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Environmental Limitations & their impact on O & G

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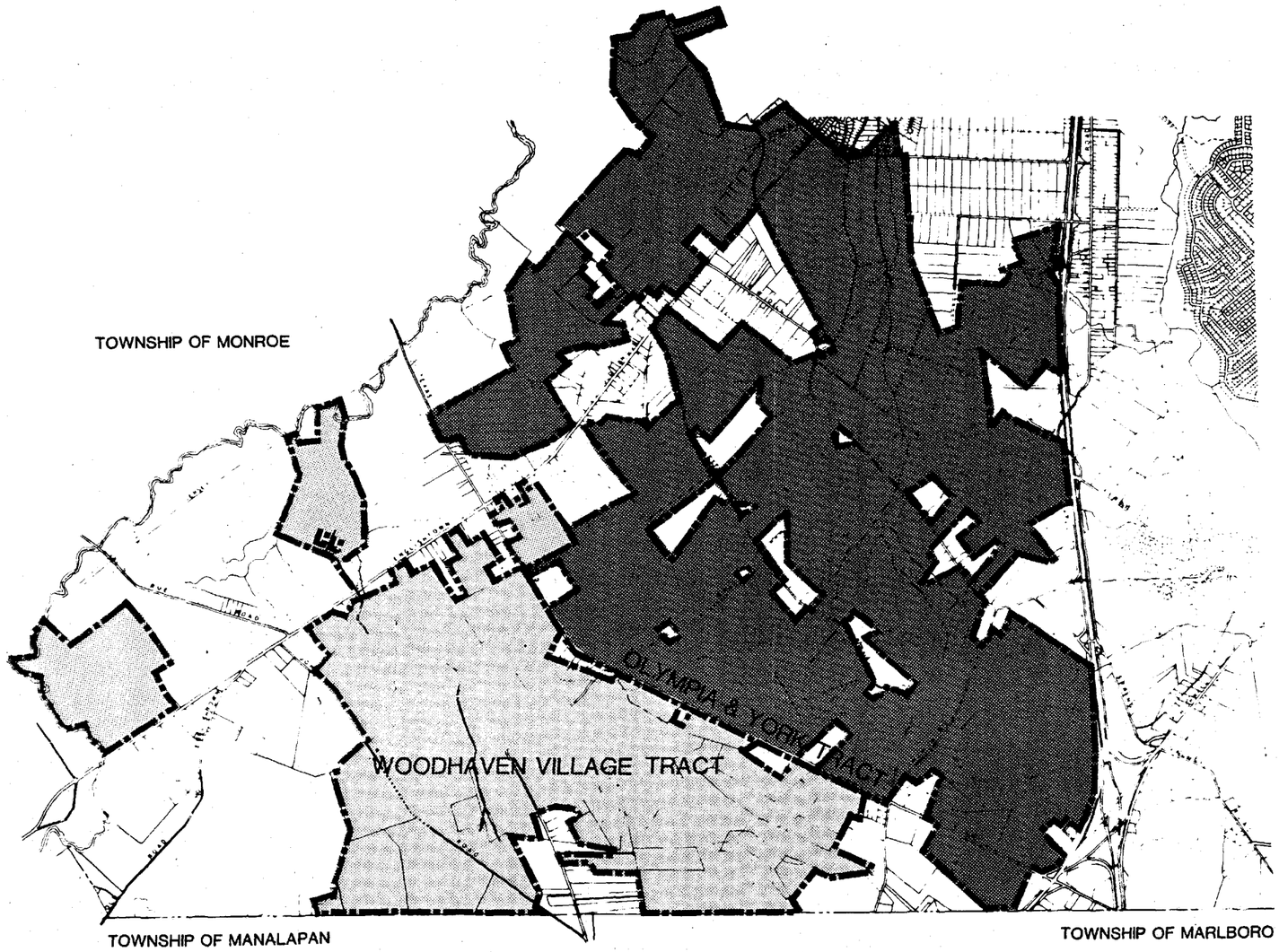


A Portion of:

OLD BRIDGE TOWNSHIP

Middlesex County, N.J.

1 Acre
16 Acre Grid

0 500 1000 2000 4000
One Inch Equals One Thousand Feet

HINTZ / NELESSEN ASSOCIATES, P.C.
Pennington, N.J.

