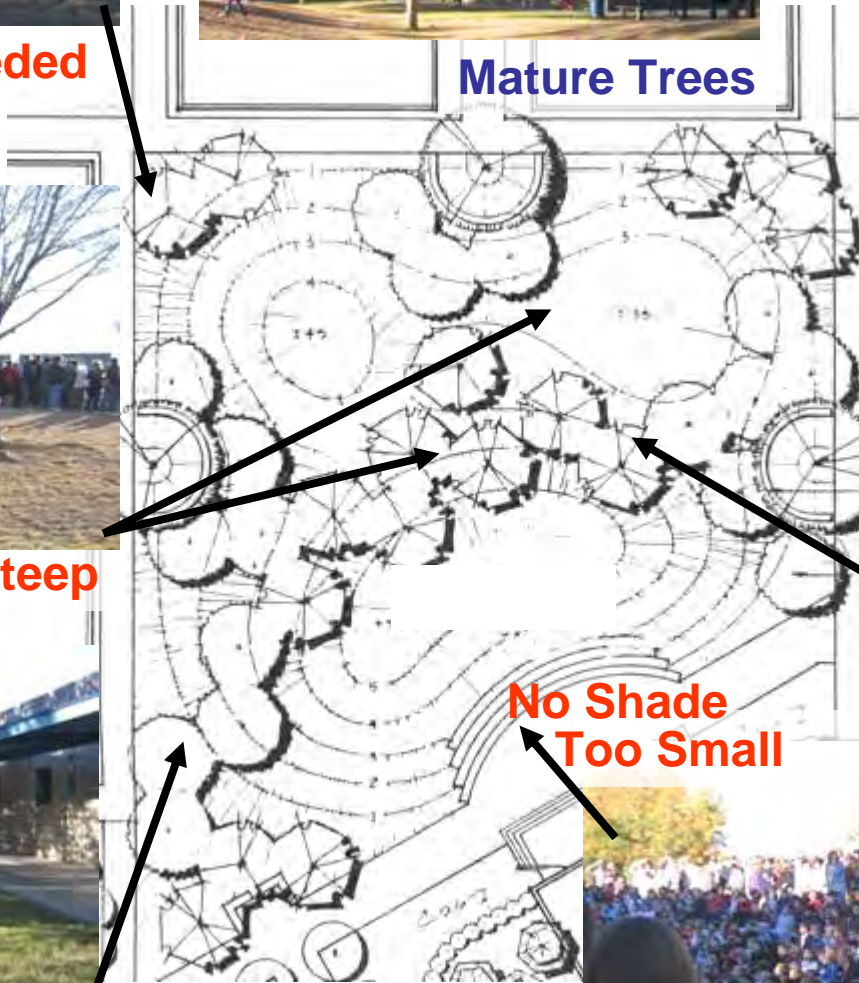
**Mature Trees**



**Safety issues**



**Too Steep**



**Shady Tables**



**Works well**

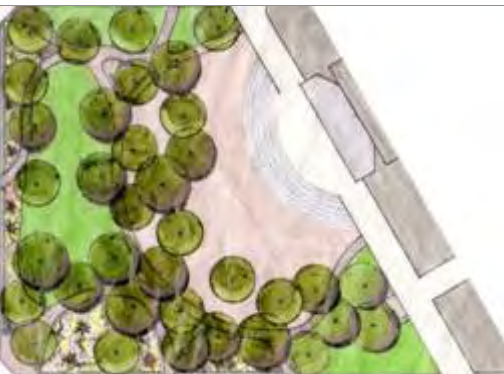
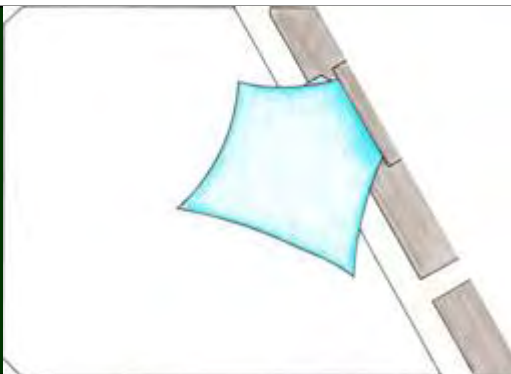
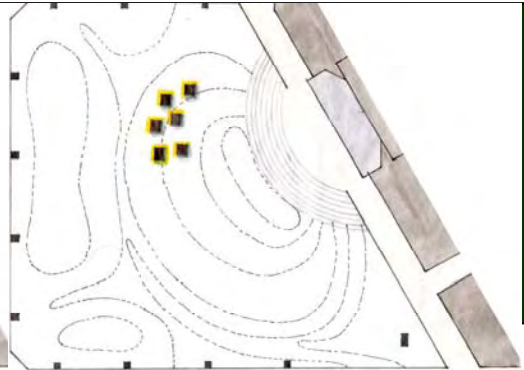
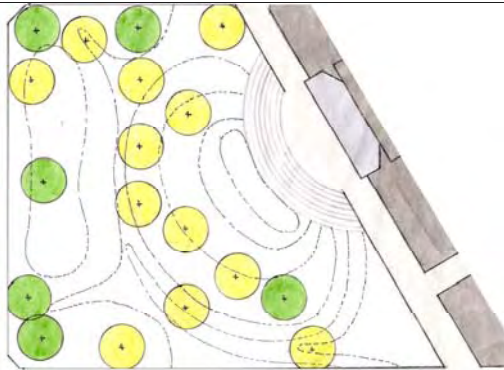
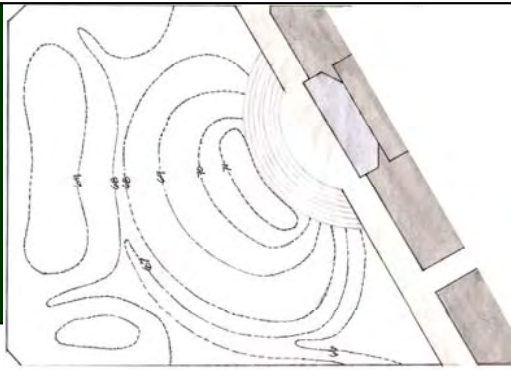
**No Shade  
Too Small**



