Planning in a New Decade

38th ANNUAL UPPER MIDWEST PLANNING CONFERENCE – MANKATO, MINNESOTA

September 22-24, 2010
Planning in a New Decade

SITE PLANNING FOR SUSTAINABILITY

September 22, 2010

“Pete” Pointner FAICP, ALA, ITE
Sustainability in Site Planning

Characteristics

• IS ENVIRONMENTALLY BASED… CONNECTING AND BALANCING ALL ELEMENTS OF THE HUMAN, NATURAL AND MAN MADE ENVIRONMENT

• CREATE LIVABLE COMMUNITIES THAT ARE ECONOMICALLY, SOCIALLY AND ENVIRONMENTALLY VIABLE OVER THE LONG TERM
Sustainability in Site Planning
Key Planning & Design Concepts

• **LOW IMPACT DEVELOPMENT** – MINIMIZES SURFACE RUNOFF AND PROTECTS NATURAL RESOURCE SYSTEMS
Sustainability in Site Planning

Key Planning & Design Concepts

• GREEN INFRASTRUCTURE – BMP, OPEN SPACE CORRIDORS, RESPONSE TO SITE RESOURCES
Defining Green Infrastructure

Includes all of the elements of environmental systems, whether natural or constructed, that influence and support human communities – urban, suburban and rural.
Sustainability in Site Planning
Key Planning & Design Concepts

• CONSERVATION DESIGN – CLUSTER OPEN SPACE PLAN
Sustainability in Site Planning

Key Planning Principles

- **NEIGHBORHOOD CONCEPT** – MIXED USE, WALKING DISTANCE PROXIMITY, DIVERSITY OF HOUSING

- **CONNECTIONS** – TO MUNICIPAL SERVICES, TRANSPORTATION AND OPEN SPACE SYSTEMS AND ADJACENT NEIGHBORHOODS
Sustainability in Site Planning
Key Prerequisites

• GOOD CLIENT – DIRECTION AND PROGRAM
• INTERDISCIPLINARY TEAM – KNOWLEDGE AND VALUES
• PROCESS – CONCEPT THROUGH OPERATION AND MAINTENANCE
• Site location and area
• Interdisciplinary Team
  Corporate Services Inc.
  Gary R. Weber Associates, Inc.
  Encap, Inc.
  James J. Benes and Associates
  Schneider Geoscience, P.C.
  Strategy Planning Associates, Inc.
  Militello, Zanck and Coen, attorneys

The Fields of Woodstock
Fields of Woodstock
Project Location

• CONTIGUOUS TO CITY LIMITS
• ADJACENT TO MUNICIPAL UTILITIES
• .5 MILES TO COUNTY GOVERNMENT CENTER
• 1.5 MILES TO COMMUTER RAIL STATION
• Context design
• Existing site resources and character
Fields of Woodstock
Project Site

- 395.75 ACRES
- ROW CROP AGRICULTURE
- SMALL GRAVEL PIT
- ONE WOODLOT
- GROUNDWATER RECHARGE AREA
- WETLANDS
- PERIMETER ARTERIALS
Project Site
Fields of Woodstock
Land Use

MIXTURE OF DWELING UNITS (534 UNITS)
- 351 SINGLE FAMILY (18.5%)
- 43 ESTATE LOTS (6.2%)
- 140 DUPLEX UNITS (4.1%)

MIXTURE OF LAND USES (3.4%)
- RETAIL SERVICE CORE 5 ACRES
- OFFICE PARK FOR 100,000 SF GLA

PUBLIC USES
- RIGHTS-OF-WAY (13.3%)
- COMMUNITY PARK (32.2%)
- OPEN SPACE (22.3%)
Fields of Woodstock
Plan Components

• MORE THAN 50% IN PERMANENT OPEN SPACE
• AQUIFER RECHARGE PROTECTION
• GREENBELT, RECREATIONAL PATHWAY (8 MILES)
• CLUSTER DESIGN
Circulation

- Ware Road collector extension
- Access connections
- Curvilinear design at perimeter of City, fits topography
- Roadway design standards, scale and loop parkway concept
- Bikeway and pedestrian system continuity, connectivity
- Reduction of auto dependency, shops by busiest intersection

The Fields of Woodstock
Maintenance of Community Character

• Road connections
• Pedestrian pathway in open space system
• Community center, mixed use with local shopping, services and offices within walking distance
• Public square
• Design guidelines for non-residential development

The Fields of Woodstock
Fields of Woodstock Plan Components

- WOODLOT PRESERVATION
- PERIMETER LANDSCAPED BUFFER
- WETLAND RESTORATION AND CREATION
- OPERATION AND MAINTENANCE
Conserve School Project Team

