

SUBURBAN HIGHWAYS AND ROADS AS INSTRUMENTS OF LAND USE CHANGE

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Initial development in suburban areas typically occurs around a rural highway. The highway quickly becomes the main street of the new community and serves shopping, medical, and educational needs. Safety and congestion are 2 problems quickly recognized that result in community endeavors to have traffic control devices and increased capacity provided. However, increased capacity may adversely affect a regional environment. This in turn can place a severe restriction on the road service provided to a suburban community. Under such restrictions, it stands to reason that land use changes should be controlled to be compatible with the permitted highway capacity. The author argues that highway and road capacity in suburban areas can be used to effectively control land development in the same manner as sewer connections and capacity are used. Both public facilities are specifically included in typical adequate public facilities ordinances and subdivision regulations, and on occasion, in zoning ordinances. Recent litigation upheld the Township of Ramapo zoning ordinance that required an assessment of road standards among other public services. This has effectively slowed the pace of land development in Ramapo, New York. Court decisions (National Land, 1966; Ramapo, 1972; and Petaluma, 1974) strongly suggest that an individual's constitutional rights, such as the right to travel, the right to develop land, and the right of equal protection, can be overridden if a compelling state interest (in the public welfare) is present. Regional environmental considerations could represent such a compelling state interest and constrain highway and road capacity. Therefore, it follows that highway and road capacity constraints could be used effectively to control land development through the exercising of an adequate public facilities ordinance. This argument is discussed in the context of the rapidly growing Washington, D. C., suburban area, South Laurel-Montpelier, Maryland.

●IN MOST instances, suburban roads initially open up land for development and, hence, are instruments of land use change. However, subsequent action of the developer is to keep the pace of land development high, which brings traffic congestion and more accidents. Citizens clamor for relief and are successful in obtaining road improvements that developers use to justify more development. Until now, only fiscal constraints have been assumed to limit the provision of whatever road capacity is required for the allowed land development.

Regional environmental considerations can place a severe restriction on road service provided to a suburban community. Under such restrictions, it stands to reason that land use changes also should be controlled to be compatible with allowable highway capacity. The purpose of this paper is to show that road capacity, in addition to sewer connections and sewer capacity, can be a constraint on land use and therefore can be an influential factor in decisions to change land use. Use of this factor should be made by those concerned with the implementation of growth-control policies. The case of the South Laurel-Montpelier planning area in Prince Georges County, Maryland, will be dealt with specifically.

EVIDENCE EXISTING TO SUGGEST THAT ROADS CONTROL LAND USE

Evidence exists in the literature that freeways induce certain types of development. Babcock and Khasnabis (2) have shown in their analysis of the North Carolina Interstate Highway System that services to highway users can be found in 35 percent of the rural interchange quadrants. By far the greatest use is for service stations. For urban freeway interchanges, 79 percent of the interchange quadrants were found to be developed, and industrial areas, shopping centers, and road user service facilities are the principal users. The consistent concentration of certain types of land development around urban interchanges is evidence that freeways are instruments of land use change.

A report (3) prepared for the U.S. House of Representatives Public Works Committee was definite in its statement that "Highways, particularly Interstate highways, influence the way land is used or developed." A study by the University of Washington is noted that concludes that "intensive land development will occur near the interchanges of large metropolitan areas within a few years after the Interstate system is completed."

Large land use models are predicated on a given transportation system. Usually urban residential location is determined by the relationship between travel time and employment location. The same model structure is used to locate commercial supporting services serving residential areas. Brown et al. (4) provide a comprehensive state-of-the-art description of land use models in a recent publication showing the relationship between land use and personal mobility.

EVIDENCE EXISTING TO SUGGEST THAT ROADS DO NOT CONTROL LAND USE

After roads have allowed initial development to occur, it has been noted that subsequent development follows at such a rapid rate that the services needed to support the development soon become inadequate. Highway engineers have long recognized their task in suburban areas as one of catching up on the provision of road capacity to meet travel demand. Highway planners have blamed local municipalities for their inability to control related land use so that congestion and safety hazards are avoided. This historical catching-up process is evidence that suburban highways and roads follow development and, hence, are not instruments of land use change.