# Design Goals

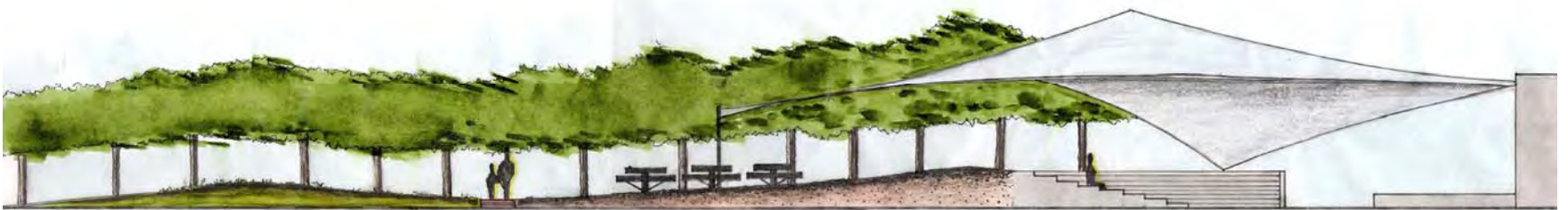
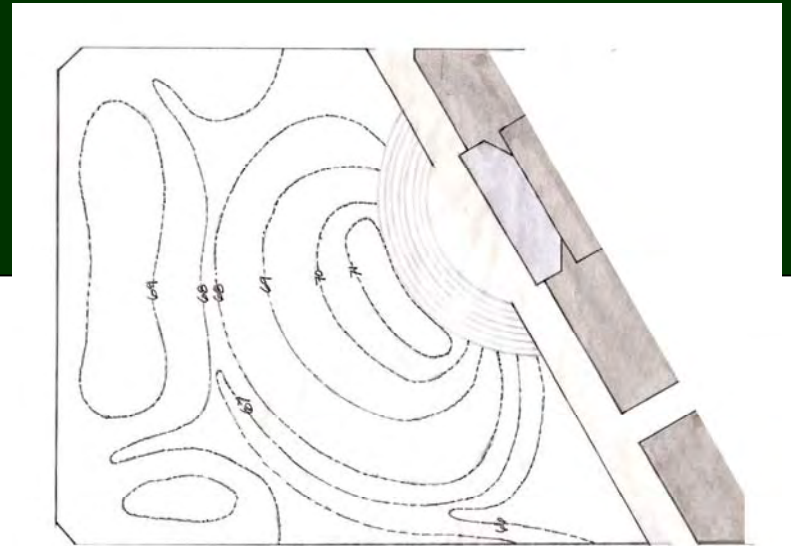
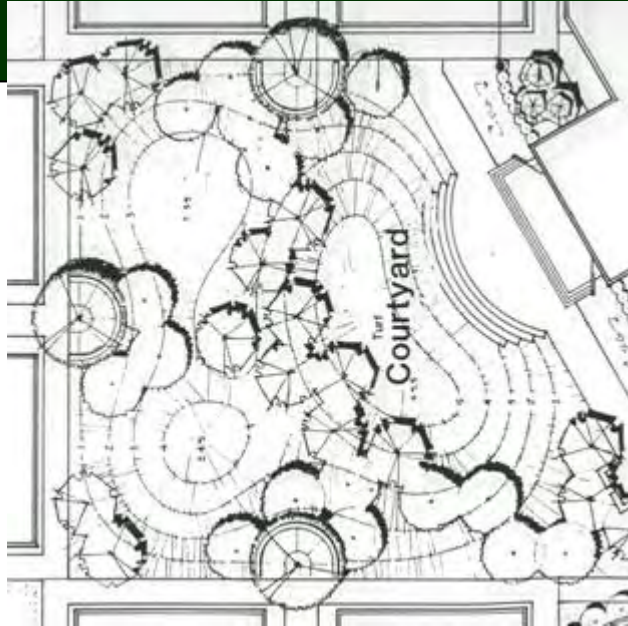
- Allow variety of uses in the courtyard
- Accommodate variety of group sizes
- Create extended learning environment
- Ensure climatic comfort
- Keep maintenance burden low
- Enhance aesthetics
- Build community
- Permit outdoor eating



