The Basics of Sustainable Landscape Design

Placing Trees for Beauty and Environmental Services
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A BIT OF BACKGROUND

• 1981 – XERISCAPE

  – DENVER WATER COMPANY/BOARD
  – PLANNING AND DESIGN, LIMIT TURF AREAS, EFFICIENT IRRIGATION, SOIL IMPROVEMENTS, MULCHES, APPROPRIATE PLANTS, APPROPRIATE MAINTENANCE
A BIT OF BACKGROUND

• 1987 – SUSTAINABILITY

The term "sustainable" was defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

From the Brundtland Report – UN World Commission on Environment and Development (WCED)
A BIT OF BACKGROUND

• 1995 – 2006 – Leadership in Energy and Environmental Design (LEED)

– Consists of a suite of rating systems for the design, construction and operation of high performance green buildings, homes and neighborhoods.
A BIT OF BACKGROUND

• SUSTAINABLE SITES INITIATIVE
2005 – 2013

Partnership of American Society of Landscape Architects, Lady Bird Johnson Wildflower Center and US Botanical Garden

To promote sustainable land development and management practices that can apply to sites with and without buildings.
DESIGN ELEMENTS

ELEMENTS
• Line - Point, Line, Plane
• Color
• Shape
• Texture
• Volume or Form
• Light – Value or Tone
POINT
LINE
PLANE
COLOR

COMPLEMENTARY

ANALAGOUS
TEXTURE
VOLUME
VALUE
DESIGN PRINCIPLES

PRINCIPLES

• Unity – with Diversity
• Balance – Harmony, Symmetry, Rhythm
• Similarity and Contrast – Repetition, Opposition, Variety, Depth
• Hierarchy
• Scale - Proportion
• Dominance – Emphasis, Focal Point
SIMILARITY AND
CONTRAST
APPLYING DESIGN PRINCIPLES TO LANDSCAPE DESIGN

• MEASURED LAYOUT PLAN OF THE SITE
  – TO SCALE
  – SHOW EXISTING FEATURES

• SITE INVENTORY AND ANALYSIS
  – ENVIRONMENTAL FACTORS
    • WIND, SUN, SOIL, NOISE, CLIMATE ZONE
  – HUMAN FACTORS
    • USE OF THE SPACE, TRAFFIC/NOISE, NEIGHBORS, MAINTENANCE CAPABILITIES, UTILITY LOCATIONS
    • LIST WHAT YOU WANT OUT OF THE SPACE
SITE INVENTORY AND ANALYSIS
SITE INVENTORY AND ANALYSIS
APPLYING DESIGN PRINCIPLES TO LANDSCAPE DESIGN

• CONCEPTUAL DESIGN
  – GET YOUR IDEAS ON PAPER
  – TEST YOUR OPTIONS ON PAPER
  – CONSIDER MATURE SIZE OF ALL PLANTS
    • RIGHT TREE, RIGHT PLACE – UTILITIES, ROOF LINE, WALKWAYS AND DRIVEWAYS, PATIOS, COURTYARDS
  – CONSIDER FUNCTIONS OF TREES IN LANDSCAPES
    • SHADE, WIND BREAK, COLOR, FRUIT, STRUCTURE

• DESIGN DEVELOPMENT
  – REVIEW YOUR OPTIONS
  – CONFER WITH OTHERS
  – REFINE YOUR DESIGN
  – MAKE PLANT AND MATERIALS SELECTIONS
CONCEPTUAL DESIGN / DESIGN DEVELOPMENT
CONCEPTUAL DESIGN / DESIGN DEVELOPMENT
APPLYING DESIGN PRINCIPLES TO LANDSCAPE DESIGN

• FINAL DESIGN
  – WORK OUT ALL THE DETAILS
  – MATERIALS, PLANTS, IRRIGATION SYSTEM
  – DETAILS ARE IMPORTANT
  – EDGES, ENTRY AND EXIT POINTS, EXPOSURE
  – FUNCTIONALITY, MICROCLIMATE (EXISTING AND CREATED)
  – CONSTRUCTABILITY – DIY OR CONTRACTOR
  – PROFESSIONAL DESIGN ADVICE OR ASSISTANCE?
FINAL DIY PLANTING PLAN
FINAL CONTRACTOR PLANTING PLAN
INSPIRATION
Questions?
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