Hutchinson (5) destroys the myth that rapid transit facilities will by themselves bring about certain high-density residential areas and commercial office space around stations. In examining the Toronto system, Hutchinson points out the availability of land for commercial development and shows that this availability, not the presence of a subway system, is the controlling criterion. Too often, planners have not been shown evidence where this development is absent around stations.

In recent years, subdivision regulations have been amended to include an adequate public facilities ordinance. The need for such an ordinance implies that these facilities would not necessarily precede the land development that is likely to occur.

An early court decision (*Borus v. Smith*, 304 N.Y. 164, 106 N.E.2d 503) described the nature of subdivision regulations that imply that public facilities follow land development: "Subdivision regulations reflect in essence a legislative judgment that the development of unimproved areas be accompanied by provision of essential facilities."

In Fairfax County, Virginia, continuity of design standards for roads has not been maintained because of a subdivision requirement. Subdivision development has required widening and upgrading of roads to allow for expected traffic increases. Where development has not occurred, the road remains in its original condition. Although this policy of the Virginia Department of Highways and Transportation, which is responsible for all roads in Fairfax County, succeeds eventually in distributing a significant portion of the cost of road building to the land developer, it also results in a profusion of severe safety hazards by encouraging sudden variation of road width, shoulder width, and the like. This evidence suggests that land development precedes the provision of roads. Fairfax County is developing new adequate facilities controls

and standards as part of a planning and use control system (PLUS) (6) in an effort to plan and control growth.

PROVISION FOR ADEQUATE PUBLIC FACILITIES IN SUBDIVISION REGULATIONS

The requirement of adequate public facilities in subdivision regulations and zoning ordinances recognizes the inherent lack of dependency of land use development on existing public facilities. By its provision in subdivision regulations, it becomes a determinant of whether a land use change will occur. It is therefore worthwhile to review the intent of an adequate public facilities ordinance as it concerns roads before exploring its effectiveness in controlling land use and what changes in effectiveness might be anticipated in the future.

Subdivision Regulations, Prince Georges and Montgomery Counties, Maryland

The Regulations for the Subdivision of Land for the Maryland-Washington Regional District in Prince Georges County, Maryland (Section 3(a)16, Oct. 17, 1961, as amended), state precisely what its intent is.

It is the intent of this section that public facilities and services should be adequate to preclude danger or injury to the health, safety and welfare and excessive expenditure of public funds.

The ordinance goes on to say that the planning board shall give due weight to the following:

The availability of access roads adequate to serve traffic which would be generated by the subdivision, or the presence of a proposal for such road(s) on an adopted Master Plan and in the current Capital Improvement Plan or the State Roads Commission Program.

Clearly, the concern is that sufficient capacity exists to relieve congestion in the streets as noted in the Standard State Zoning Enabling Act. Sufficient vehicular capacity need not exist at the time a subdivision plat is approved, but it must be planned for in the Maryland Highway Administration 5-year plan. Because environmental impacts have not been evaluated for projects in the 5-year plan, this provision in the ordinance would no longer appear to be valid proof that adequate public facilities, such as roads, will be adequate.

The adequate public facilities ordinance for Montgomery County, Maryland (7), is much more detailed than that of Prince Georges County. Its intent is "to provide that no preliminary plan of subdivision shall be approved unless the planning board determines that public facilities are adequate to support and service the proposed subdivision" A recent interpretation (8) of this statement is that "a developer must prove, before building permits will be issued, that there will be adequate fire, police, roads, water, sewer and other services to serve the proposed development." In its consideration of roads, the ordinance is very specific.

Said area or tract to be subdivided shall be deemed adequately accessible via roads and public transportation facilities if any of the following conditions are present:

1. Existing roads are adequate to accommodate the traffic that would be generated by the subject subdivision in addition to existing traffic, and are publically maintained all-weather roads or
2. Such additional roads, necessary in combination with existing roads to accommodate the additional traffic that would be generated by the subject subdivision, are proposed on an adopted Master Plan and are programmed in the current adopted Capital Improvement Program or the State Highway Administration's Five Year Program for construction with public or private financing. . . .

