

JAMES A. GRAASKAMP COLLECTION OF TEACHING MATERIALS

V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM

I. Other Presentations In Which Either The Date And /
Or Sponsoring Organization Is Missing

3. Development Topics

- f. "Cubernetics - The Study of Space/Time
Attributes for Land Use Allocation", no
date

'CUBERNETICS'

- I. If dollars and the time value of money measure solvency on the money/time side of the equation, what will be the fungible unit of space/time that is compatible with all types of improvements categorized as land development?
 - A. Limitations of existing improvement intensity indexes:
 1. DU's
 2. F.A.R.'s
 3. People per acre
 - B. The Cubit is one square unit of surface times one unit of "height" as an index for intensity of development. The cubit has the attribute of permitting 1/10 of a square surface unit of manmade impervious surface.
 - C. A cubit is a measure of realized or potential land use for any given property owner.
 - D. To be an economic commodity the cubit must be scarce or limited in supply, in constant demand, and easily available without permitting monopoly, undesirable speculation, or significant discretionary manipulation by public officials. It must relate to major land use problems including taxation, eminent domain, land planning with equity, as well as the nature of real estate enterprise.
- II. General Requirements of Setting Up a Cubit System of Property Rights
 - A. Establishing a general master plan for a county based on physical suitabilities and capacities of the land with improvements existing as of a given date.
 - B. Measuring the exact amount of surface area in a plane determined by parcel dimensions for all parcels including lots, farms, road right-of-ways, parks, school yards, etc.
 - C. Establish a height index factor as to desired intensity of use. For purposes of discussion:
 - 1 = open or wet lands
 - 4, 6, 8 = class 1, 2, 3, farm land
 - 20, 24, 28, 36, 48 = alternative residential density
 - 4 = all public parks, campuses, church sites, etc.
 - 30, 60, 90, or 150 = alternative commercial density zones
 - 6, 12, 18, and 24 = alternative forest and mineral land
 - D. The aggregate sum of each parcel area x the zone height factor = total potential cubit development for a county.
 - E. Actual supply of cu bits in use would be 8 cubits granted every parcel per square unit of surface plus cubage of all existing structural improvements.

III. Some Applications of Cubits

- A. Allocation of a portion of real estate taxes as a mill rate per cubit on all property, including currently exempt land to create a disutility of holding surplus land, (ala the University or a church). Redistributes tax burden away from those owning open space wetlands or marginal farm land.
- B. As a transferable development right land owners would be permitted to transfer cubits granted in excess of those required by use zone in master plan. Those permitted to build or develop would have to purchase cubits from those restricted to open space or first destroy an obsolete structure already owned (or tear up an old roadway) to release cubits for a new project.
 1. Cubits must always be assigned to a site in a county to prevent speculation by non-land owners.
 2. Cubits attached to a particular site cannot exceed site cubits permitted by land plan zone.
 3. All cubits bought and sold by county cubit bank, (partially funded by initial bond issue to be paid off from spread between cubit purchases and sales) required to maintain and balance the bid and asked prices for cubits. Result is a transfer of wealth from those who are permitted to develop by master plan to those who cannot or do not wish to develop land.
 4. Note that cubits are required for impervious surface such as roads or tennis courts or driveways as well as for structures putting a control on the Highway Department or other public agency like airports.
- C. Eminent domain awards can be in cubits rather than cash
 1. Present system requires compensation for present value of an opportunity with little recognition of risk or expertise required.
 2. Payment in cubits simply restores access to an opportunity at a location where the master plan thinks it is appropriate.
 3. Even indemnity in terms of cost per cubit acquired provides solvency without requiring the public to purchase a potential set of assumptions about future economic successes.