March 1987
May 1987

Property Boundaries for Olympia and York, and Woodhaven Villages.

LAND HOLDINGS

SOURCE: Old Bridge Township Tax Maps

proposed, and which, in fact, severely constrain any development. First and foremost, the existence of wetlands on large portions of both sites clearly presents a major environmental limitation. In addition, the occurrence of areas of very high seasonal water table (Ø-1 feet from surface), as well as stream corridors presenting flood hazard potential, further constrains development potential. When combined, these three inter-related environmental constraints clearly indicate the need to reassess the projects as a whole. In addition, the sites' topography was examined, and the absence of slope presents an additional constraint.

This report will show that once these environmental constraints are considered to their full extent these projects should no longer be considered feasible new towns/planned unit developments, given both physical limitations to their lay-outs and economic limitations. It will also show that the conditions of the court settlement between the developers and the township are no longer feasible.

The environmental features considered as major obstacles, both individually and combined, are briefly discussed in Section 2. Section 3 explores concisely the implications of these constraints from a land use planning and design point of view. Finally, Section 4 explains why the conditions set forth in the court settlement can no longer be considered feasible.

This report does not bring new information to the fore in the form of original field work or site analysis, but rather builds on the existing descriptions of the sites' environmental features -- as set forth in reports provided by O&Y and WHV -- and explores their planning and land use/design consequences. It should be pointed out, however, that the most thorough and reliable sources on the sites' environmental problems have only become available <u>after</u> the court settlement, and after public hearings before the Old Bridge Planning Board. It is undisputed, therefore, that these environmental concerns were not considered in the court settlement. Reassessing the proposed developments in the light of this new evidence is, consequently, the object of this report.

2. ENVIRONMENTAL LIMITATIONS

2.1. Wetlands

Wetlands have a well recognized environmental value and serve a number of important functions, including natural flood control, improving water quality, and providing essential breeding, spawning, nesting and wintering habitats for fish and wildlife.

The importance which increasingly is attached to wetland preservation has been translated into protective legislation at all levels of government. At the national level, protection of wetlands is ensured by virtue of the Federal Clean Water Act, which has been tested and upheld in the U.S. Supreme Court. In New Jersey, the proposed Freshwater Wetlands Act (Ogden bill A.2342) provides:

> "[...] freshwater wetlands play an integral role in maintaining the quality of life through material contributions to the water quality and supply of the State, its economy, food supply and fish and wildlife resources by [...] serving as a buffer zone between dry land and water courses."

Wetlands are generally defined as those areas with the following features: hydric soils, seasonal high water table at or near the surface (0-1 feet), and predominance of wetland vegetation (see US Army Corps of Engineers Wetland Delineation Manual Technical Report Y-84, Vicksburg, Mississipi, 1985).

The presence of wetlands at the township-wide scale has been confirmed through the US Fish and Wildlife Service's National Wetlands Inventory maps (1986). At the site-specific level, the major sources for confirmation used in this report are the Wetlands Delineation Report prepared by Amy Greene Environmental Consultants for Olympia and York

Planned Development (1987); and two reports prepared by Psuty and Roman for the Old Bridge Township Planning Board, namely A Report on the Delineation of Wetlands in the Olympia and York Development Area (1986), and A Report on the Delineation of Wetlands in The Woodhaven Village Development Area (1986).

Although these studies are not in agreement as to the exact delineation of the areas of wetlands, it seems beyond doubt that substantial portions of both sites fall within wetlands designation, and that the portion of the site within wetlands designation is larger after in-field investigation has been carried out. Thus, O&Y's consultants (Amy Greene) have determined, after in-field verification, that the portion of their site in wetlands consists of approximately 1,450 acres, or 56% of the tract (see Wetlands for Olympia and York Tract map, page 7; also Development Plan map, Appendix). Final determination on the issue of delineation will be made by the US Army Corps of Engineers, which has made two inspections of the O&Y site.

WHV's consultants (Dresdner Associates), on the other hand, have mapped approximately 504 acres of wetlands on their site, equivalent to only 35% of the tract (see Wetlands for Woodhaven Village Tract map, page 8). It should be noted that WHV has never applied to the US Army Corps of Engineers for certification of this delineation of wetlands on its site; it should further be noted that Psuty and Norman's reports question the accuracy of the current WHV delineation. It is to be expected, therefore, that in-field verification of wetlands on the WHV site will show that the current delineation understates the actual extent of wetlands on the site.

