



# Site Design and Process Overview

Fanning & Howey Associates, Inc.  
High Performance Schools Seminar  
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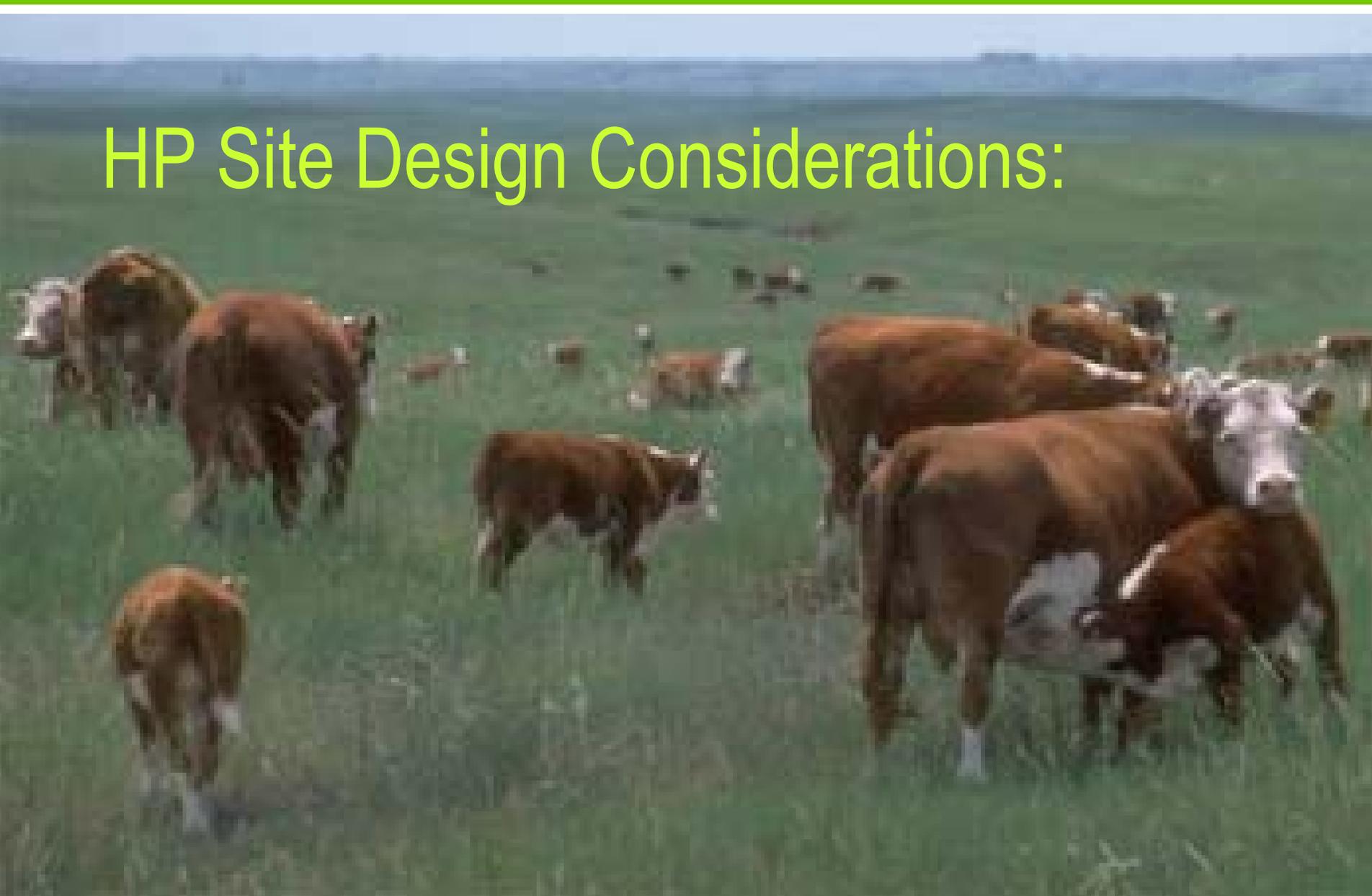
# High Performance (HP) Design Process

The **whole building design** approach asks members of the design and construction team to look at process, siting, materials, systems, and assemblies from many different perspectives. The design is evaluated for cost, quality-of-life, future flexibility, ease of maintenance, energy and resource efficiency, overall environmental impact, productivity, creativity, and how the occupants will be enriched and enlivened by their surroundings.

1. Cost
2. Quality-of-life
3. Future flexibility
4. Ease of maintenance
5. Energy and resource efficiency
6. Overall environmental impact
7. Productivity
8. Creativity
9. How the occupants will be enriched and enlivened



# HP Site Design Considerations:





# HP Site Design

- Reduce environmental impact from project location on the site:
  - Don't build in a flood plain!
  - Or too near a wetland
  - On prime agricultural land





# HP Site Design

- Design to reduce urban sprawl
- Reduce private auto use
- Reuse existing infrastructure
- Consider a brown-field versus a green-field site





2009 HP Hall of Fame School

# HP Site Design

- Maximize quantity and access to green space
- Conserve existing site amenities
- Restore damaged ecosystems
- Promote biodiversity



# HP Site Design





# HP Site Design

Preserve the starry night sky

Reduce/eliminate nighttime  
light pollution

Reduce impact on nocturnal  
environment





# HP Site Design

- Use native trees and plants in new growth areas
- Reduce watering needs
- Reduce maintenance needs
- Retain soils





# HP Site Design

- Provide shade on impervious surfaces
- Lessen the amount of paved surfaces
- Avoid heat islands
- Minimize the impact on microclimates and human and wildlife habitats



# HP Site Design

- Erosion control during construction
- Provide natural retention vs. mechanical storm water runoff systems
- Avoid potential for contamination of receiving waters
- Evaluate potential for “living machine” Waste Water Treatment”



# HP Site Design

- Optimize building orientation for:
  - Pedestrian and Alternative Transportation Access
  - Passive Access to Daylight and Renewable Energy Sources
  - Reduced energy consumption
  - Vehicular Access
  - Deliveries
  - Utility Access





# HP Design Process

- Design Process Steps:

1. OIC and PM to work *with owner* to establish HP objectives at the contractual stage of pre-design
2. PM and PC maintain check list of design strategies for compliance with HP objectives
3. Review compliance objectives and achievements with team at each stage of design
4. Present HP compliance achievements to owner at every opportunity





# High Performance Schools and your process



- **Design Objectives:**

## CONCEPT

- ✓ • 1 Acoustics
- ✓ • 2 Commissioning
- ✓ • 3 Daylighting
- ✓ • 4 Energy Tools
- ✓ • 5 Shell
- ✓ • 6 Materials
- ✓ • 7 Site...
- ✓ • 16 Water Use

## SD

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# HP Design

- The future begins with you!

