

A scenic view of a pond with a decorative bench in the foreground, surrounded by lush greenery and trees. The bench is ornate with a dark metal frame and a wooden seat. The pond is filled with tall reeds and lily pads. In the background, there are various plants, including a large evergreen tree and a smaller tree with a white trunk. Two people are visible in the distance near the pond. The overall scene is peaceful and natural.

Conservation Subdivisions

Part I:

**What is a Conservation
Subdivision?**

from Randall Arendt's
Conservation Design for Subdivisions, (Island Press, 1996):

“ ‘**conservation subdivision**’ refers to residential developments where half or more of the buildable land area is designated as undivided, permanent open space” at a neutral density to existing zoning.

(Source: Arendt, Randall, Conservation Design for Subdivisions, p. 6)

“ ‘**conventional subdivision**’ refers to residential developments where all the land is divided into house lots and streets, with the only open space typically being un-developable wetlands, steep slopes, floodplains, and storm water management areas.”

(Source: Arendt, Randall, Conservation Design for Subdivisions, p. 5)

Important Elements of Conservation Subdivisions:

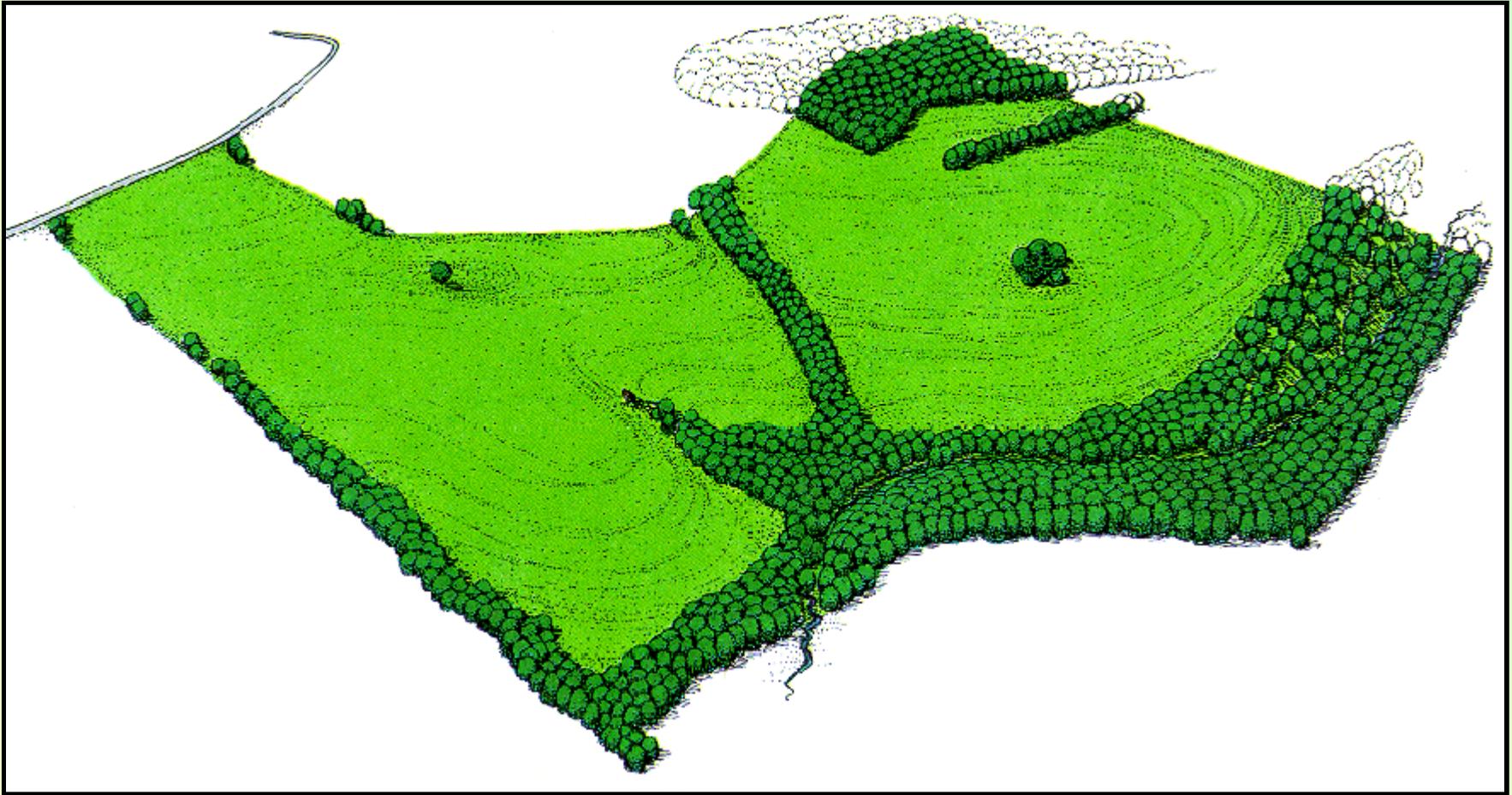
- Most lots adjoin open space.
- Open space preserved by zoning plan, subdivision plat and conservation easement.
- Cluster residential development on smaller lots with overall equivalent yield.
- Density-neutral: same “yield” as large lots currently permitted.

Part II.

How to design a Conservation Subdivision.