- INTERPLAN PRACTICE LIMITED, ARCHITECTS, PRIME CONTRACTOR
- PLANNING RESOURCES INC. SUB-CONTRACTOR RESPONSIBLE FOR ENVIRONMENTAL STUDIES, SITE SELECTION AND SITE PLAN FOR THE CAMPUS
Conserve School
The Assignment

• SITE SELECTION
• SITE PLAN
• LANDSCAPE DESIGN
• ARCHITECTURAL DESIGN
• CONSTRUCTION MANAGEMENT
Conserve School

Project Location

• NORTHERN WISCONSIN NEAR LAND O LAKES
Conserve School
Project Site

- REGIONAL CONTEXT
- ADJACENT USES
- 1,400 ACRES
Conserve School Project Site
Conserve School Project Site

- FLORA
- FAUNA
- WATER RESOURCES
Conserve School Environmental Issues

- ACCESS
- FOOTBALL
- SUMMER OPERATION
- WETLANDS
- CONSTRUCTION IMPACTS
- FUEL
- WASTE WATER
Conserve School Planning Factors

- WEATHER
- FIELD REVIEW
- TEAM INTERACTION
Conserve School Planning Factors

- WETLANDS
- TOPOGRAPHY/VIEWS
- SOILS
- VEGETATIVE COVER
- SURFACE WATER
- ACCESS
- EXISTING TRAILS/ROADS
- WILDLIFE HABITAT
- LANDMARKS
Conserve School
Site Selection & Planning

• MAXIMUM TREE PRESERVATION
• MINIMUM WETLAND IMPACT
• VEGETATED SWALES TO FILTER STORM WATER
• REUSE OF SOILS & BOULDERS
• PRAIRIE GRASS
Conserve School Site Plan
Conserve School Access and Utilities

• MINIMIZE VEHICLE MILES OF TRAVEL
• MINIMIZE RIGHT OF WAY CLEARING
Conserve School
Access and Utilities

• ENTRY LOCATION AND DESIGN
Conserve School
Access and Utilities

• ON-SITE WASTE TREATMENT, “GREEN MACHINE”
• MINIMIZE POLLUTION AND COST
Conserve School
Architectural Design Features

- SOLAR ORIENTATION
- ROOF DESIGN
- ENERGY MODELING
- INSULATION
- GLAZING
- EFFICIENT HVAC & LIGHTING CONTROLS
Conserve School
Architectural Design Features

- HIGH RECYCLED CONTENT
- LOW EMBODIED ENERGY
- LOCAL GOODS AND SERVICES
- LOCALLY HARVESTED PINE SIDING
Conserve School
Construction & Operation

- Enhanced Erosion Control
- Construction Waste Recycling
- Job Inspections and Training
- Indoor AQ Construction
- Environmental Operations Plan
Conserve School
Green Benefits

• MINIMUM IMPACT ON ECOSYSTEMS
• MARKETING IMAGE
• STAFF/STUDENT PRODUCTIVITY
• REDUCED OPERATING COST
• EDUCATIONAL TOOL
References

• **SUSTAINABLE SITES INITIATIVE: GUIDELINES AND PERFORMANCE BENCHMARKS 2009**” AVAILABLE AS A PDF DOWNLOAD ON [WWW.SUSTAINABLESITES.ORG](http://www.sustainablesites.org), go to the current work tab on top of the home page then under current work go to report where there are instructions for downloading the file.

• **"LOW IMPACT DEVELOPMENT DESIGN STRATEGIES: AN INTEGRATED DESIGN APPROACH"** IS AVAILABLE AS A PDF DOWNLOAD ON [WWW.EPA.GOV/LID/](http://www.epa.gov/lid/)
References

• "THE PRACTICE OF LOW IMPACT DEVELOPMENT" PUBLISHED BY HUD, 2005 IS AVAILABLE AS A PDF DOWNLOAD BY GOING TO WWW.HUDUSER.ORG, THEN TO RESEARCH TAB, THEN PUBLICATIONS, LIST BY TITLE

• “LOW IMPACT DEVELOPMENT DESIGN STRATEGIES”, PRINCE GEORGE’S COUNTY, MARYLAND, DEPARTMENT OF ENVIRONMENTAL RESOURCES, JUNE 1999

• “PLANNING CONNECTIONS – HUMAN, NATURAL, MAN MADE”, “PETE” POINTNER FAICP, AUTHOR HOUSE 10-23-08
Think Green…Green Is Good

GENESIS 1: 11-12

• “AND SO IT HAPPENED: THE EARTH BROUGHT FORTH EVERY KIND OF PLANT THAT BEARS SEED AND EVERY KIND OF FRUIT TREE ON EARTH THAT BEARS FRUIT WITH ITS SEED IN IT. GOD SAW HOW GOOD IT WAS.”