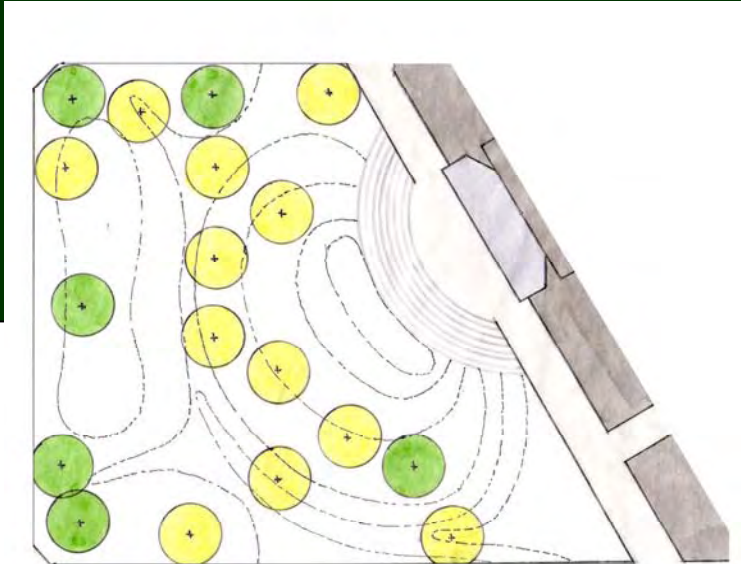


Plans and sections

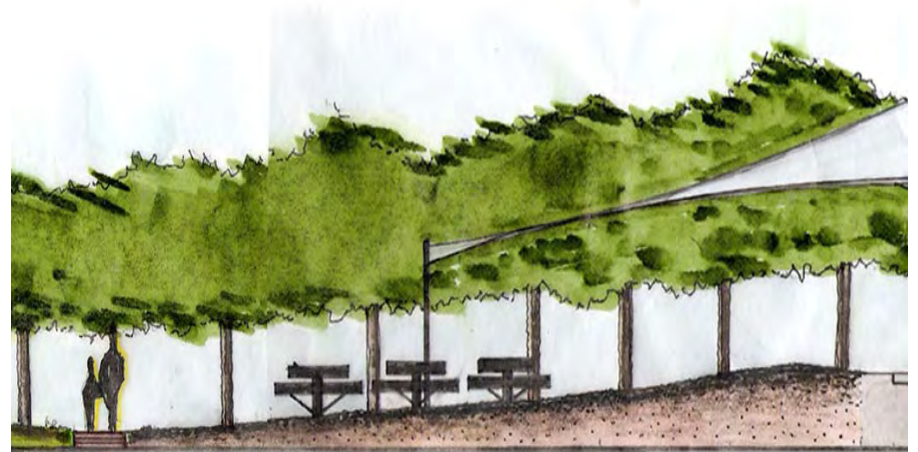
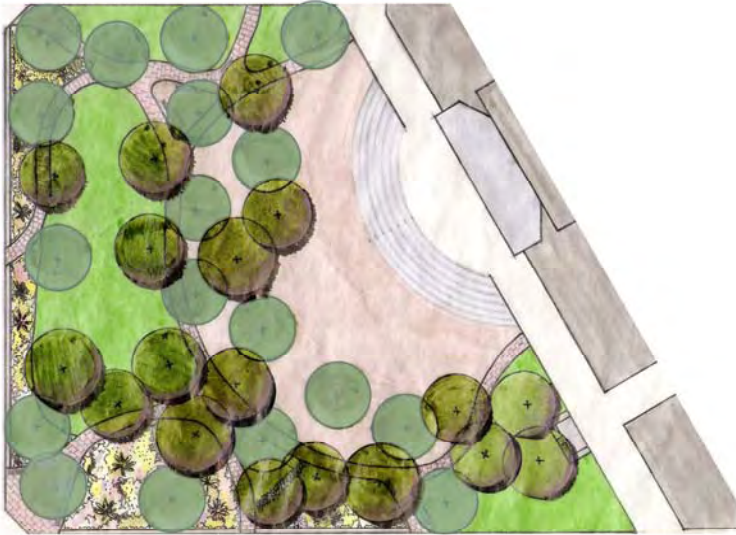
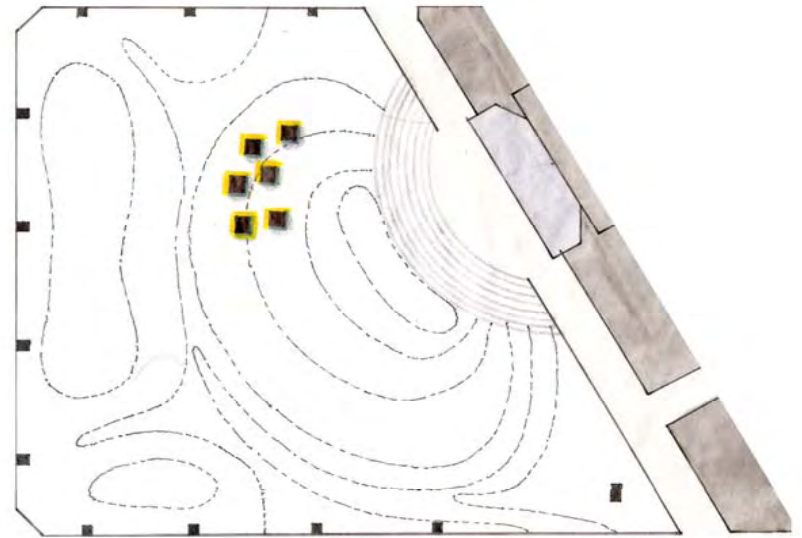
# Topography