Conventional Vs. Conservation design

Example:
Undeveloped Land

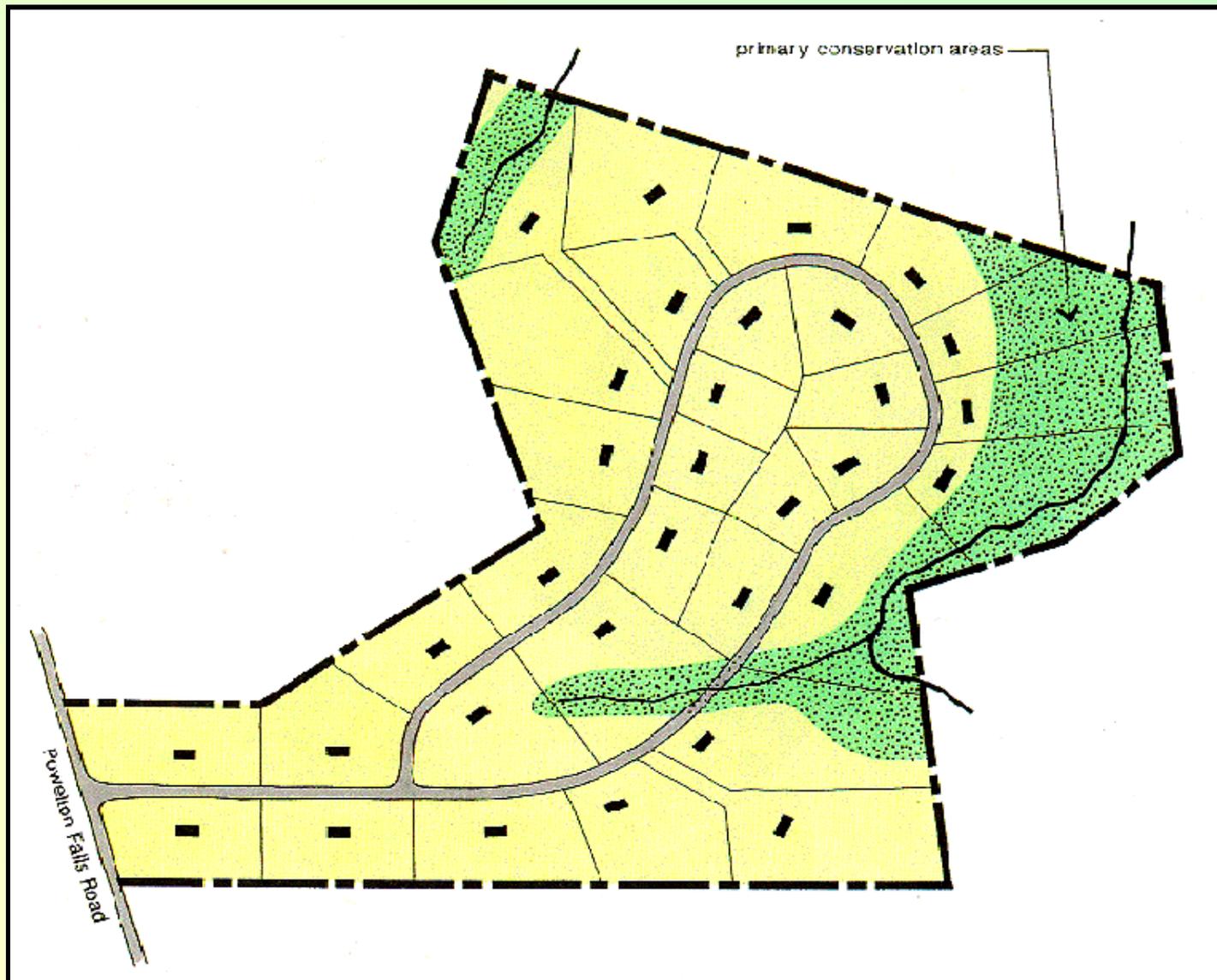


(Source: Randall Arendt, *Conservation Design for Subdivisions*, Page 59)

Conventional Design

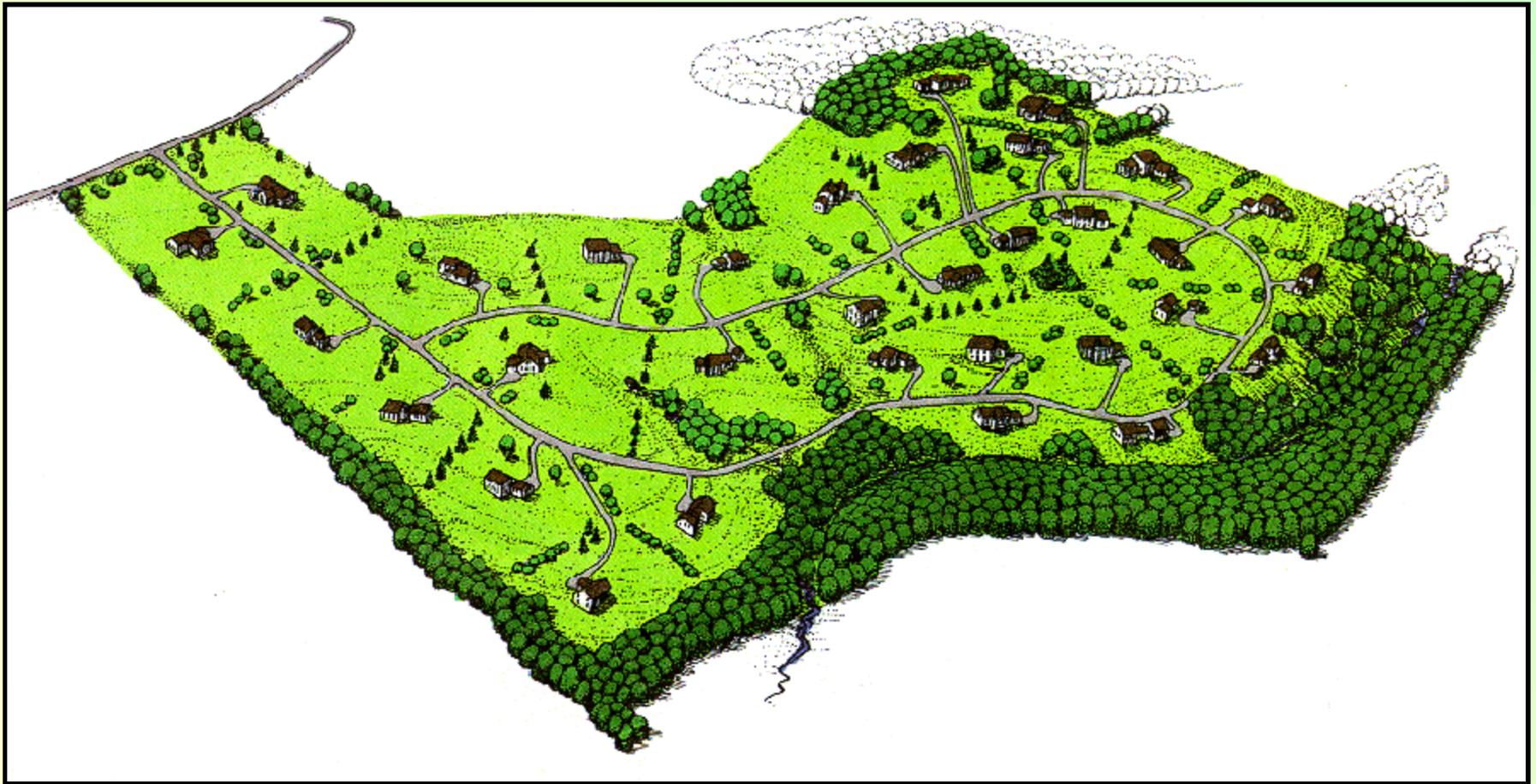
- Large lots and road right of way platted
- No open space
- Environmentally wasteful

Example:
Conventional Subdivision Design



(Source: Randall Arendt, *Conservation Design for Subdivisions*, Page 60)