There is, consequently, a greater certainty at present regarding the delineation of wetlands on the O&Y tract -- where field reconnaissance has been carried out -- than on the WHV tract. The current state of knowledge regarding wetlands on both sites is nevertheless sufficient to make the general point regarding the difficulties for their development. The approximate delineation of wetlands on the two sites, compiled from the information currently available, has been plotted on the Wetlands map (see page 9).

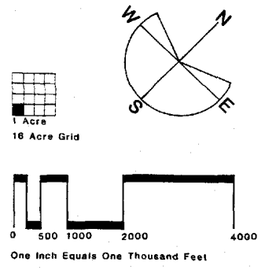
NATIONAL WETLANDS INVENTORY

FIELD VERIFICATION OF WETLANDS

A Portion of:

OLD BRIDGE TOWNSHIP

Middlesex County, N.J.



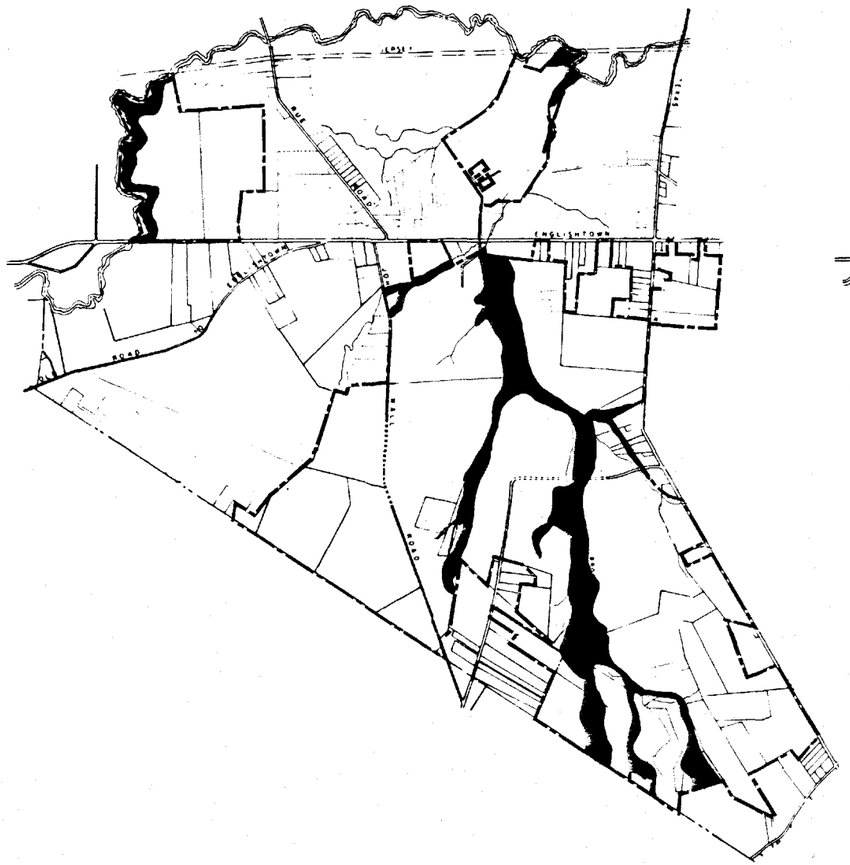
HINTZ / NELESSEN ASSOCIATES, P.C.
Pennington, N.J.