4. In its determination of the adequacy of a road to accommodate traffic, the planning board shall consider the recommendation of the State Highway Administration or county Department of Transportation, the applicable levels of traffic service, peak hour use and average use, and any other information presented.

The mention of levels of traffic service is a significant feature. The traffic engineer's level of service is a yardstick for measuring the level of congestion on a highway, from freely moving traffic to traffic at a standstill. It is described pictorially in the Highway Capacity Manual (9, pp. 82 to 85) and is correlated with various highway characteristics such as a number of lanes, width of lanes, grades, percentage of trucks, and peak-hour travel demand. It is an extremely useful tool because it relates to public acceptance of the service provided. The acceptable level of service is not described in the county ordinance and, hence, is left to the discretion of the planning board. However, level of service C or D, as described in the Highway Capacity Manual (9), has been the criterion used in highway needs studies. Land use decision makers could use these levels as a measure of road adequacy against which land use changes would be judged.

Legal Case History

Many legal cases have cast a considerable cloud on the effectiveness of the adequate public facilities ordinance to control growth. The problem is reconciliation of individual rights under the constitution with the protection and conservation of neighborhoods. An individual landowner has the right to develop land in a manner of his or her choice providing such development does not violate the health, general welfare, and morals of the community. An individual's freedom to live in the location of his or her choice (the right to travel) is constitutionally protected. Last but not least is the individual's right to equal protection under the law. Until recently the courts have upheld these individual rights at "cost" to the neighborhood.

In *National Land and Investment Company v. Kohn* [215 A.2d 597 (1966)], the decision to zone a portion of Easttown Township into 4-acre-minimum (1.6-hm²-minimum) lots was declared a violation of an individual's constitutional right to use his or her property unfettered except in specific instances. The court was not persuaded by the Easttown Township arguments concerning the need for proper sewage disposal, the protection of township water supply, inadequacy of roads, preservation of area character, protection of historic sites, and existence of similar low-density ordinances in other townships. With regard to the line of reasoning on roads, the court had this to say:

Zoning is a tool in the hands of governmental bodies which enable them to more effectively meet the demands of the evolving and growing communities. It must not and cannot be used by those officials as an instrument by which they might shirk their responsibilities. Zoning is a means by which a governmental body can plan for the future—it may not be used as a means to deny the future. The evidence indicates that for the present and the immediate future the roads system of Easttown Township is adequate to handle the traffic load. It is also quite convincing that the roads will become increasingly inadequate as time goes by and that improvements and additions will have to be made. *Zoning provisions may not be used, however, to avoid the increased responsibilities and economic burdens which time and natural growth invariably bring.* (emphasis added)

The Pennsylvania court further said, "A zoning ordinance whose primary purpose is to prevent the entrance of newcomers in order to avoid future burdens economic or otherwise upon the administration of public services and facilities cannot be held valid. . . ." This case, in addition to others, has established the obligation of municipalities to provide the necessary services to accommodate growth. Although development can be delayed for the public facilities to be provided, it cannot be delayed unreasonable lengths of time.

A more recent court decision (*Golden v. Ramapo* 30 N.R.2d 359) (10, 11) established that, under certain conditions, adequate public facilities provisions could be used to stage and slow land development. In 1969, the town of Ramapo adopted an amendment to the town zoning ordinance prohibiting subdivision approval except where the residential developer has secured, before application of plat approval, a special permit. The standards for the issuance of special permits are framed in terms of the availability to the proposed subdivision plat of 5 essential public facilities, 1 of which was state, county, or town roads. A developer accumulated points from each of the 5 facilities. Fifteen of a possible 23 points were necessary for the issuance of the permit. The point system for improved roads is as follows:

1. Direct access = 5 points;
2. Within 0.5 mile (0.8 km) = 3 points;
3. Within 1 mile (1.6 km) = 1 point; and
4. Farther than 1 mile (1.6 km) = 0 points.