Example:
Conventional Subdivision Design

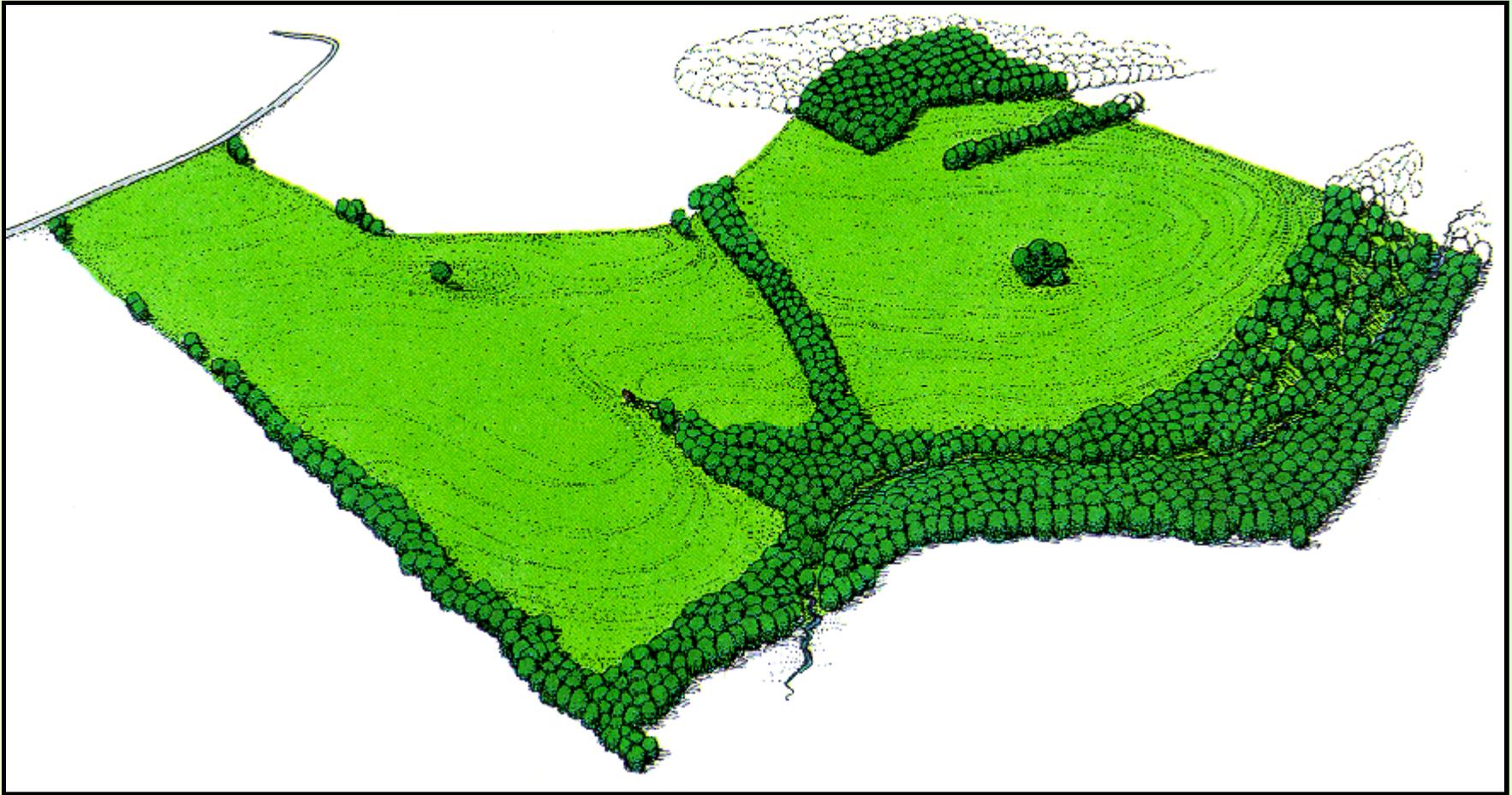


(Source: Randall Arendt, *Conservation Design for Subdivisions*, Page 61)

Conservation Design

- Minimum 50% open space preserved
- Environmentally sensitive
- Smaller lots
- Density neutral
- Significantly less land development cost
- Less damage to natural ecology

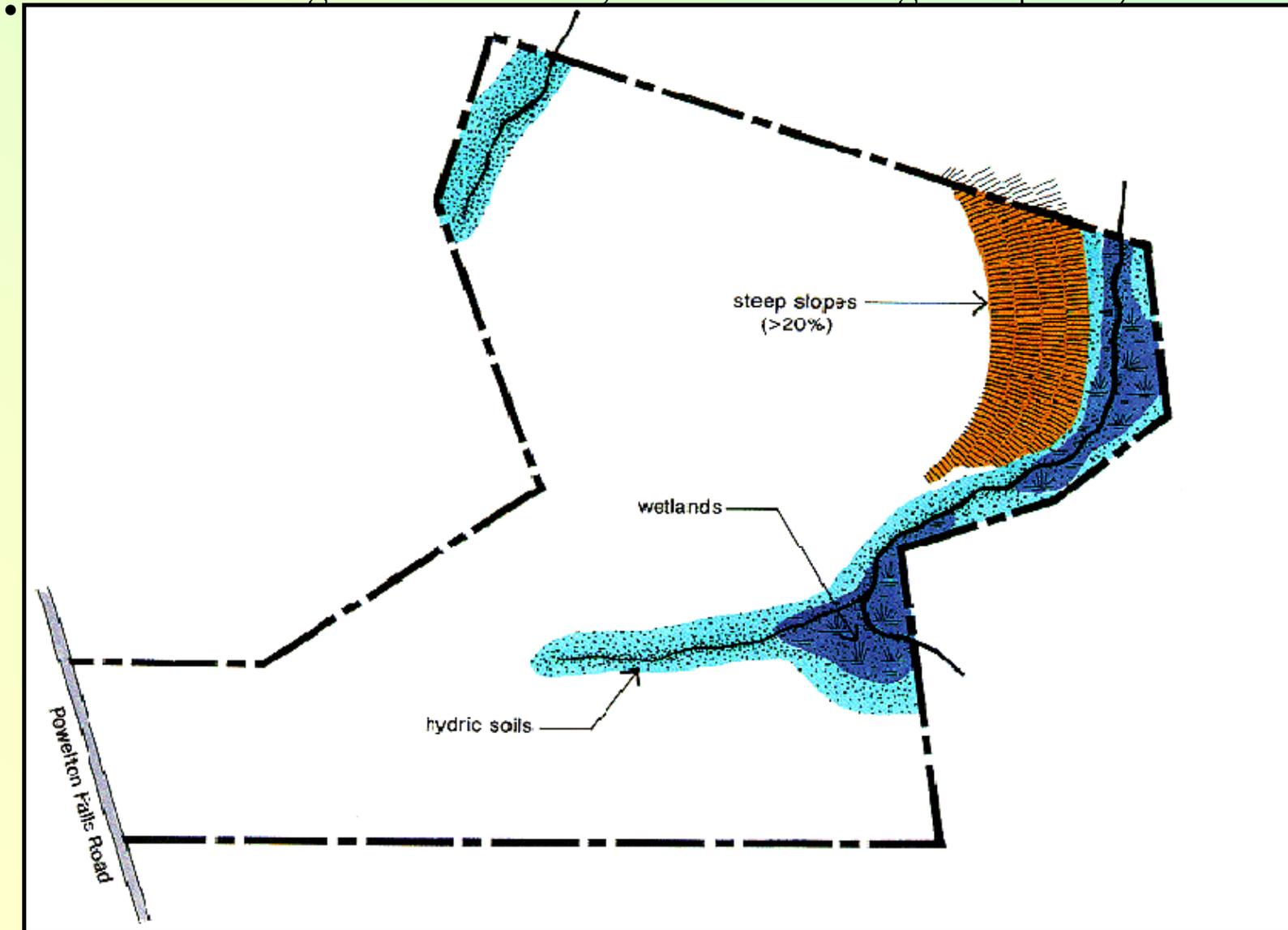
Example:
Undeveloped Land



(Source: Randall Arendt, *Conservation Design for Subdivisions*, Page 59)

Step 1. Identify Primary Conservation Areas:

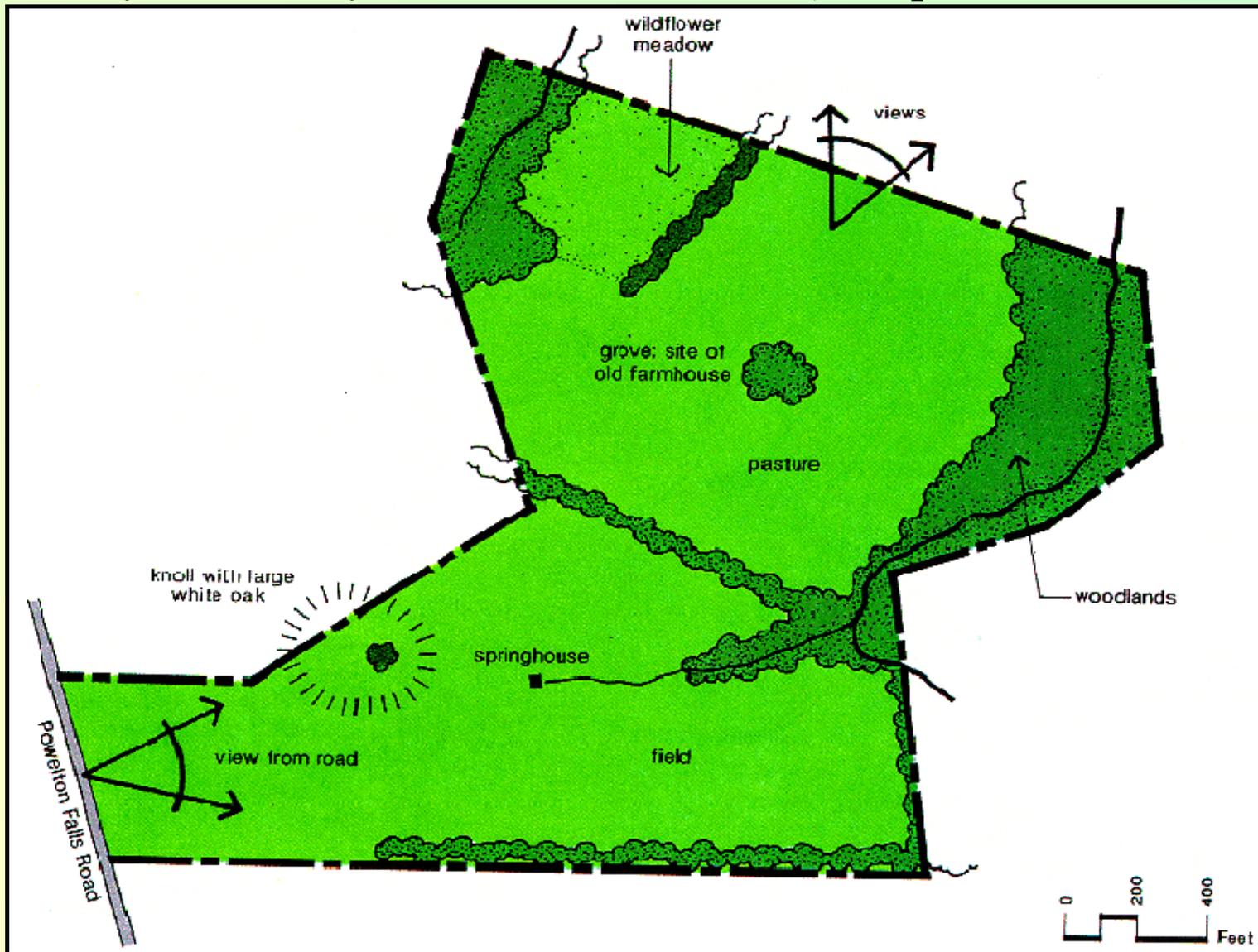
Slopes greater than 20%; 100 year floodplains; jurisdictional wetlands, existing bodies of water, habitat of endangered species).



(Source: Randall Arendt, *Conservation Design for Subdivisions*, Page 62)

Step 2.

Identify Secondary Conservation Areas (nice places worth saving)

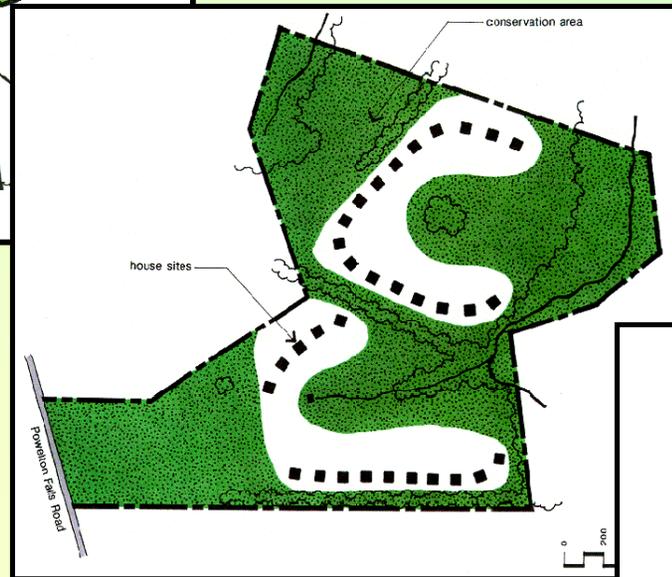


(Source: Randall Arendt, *Conservation Design for Subdivisions*, Page 63)

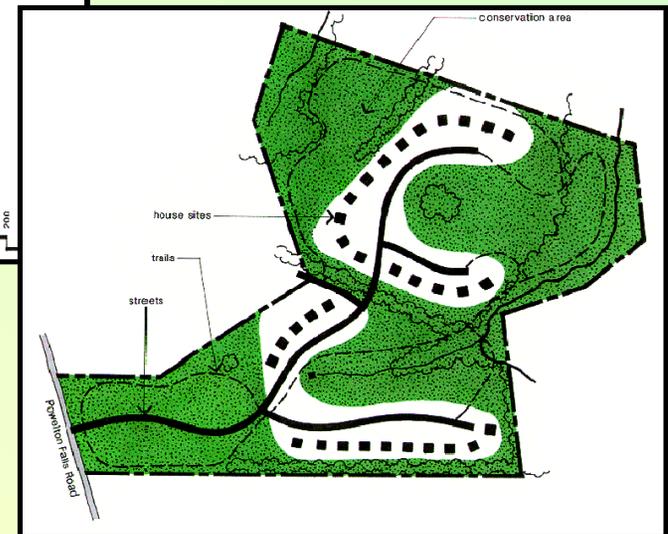
Creating Conservation Designs: Steps 3, 4 and 5



Step 3: Locate preferred development sites, preserving primary conservation areas and some secondary conservation areas



Step 4: Locate Building Sites



Step 5: Lay Out Roads, Trails and Access

Example:
Conservation Subdivision Design



(Source: Randall Arendt, *Conservation Design for Subdivisions*, Page 68)

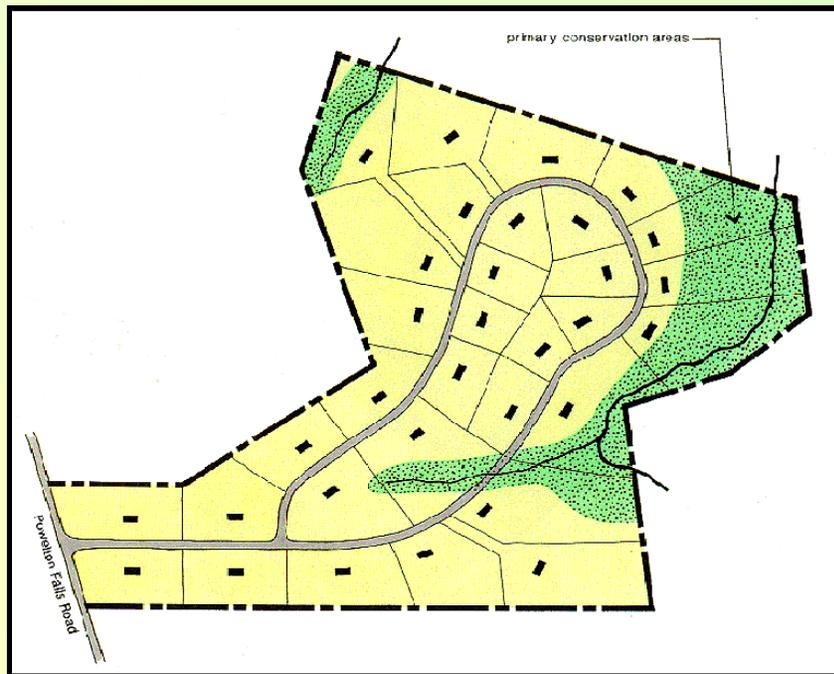
Example:
Conservation Subdivision Design



(Source: Randall Arendt, Conservation Design for Subdivisions, Page 69)

Example:
Comparison of Subdivision Designs

Conventional



Conservation



(Source: Randall Arendt, *Conservation Design for Subdivisions*, Page 60,68)

Sewage Disposal

- Open space may be appropriate for individual or community sewage systems.
- Local and/or state health approvals will be required and may be soil-dependent.