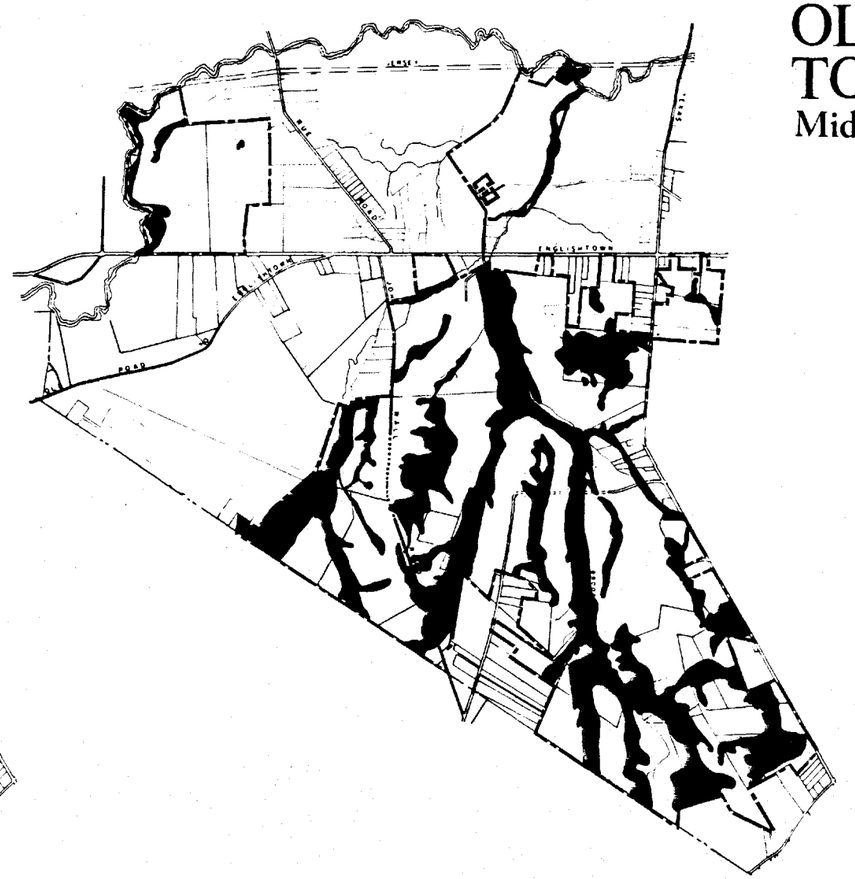
March 1987
May 1987

Property Boundaries for Olympia and York, and Woodhaven Villages.

WETLANDS FOR OLYMPIA & YORK TRACT

SOURCES: Sullivan Associates, P.C., Uplands Map, 1/29/87
Amy S. Greene, Environmental Consultant, Taylor Wiseman Taylor
Pauty and Romen
Base Map: Old Bridge Township Tax Maps





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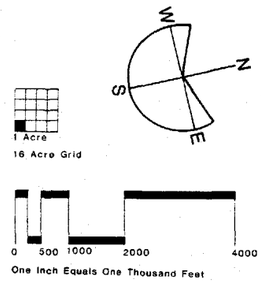
OLD BRIDGE TOWNSHIP

Middlesex County, N.J.