An improved road was defined as having sidewalks and curbing. If a developer had insufficient points, he or she could proceed to provide the facilities to acquire the required point total. If this proved not possible, he or she would have to wait until such time as the city provided the facility. The town argued with persuasion that its policy was not to deny growth but to stage growth according to its ability to provide the public the necessary facilities. In a long statement, the Court of Appeals allowed the city to do this. Important in the decision were 4 findings of fact.

1. The city had a capital improvements program with a good record of providing improvements on schedule.
2. The city had a comprehensive plan.
3. The zoning ordinance was based on the comprehensive plan.
4. The capital improvement program called for all improvements throughout the township within 18 years.

These facts convinced the court that Ramapo was not being exclusionary nor was it violating a landowner's constitutional rights to develop land. A dissenting opinion was based on 2 issues.

1. The enabling legislation for zoning did not provide for such a staging policy.
2. The issues at hand were regional and should not be controlled by "idiosyncratic municipal action."

The most recent court decisions concerning a community's right to reduce its rate of growth based on the provision of adequate public facilities is to be found in the *Petaluma* case [375 F.Supp. 574 (1974)] (12). The city of Petaluma had adopted a special ordinance in 1972 that called for an allocation of no more than approximately 500 units/year for the period 1973 to 1977. The court decision stated clearly that the city does not have the right to control the rate of growth such that it is less than that for the entire region.

By limiting its public facilities, the city intended to serve a population lower than the market and demographic growth rates would produce, to restrict the travel of new residents into Petaluma, and consequently to limit the number of housing units that might be constructed. . . . It is appropriate to measure the potential effects that the exclusion practiced by Petaluma would have if it proliferated throughout the region itself.

The court stated that when there is interference with a fundamental constitutional right, such as the right to travel, then the test to determine whether the governmental interference can be sustained is: Can a compelling state interest be shown and are there no feasible alternatives to accomplish the same governmental objectives with less damage to the fundamental right concerned? Also, the governmental interference

must be within the public welfare. The District Court found that the city of Petaluma failed to sustain this burden of proof. The courts also agreed with the plaintiff's contention that

the question of where a person should live is one within the exclusive realm of that individual's prerogative, not within the decision-making power of any governmental unit. . . . It is contended that the city has violated the people's right to travel.

Therefore, the ordinance was determined to be exclusionary.

The decisions in the Easttown and Petaluma cases clearly show that a municipal policy restricting growth simply because the municipality does not want to grow at a faster rate or because such a growth rate places too great a financial burden on the municipality is unconstitutional. Such reasons do not reflect compelling state interests.

In July 1974, Justice Douglas of the U. S. Supreme Court temporarily reinstated the ordinance at the request of the city of Petaluma pending the city's appeal to the Court of Appeals.

Although the Petaluma case did not rest on issues concerned with the adequacy of roads, an inference can be drawn to support the hypothesis that road capacity can be used to control land use. To override an individual's right to reside in any municipality, a compelling state interest must be proved. In the case of suburban roads, capacity could be limited on environmental grounds. Such a limitation would mean that a government could never provide a road with an acceptable level of service to meet the demands from a proposed, more intensive land use. Considering that environmental considerations could well be classified as a compelling state interest, road capacity could be as effective as sewer connections in controlling land use.

The finding that road capacity is a tool for land use control in suburban areas is important to those concerned with implementing a growth-control policy. Among those concerned are municipal governments, planning commissions, planning staffs, citizens associations, and others representing the general public. It would be important to the highway and road planners if their jurisdiction is extended to land use considerations.