Part III

Conservation Subdivision Case Studies

in

Michigan, Pennsylvania & Ohio

Case Studies: Hamburg, Michigan

Hamburg Township:

- **1990** - Population was 13,000.
- **1991** - Minimum lot size increased (1.5 acres).
- **1992** - Wrote PUD Open Space Ordinance to allow development with half-acre lots at density of one unit per 1.5 acres if certain open space conditions were met.
- **1993** - Stanley Home Builders built Spencer Woods. The township's first open space development.
- **As of 2002** - 42 out of the 43 developments since 1993 have been open space developments.



(Source: www.livgenmi.com)

Solitude Point (Hamburg, Michigan)



Developer: Ore Creek Development

Overall Density: 1 unit per acre

Lot size: 0.5 acres, on site sewage systems

House values: \$250k to \$300k circa 2002

Open Space Use: Wetlands/Walking Paths

Percentage of Open Space: 50%



Solitude Point (Hamburg, Michigan)



Winans Woods (Hamburg, Michigan)

Developer: Keller Williams

Overall Density: 1 unit per acre

Average lot size: 0.5 acres

House values: \$300k to \$350k, circa 2002



Open Space Use:

Wooded/Walking Paths

% of Open Space:

50%

On site sewage systems



Winans Woods (Hamburg, Michigan)



Winans Woods

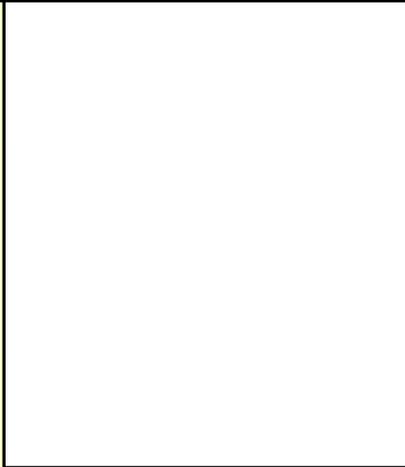


(Hamburg Twp., Livingston County, Michigan)

Winans Woods



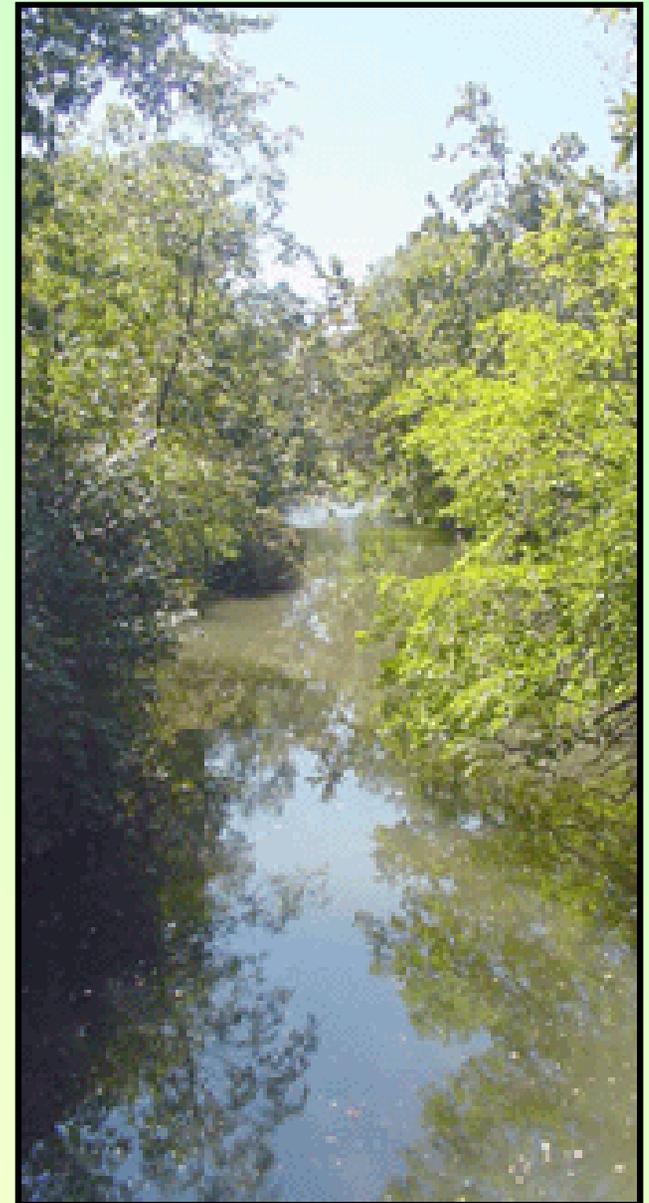
Winans Woods



Case Studies: Pennsylvania

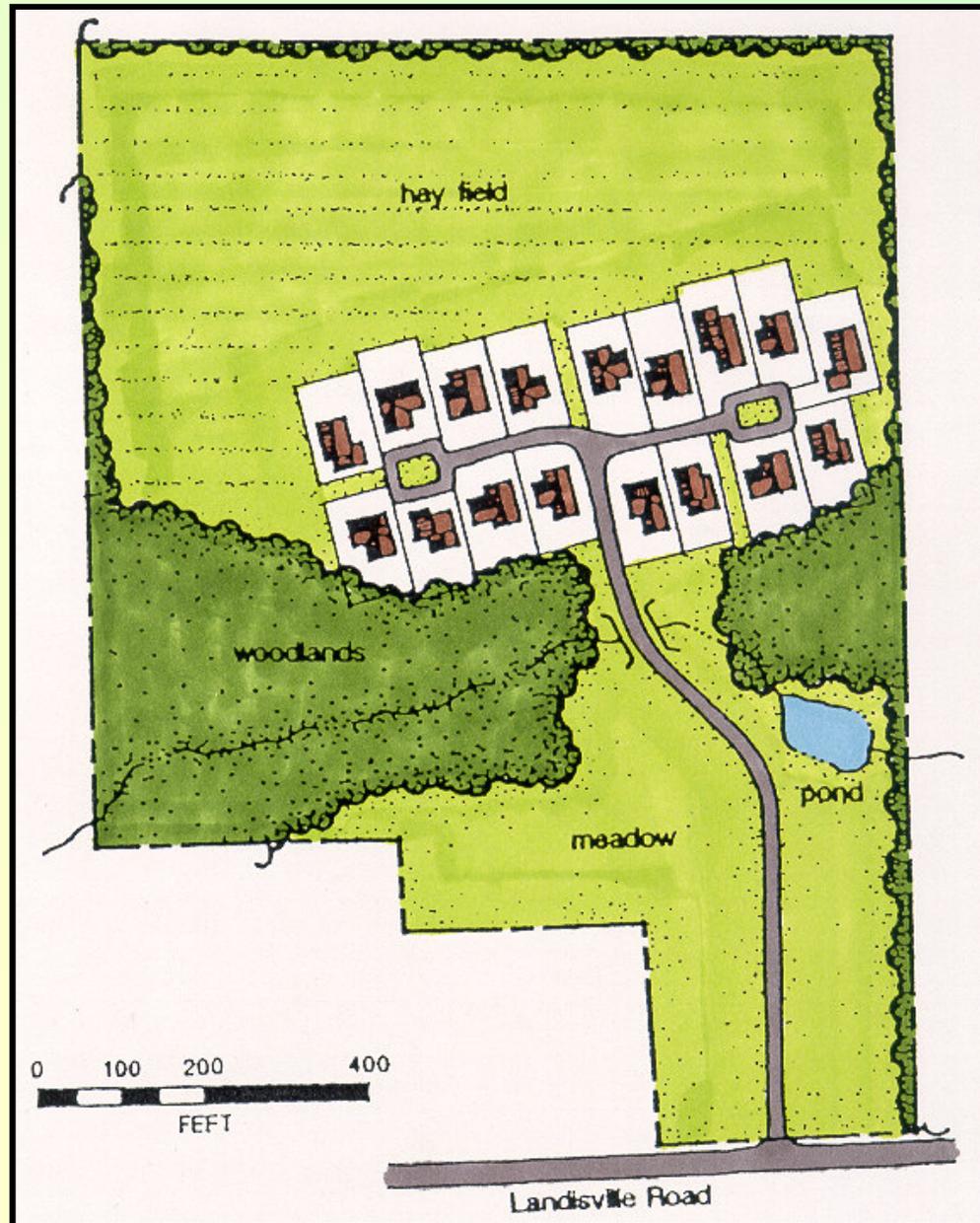
Bucks, Chester, Delaware and Montgomery Townships:

- Township zoning codes encourage conservation by density bonuses.
- Some list the conservation subdivision as a conditional use, while others consider it an alternative use.
- The transfer of development rights are used in many cases to preserve agricultural land in adjacent parcels, where development rights from one piece of land are added to an adjacent parcel to increase density and preserve the other.