NATIONAL WETLANDS INVENTORY

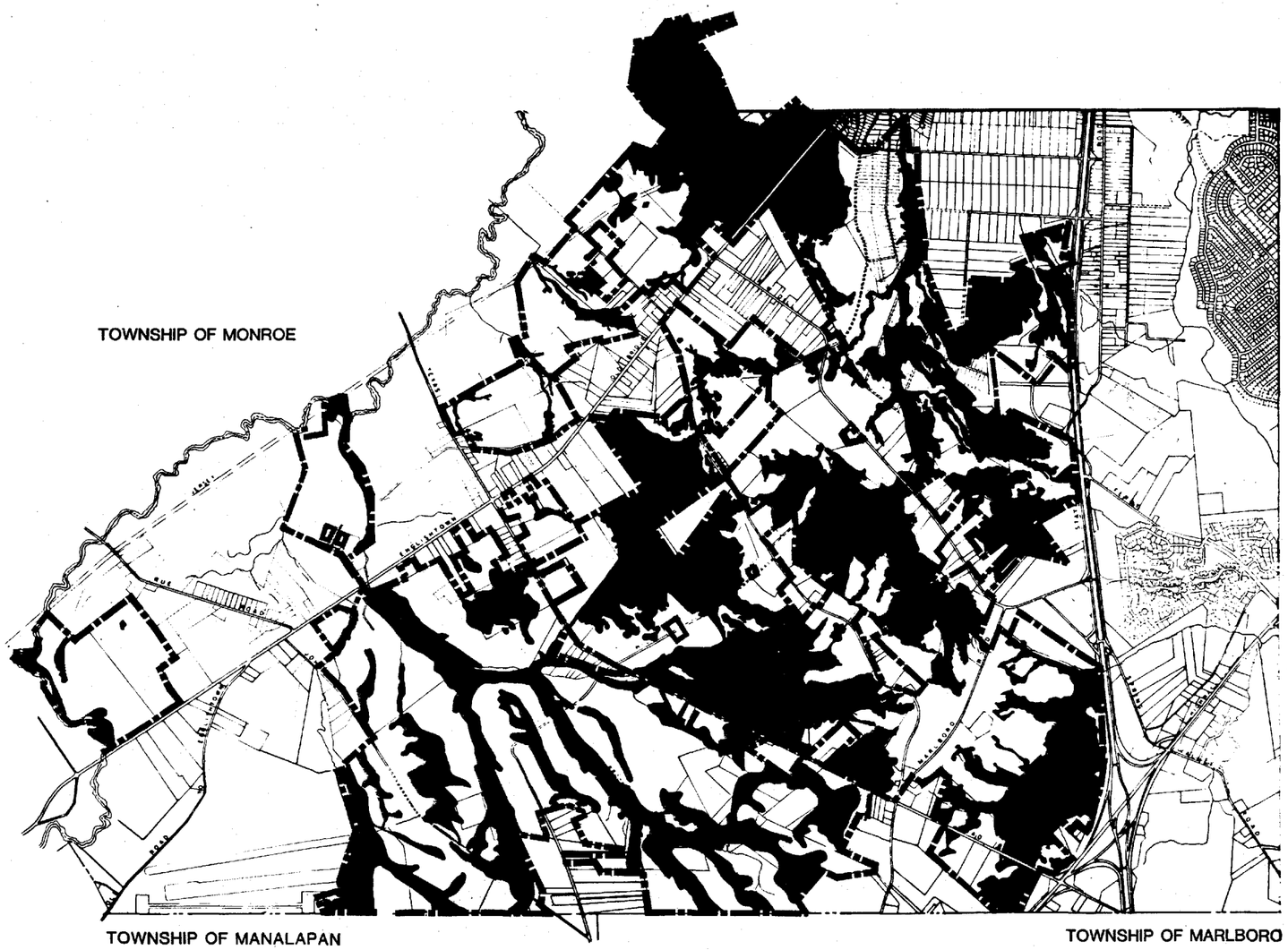
FIELD VERIFICATION OF WETLANDS

HINTZ / NELESSEN ASSOCIATES, P.C.
Pennington, N.J. May 1987

Property Boundaries for Olympia and York, and Woodhaven Villages.

WETLANDS FOR WOODHAVEN VILLAGE

SOURCE: Dresdner Associates
Carmel Engineering Group, 11/24/86
Base Map: Old Bridge Township Tax Maps



A Portion of:

OLD BRIDGE TOWNSHIP

Middlesex County, N.J.

1 Acre

16 Acre Grid

0 500 1000 2000 4000

One Inch Equals One Thousand Feet

Wetlands

HINTZ / NELESSEN ASSOCIATES, P.C.
Pennington, N.J.

March 1987
May 1987

Property Boundaries for Olympia and York, and Woodhaven Villages.

WETLANDS

All WETLANDS are subject to field verification.

SOURCES: Sullivan Associates, P.C., Uplands Map, 1/29/87
Amy S. Greene, Environmental Consultant.
Taylor Wiseman Taylor
Peuler and Roman
Dresdner Associates
Carmel Engineering Group, 11/24/87
Base Map: Old Bridge Township Tax Maps

Exact delineation, on the other hand, is not enough to protect wetlands from the impacts of potential future development -- buffers should also be considered, i.e. areas adjacent to freshwater wetlands which are either an integral component of the wetlands ecosystem or which are specifically meant to protect them from the adverse effects of adjacent development.

Buffers would be established in NJ under the proposed Freshwater Wetlands Act as "[..] 200 feet for office or commercial developments greater than 50,000 square feet in floor space, residential subdivisions or developments of more than 50 units, and linear development; and 100 feet for commercial or office developments of 50,000 square feet of floor space or less, and 51 feet in residential subdivisions or developments of more than one unit." This Act also states that "The actual buffer zone distance shall be delineated in such a way as to maximize the protection of freshwater wetlands [..]".