IMPLICATIONS FOR SOUTH LAUREL-MONTPELIER, MARYLAND

South Laurel-Montpelier, Maryland, is an unincorporated planning area of 7 mile² (18.2 km²) in Prince Georges County. It is located in the Baltimore-Washington, D. C., corridor and is approximately equidistant from the 2 cities. Land use has changed dramatically in the past 14 years; population according to census reports has risen from 600 in 1960 to 13,500 in 1970. Current population is estimated by the Maryland National Capital Park and Planning Commission to be 23,000. Eighty percent of these people are housed in garden apartments. This growth has severely taxed public facilities such as parks, sewers, and roads and has produced an educational facility crisis every 2 to 3 years. The circulation system is characterized by a once-rural highway (US-197) running approximately north and south through the planning area with roads leading to subdivisions at approximately 0.5- to 0.75-mile (0.8- to 1.2-km) intervals. The road links between subdivisions are as yet incomplete, which means that most automobile trips are made on the highway. The planning area has a most active citizens' association that assumes its jurisdiction to be the boundaries of the planning area. The Oaklands Citizens Association promoted the development of a comprehensive plan (1) that was adopted by the Prince Georges County Council in 1971. In its analysis of transportation in relation to land use the comprehensive plan shows that the road facilities, even when complete, are inadequate for the projected development according to the existent zoning. The plan therefore recommends the down zoning of selected tracts that are yet to be developed.

Road capacity and its consequent environmental concerns and sewage capacity and its consequent solid waste disposal problem are the principal arguments in support of the

down zoning called for in the comprehensive plan. (Down zoning in this paper means zoning to a more restrictive use, such as lower density residential.) Down zoning will be attempted, and a precedent-setting legal case for the county could well be fought in South Laurel-Montpelier. The question is: Can a maximum limit placed on the provision of public facilities, specifically roads, be used effectively to control growth in a suburban area?

The "main street" of South Laurel-Montpelier is Md-197 and is scheduled for widening to 4 lanes. The Maryland Highway Administration is conducting an air-quality assessment. In addition, the state probably will develop an environmental impact statement. The Oaklands Citizen Association has opposed the road widening on social and environmental grounds (13). The road widening likely will be denied, for, in addition to adverse environmental impacts, there is an intrusion on a nationally registered historic site.

If the road widening is denied, substantial increases in the vehicle capacity of the road no longer would be possible. This limitation on road capacity could then be used together with the decision for the Ramapo case to defend the down zoning of parcels during the comprehensive section map amendment process or could be used to justify the denial of new up zoning (zoning to a more intensive land use). Litigation would be required to determine whether environmental and social concerns, reflected in a maximum allowable road capacity, represent a compelling state interest and one in the interest of the general public welfare sufficient to restrict the constitutional rights of individuals.

CONCLUSIONS

Seven conclusions can be made.

1. Limited-access roads are known to induce certain types of development around interchanges. In rural areas, typical uses are service stations; in urban areas, typical uses are industrial and commercial.

2. Initially, the first roads in a region will induce low-intensity land use development. Subsequent development appears to occur independent of road capacity.

3. Suburban development will occur regardless of access road capacity unless it is inhibited by enforced subdivision regulations with an adequate public facilities ordinance.

4. Development can be delayed but not stopped under certain conditions because of inadequate public facilities. The Ramapo case has shown that these conditions should include a comprehensive plan, a zoning ordinance based on the plan, a capital improvement plan with a good record for implementation, and a time limit for providing public facilities such as roads.

5. Restricting rate of growth without impinging on the constitutional rights of individuals to travel and settle where they wish is difficult. To overcome this constitutional right, there must be present compelling government interest and concern for the general public welfare.

6. There is evidence from the Ramapo and Petaluma cases that the court would accept a municipality's policy to control growth if a compelling government interest is proved. In these cases, regional concerns were given heavy weight in the assenting and dissenting arguments. Environmental concerns are often regional, particularly those relating to air quality. It can be argued that today they represent a compelling government interest. Because of such concerns, plans for new roads and upgrading the capacity of existing roads could be denied. Such denials could make access-road capacity inadequate for a proposed new land development. Application of current requirements in adequate public facilities ordinances would require denial of the proposed development.

7. The implication for South Laurel-Montpelier is that failing to widen Md-197 would result in a strong argument to slow down and limit further development. There are strong indications that the constitutionality of a limited growth policy based on environmental grounds would be upheld by the courts.

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