(Source: www.wilson.edu)

Canterbury (Bucks Co., Pennsylvania)



(Source: Pennsylvania Examples with Substantial Conservation Areas)

Developer:

John Crestell

Overall Density:

1 unit per acre

Average lot size:

0.25 acres

Percentage of Open Space:

50%

Use(s) of Open Space:

Hay field, meadow, pond & woodlands.

Plumsock at Willistown (Chester Co., Pennsylvania)



Developer:

Leonard Blair & Son

Overall Density:

0.57 unit per acre

Average lot size:

0.5 acres

% of Open Space:

70% (50 acres)

Use(s) of Open Space:

Wooded with ponds and streams.

Zoning:

1 d.u. per 80,000 SF

(Source: National Lands Trust)

Ringfield (Delaware Co., Pennsylvania)

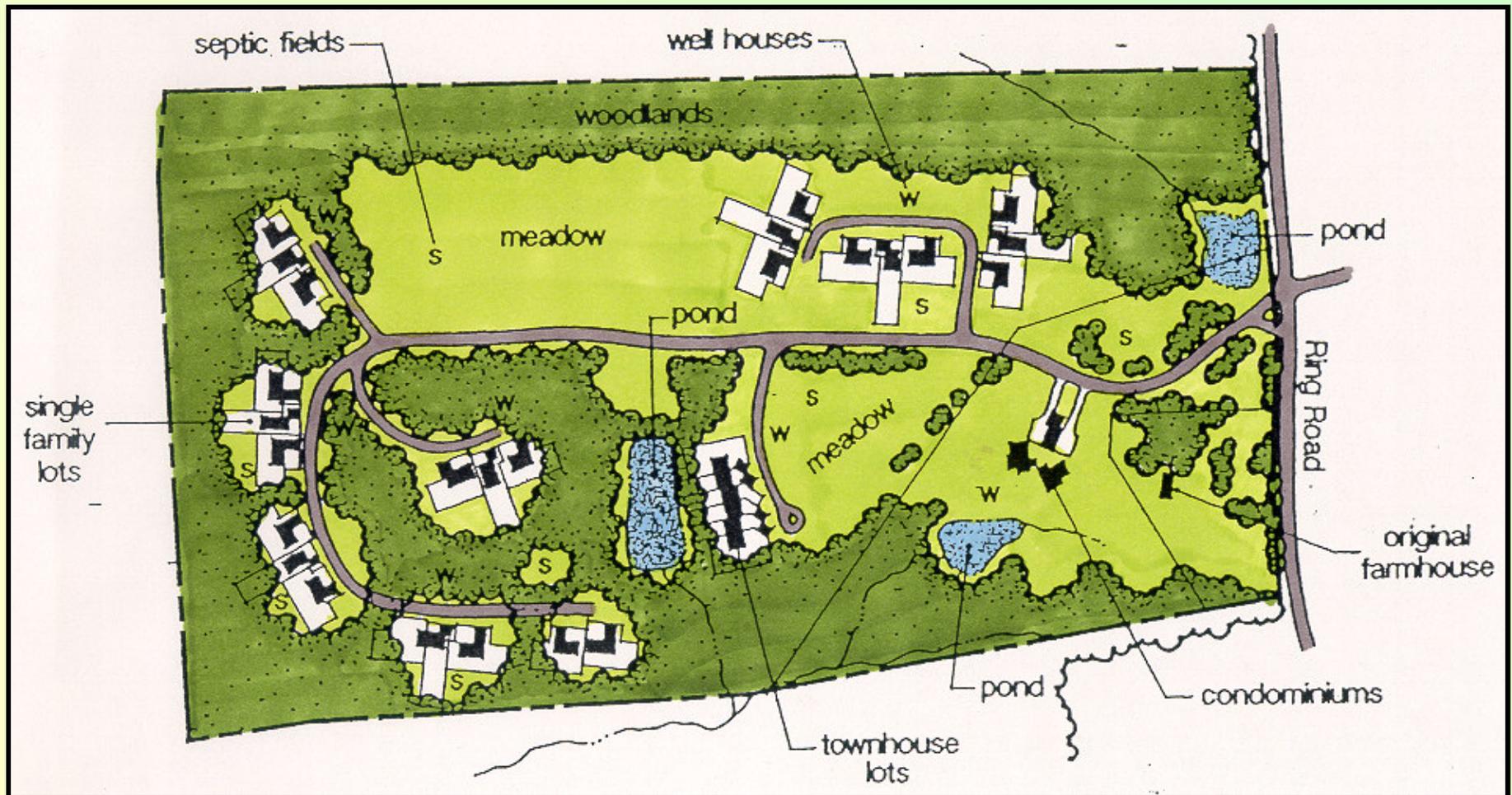
Developer: Richard Chalfant

Average lot size: 0.27 acres

Zoning: PRD at 1 dwelling unit per 2 acres with no restrictions on lot size.