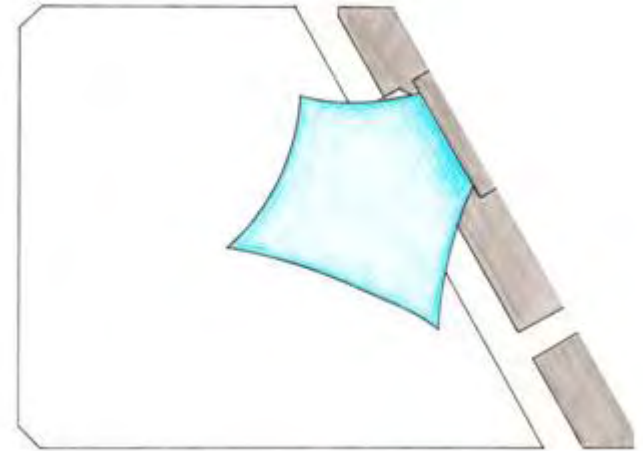
# Trees



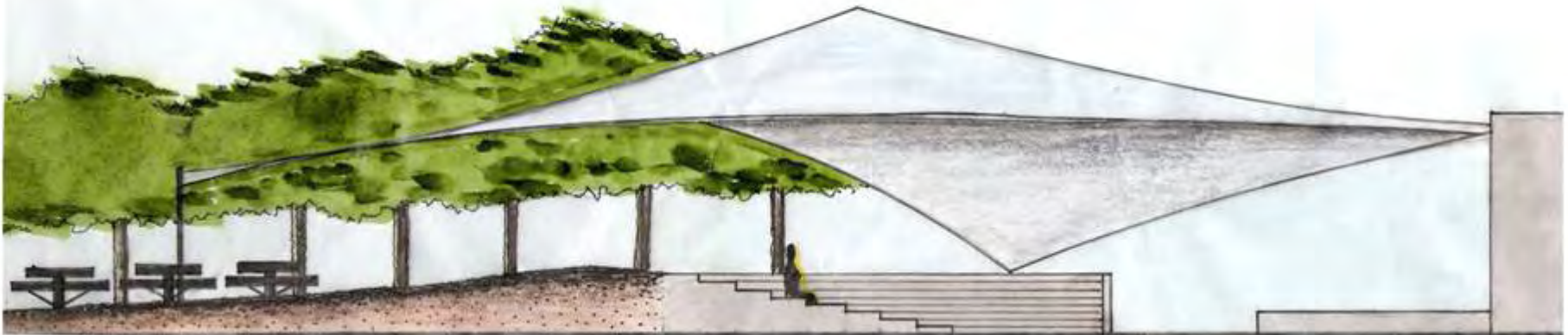
# Tables



# The Amphitheater



- Provides shade
- Accommodates entire school
- Allows outdoor eating
- Becomes flexible space



# Final plan



# Courtyard Re-design



# Raised Garden & Seat Wall



# Pathway with Seat Wall