In NJ, a precedent for the protection of wetlands through buffers can be found in the Pinelands, where a 300 foot buffer is required unless the applicant can demonstrate that the proposed development will not result in a significant adverse impact on the wetlands (see NJ Pinelands Comprehensive Management Plan sections 6-107 and 6-114). Adverse impact is defined as follows:

1. An increase in surface water runoff discharging into a wetland;
2. A change in the normal seasonal flow patterns in the wetland;
3. An alteration of the water table in the wetland;
4. An increase in erosion resulting in increased sedimentation in the wetland;
5. A change in the natural chemistry of the ground or surface water in the wetland;
6. A loss of wetland habitat;
7. A reduction in wetland habitat diversity;
8. A change in wetlands species composition;
9. A significant disturbance of areas used by indigenous and migratory wildlife for breeding, nesting, or feeding.

2.2. Depth to Seasonal High Water Table

Depth to seasonal high water table measures the distance from the surface of the soil to the water table underneath, i.e., the level at which the soil is saturated or has excess water. This distance is expressed in feet from the surface, and although measurements are taken at several times during the year -- usually winter and summer readings -- it is the highest point in the season which is most relevant. In some places an upper, or perched, water table may be separated from a lower one by a dry zone of impervious clay or bedrock which prevents normal drainage.

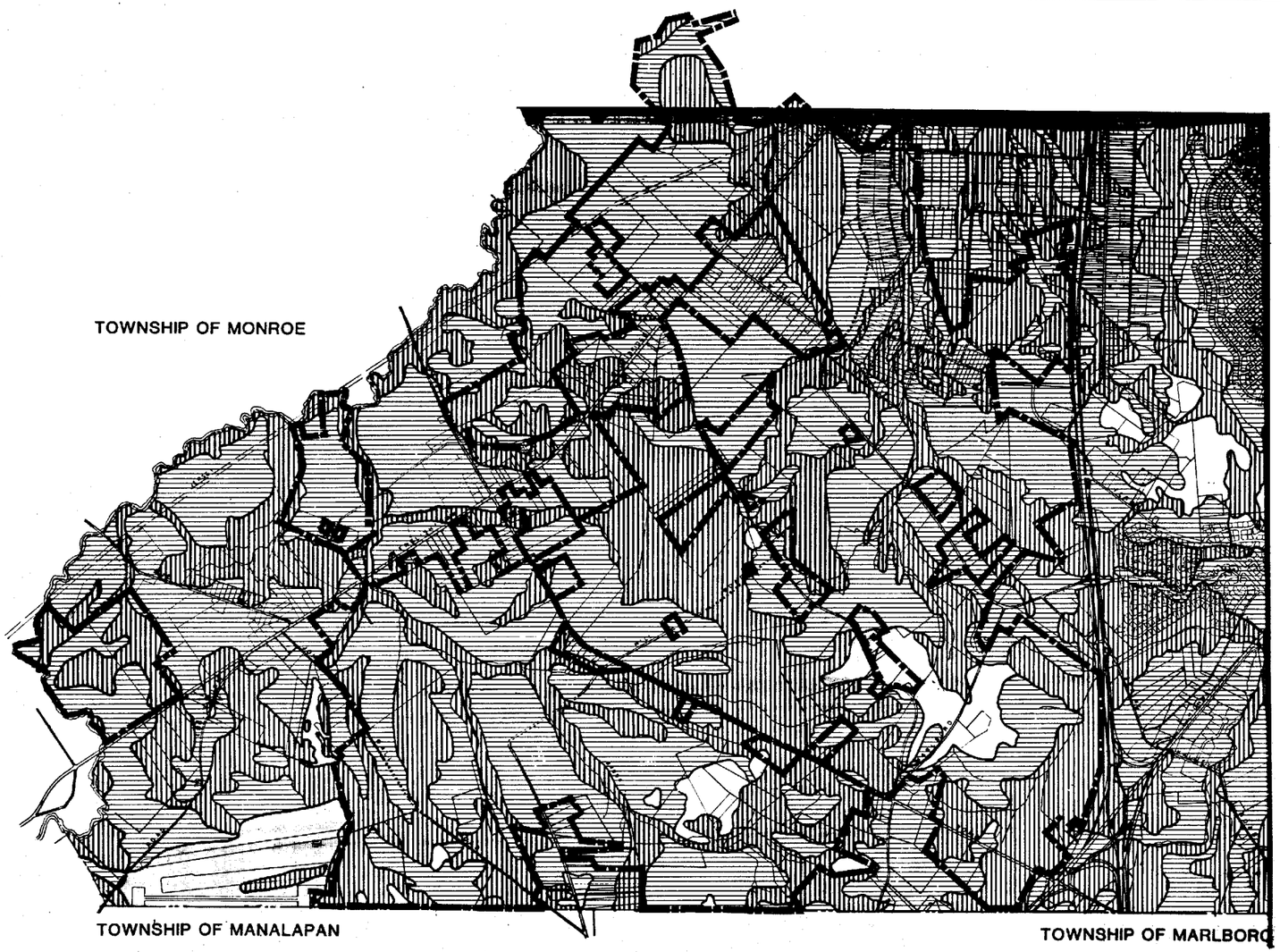
The following categories were used to map this feature for the two sites (see Depth to Seasonal High Water Table map, page 12):