Overall Density: 0.5 unit per acre

% of Open Space: 86 %

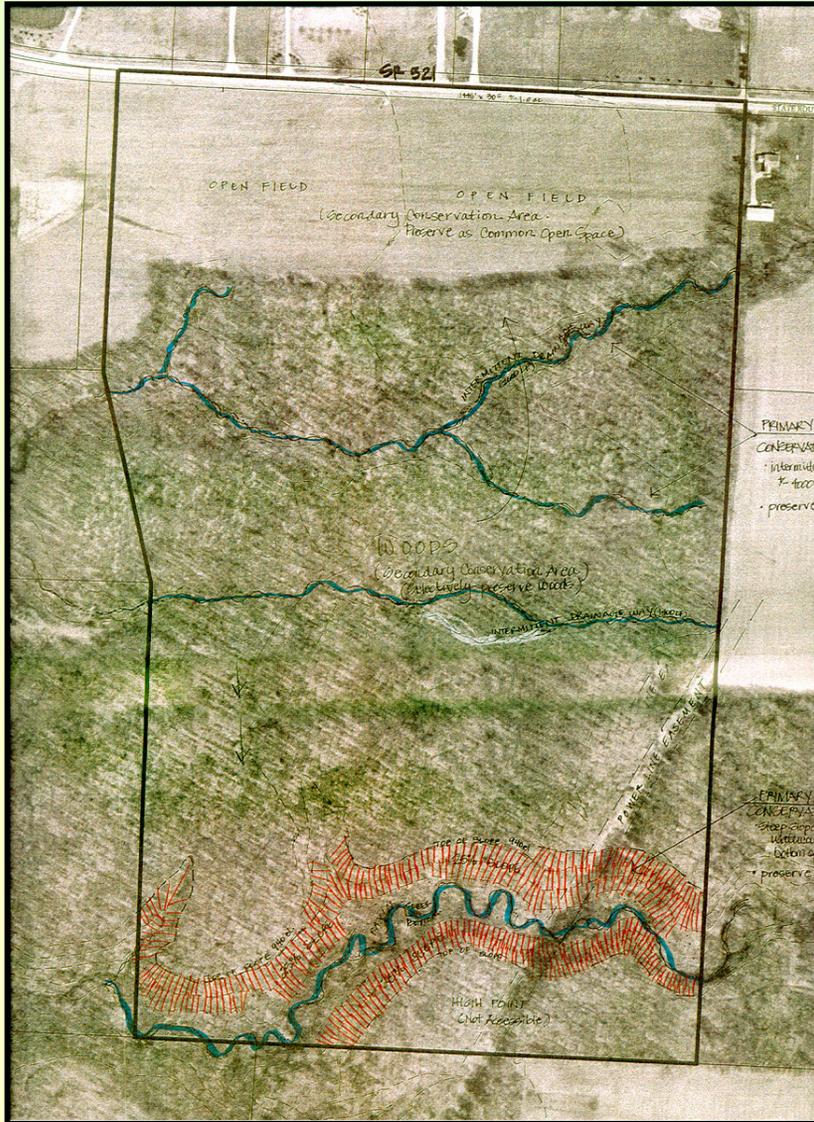


(Source: National Lands Trust)

Case Studies- Ohio

- Delaware County: Concord, Genoa and Trenton Townships adopted Conservation Subdivision Overlay zones- no rezoning is required.
- Summit County: Bath Township made Conservation Subdivisions permitted by right, and large lots a conditional use.

Brown Township: Roop Land



S.R. 521, Brown Township,
Delaware County, Ohio

70.73 gross acres

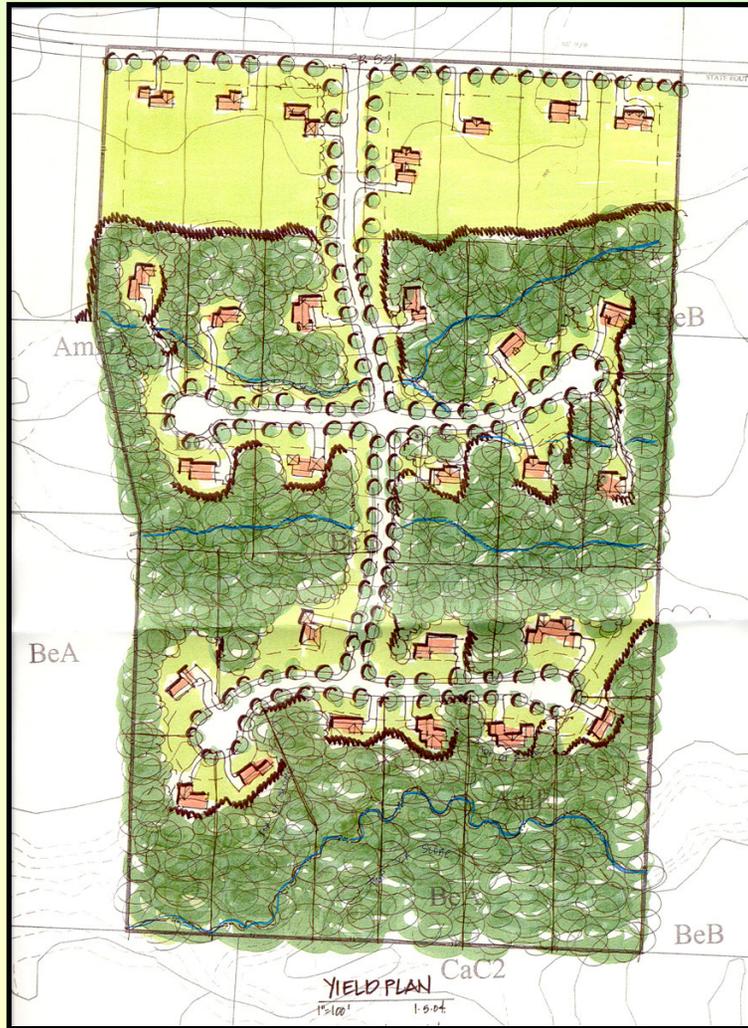
9.3 acres in primary
conservation areas.

61.43 net developable acres

30.71 acres = 50% open space

The Roop Land

Conventional Subdivision required by standard zoning



28 lots

2-acre minimum lot size

7 frontage lots on SR 521

6 new curb-cuts on SR 521

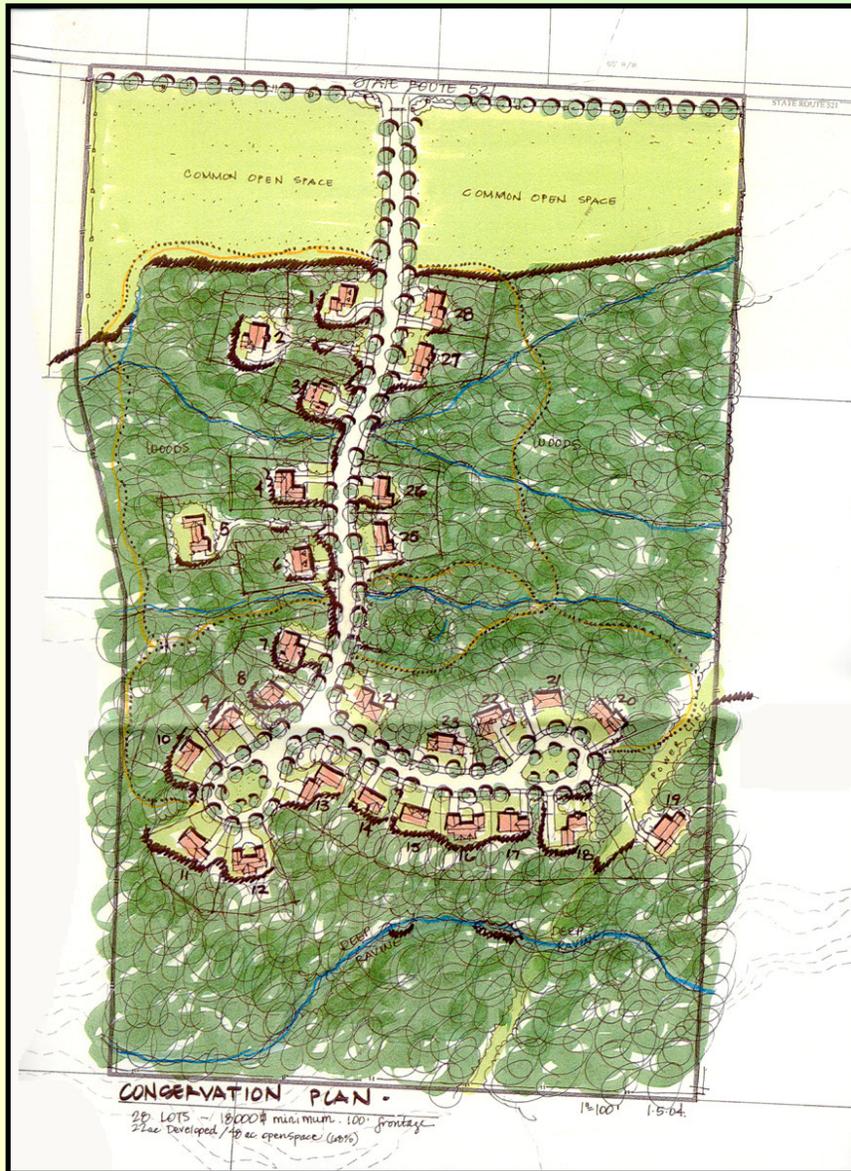
No preserved open space

Visual impact on view along the road.

Open meadow destroyed.