Level of Constraint	Depth to Seasonal High Water Table
Severe	Ø-1'
Moderate	1-5'
Slight	5'+

Deep seasonal high water (5'+) presents the fewest restrictions to development. Adequate foundations can be built for all uses and septic fields are not affected.

Moderate depth to seasonal high water (1-5') presents some problems for development, due to increased building costs (deeper foundations, insulation) and danger of ground water pollution from septic tanks. Good design practice and execution coupled with higher building costs can overcome these limitations in most areas.

Shallow depth to seasonal high water (Ø-1') presents serious problems for development, imposing significantly higher building costs in foundations and basements (single-family housing is restricted to slab on grade), discouraging the use of septic tanks due to pollution and groundwater contamination hazards, and similarly increasing construction and maintenance costs of utilities (roads, parking lots, sidewalks, water and sewer systems). These areas are best suited for conservation, recreation,



A Portion of:

OLD BRIDGE TOWNSHIP

Middlesex County, N.J.

1 Acre
16 Acre Grid

N
W
E
S

0 500 1000 2000 4000
One Inch Equals One Thousand Feet

HINTZ / NELESSEN ASSOCIATES, P.C.
Pennington, N.J.

March 1987
May 1987

Property Boundaries for Olympia and York, and Woodhaven Villages.

Severe 0'-1'

Moderate 1'-5'

Slight 5'+

Undetermined
(Cut\Fill\Clay\Pits\Sanitary Landfill)

DEPTH TO SEASONAL HIGH WATER TABLE

All DEPTH to SEASONAL HIGH WATER TABLE information is subject to field verification.

SOURCE: Soil Survey for Middlesex County, New Jersey, March 1978
Base Map: Old Bridge Township Tax Maps

and natural preserves, although light construction can be undertaken within very specific guidelines and at low densities.

"Official" wetlands delineations do not include areas with a seasonal high water table of Ø-1 feet below the surface, although they function in close association with wetlands. A high seasonal water table is, by itself, typically classified as a critical environmental feature, consequently limiting development. When associated with wetlands, areas of high seasonal water table are best left as buffer zones.

When a comparison was made between the original wetlands delineation for the O&Y site, and the more recent delineation prepared by Amy Greene, the additional areas of wetlands revealed by on-site analysis appear to be closely associated with areas of Ø-1 foot seasonal high water table (compare maps on pages 7 and 12). WHV's in-field delineation has not been independently verified, but the seasonal high water table mapping should be considered carefully since the results experienced by O&Y are also likely to occur on WHV lands (compare maps on pages 8 and 12). Thus, assuming that areas of seasonal high water table can be very indicative of wetlands, and considering the directly adjacent O&Y site as a precedent, it would appear that the WHV site will in fact contain more than the 3Ø percent of wetlands as delineated by their consultant.

2.3 Flood Hazard

"Flood hazard" is a measurement of the danger or probability of flooding. This can result from the overflowing of a waterbody onto adjacent land, but can also occur as the result of a rise in the water table, so that land becomes soaked at the subsurface level. Flood hazard is generally applied to areas known as flood plains, i.e. the level or nearly level areas on either side of a waterbody created by successive and cyclical inundation and erosion.

For purposes of measuring flood hazard, 100-year and 500-year floodplains are normally defined, that is, the extent of flooding due to the most severe storm occurring once in every 100 years, or once in every 500 years. The flood plain is composed of three areas: The stream channel, which is the normal stream bed and contains normal flows; the floodway, which is the area on either side of the stream which must be kept free of obstruction in order to contain flood flows; and the flood fringe, which can be filled under limited circumstances. The Soil Conservation Service of the USDA classifies flood hazard by frequency of flooding, ranging from never to several times a year.