Excessive road and grading impacts

Roop land-Proposed Conservation Subdivision



Preserves meadow, reduces construction impacts

Community leach beds proposed in open space along SR 521. Effluent sewers, with lift station.

28 lots

Density: .4 units per acre

18,000 s.f. minimum lot size
100 feet of frontage per lot

22 ac. developed
48 ac. of open space (68%)

Case Studies: Summary of Findings

- The value of a half acre lot with 50% publicly owned open space is slightly higher than a one acre lot with no public open space.
- Residential lots in conservation subdivisions sell at faster rates than those in conventional developments, due to their aesthetic appeal and lack of need for private open space maintenance.
- Developers prefer conservation developments, so they can sell lots faster and don't face the cost of clearing unnecessary land of trees, shrubs and other environmentally sensitive elements.

Part IV

“Cluster Subdivisions”

“Cluster” vs. Conservation Subdivisions

- ~~Many poor designs have been approved as “cluster” housing, where no useable open space is preserved.~~
- Watch out for density and design. Densities such as 2 units/acre in are suitable for cluster developments with 20-30% open space, but not for conservation subdivisions that save 50% open space.
- Small lots can work, with appropriate design and materials. Avoid snout houses with fully projecting front load garages.
- Design of open space is important. Most houses should have view of open space.

Genoa Farms “Cluster”

No primary conservation areas

2.01 units/gross ac). with 50% open space

Poor quality open space with high maintenance mowing, no habitat.



Genoa Farms “cluster”, Delaware County, Ohio

Density: 2.01 du/gross acre

Note: **this is not a conservation subdivision**; it is a “cluster” Planned Unit Development that requires 50% open space. _



Notice the lack of street trees, and landscaping.

Wide streets, curb and gutter and concrete sidewalk are inappropriate in conservation subdivisions.

Part V:

Suggestions

1. Make **Conservation Subdivisions** a **permitted** use anywhere within designated rural areas.
2. At a minimum, make the conservation subdivision a permitted alternative to large lot zoning.
3. Large rural lots should ideally be a conditional use, only permitted if a conservation subdivision is not feasible due to topography, etc.

4. Procedure to create a Conservation Subdivision

- * Prepare Site Analysis Map
- * On-site walkabout (very important!)
- * Draw conservation subdivision saving primary and secondary conservation areas as agreed during the site walk.
- * Prepare Subdivision Application
- * Action by Planning Commission
- * Record subdivision plat with conservation easement for open space

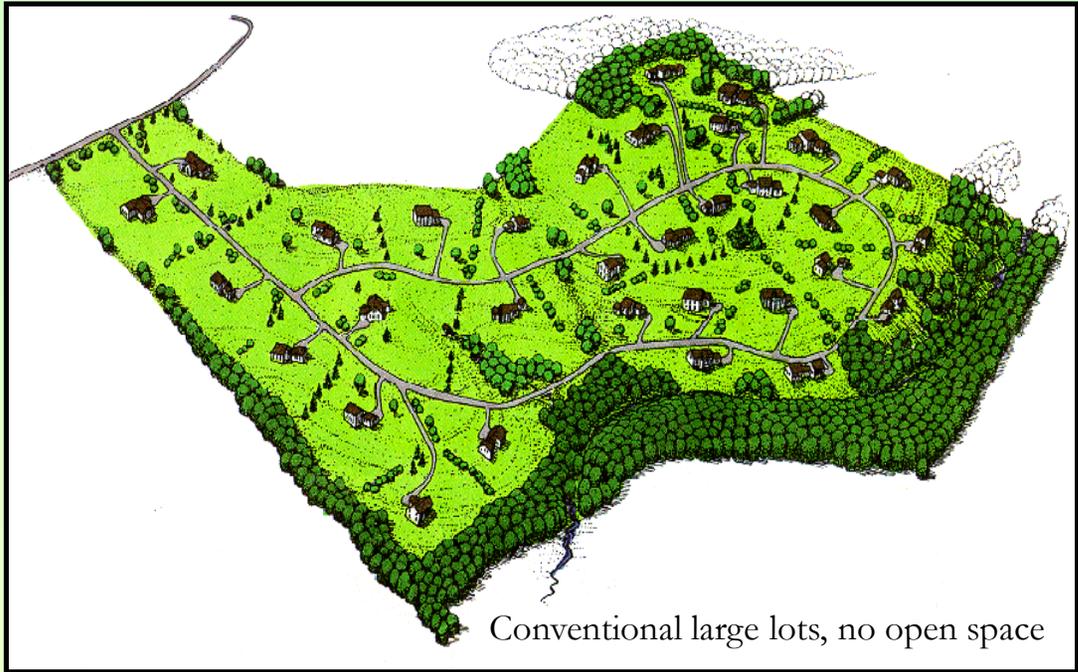
5. Ownership and Maintenance of Open Space

- * Offer of dedication
- * Managing Entity (Homeowners Association, conservation trust, public agency). Membership is mandatory for all homeowners.
- * Third party conservation easement to a conservancy is best protection of the open space.

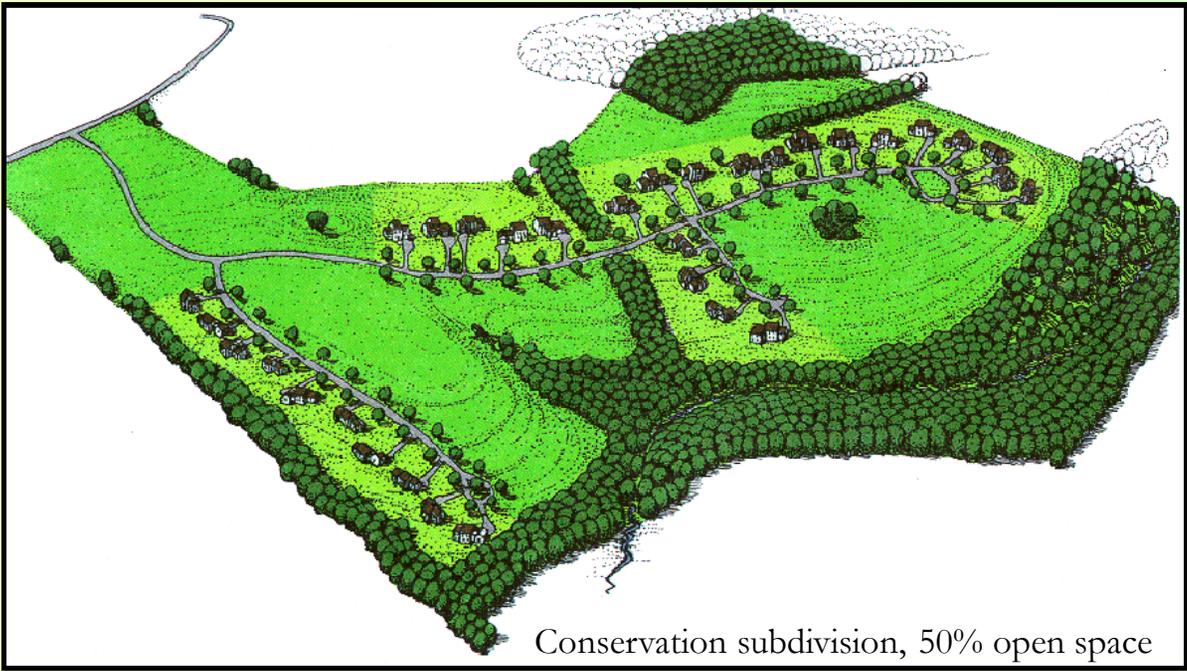
So.....

**.....What do you want
your community
to look like ?**

This? →



Conventional large lots, no open space



Conservation subdivision, 50% open space

← Or this?



For more information, contact:

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