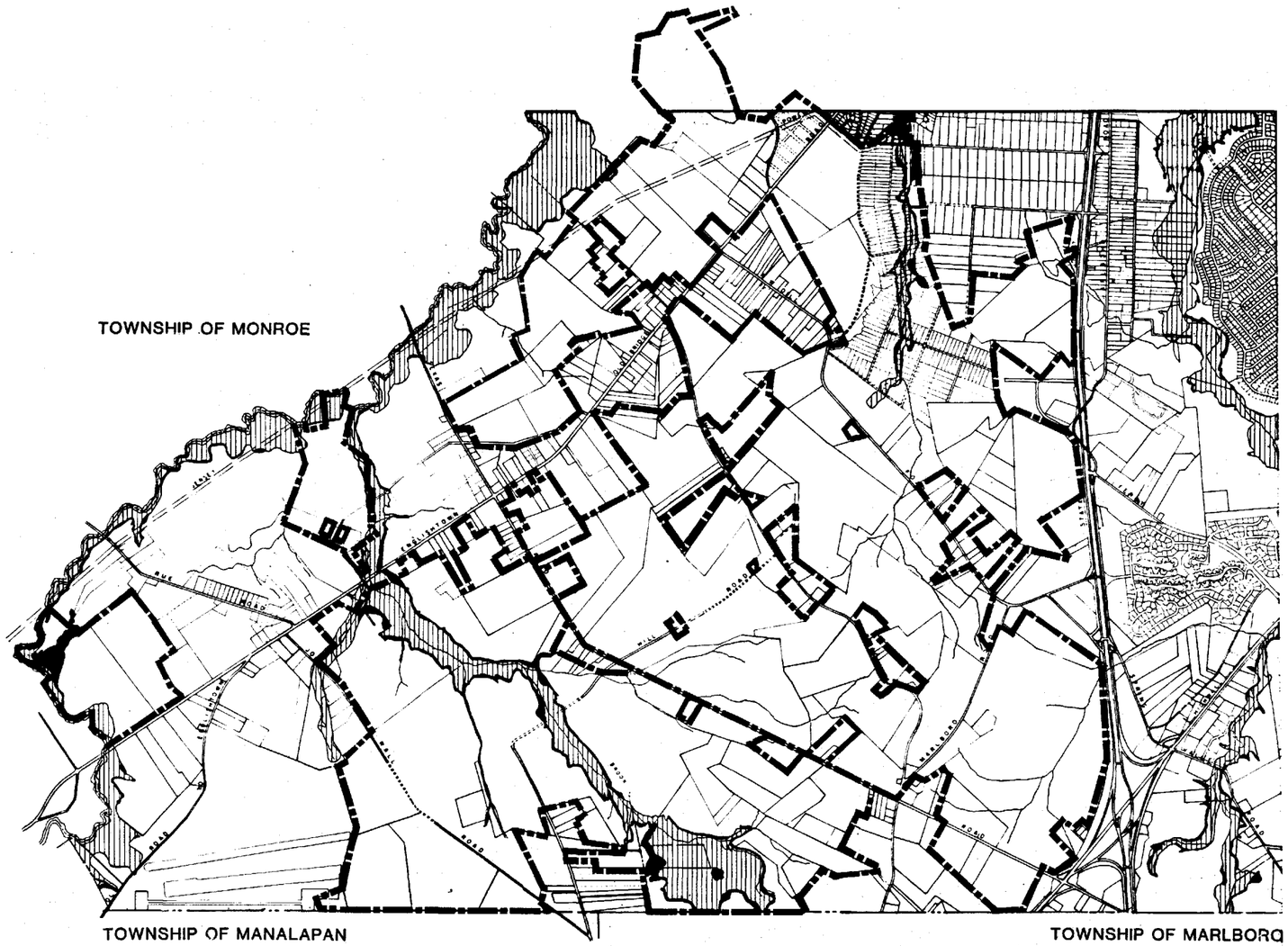
The stream corridors traversing the two sites were mapped (see Floodplains map, on page 15, based on National Flood Insurance data). Both 100-year and 500-year floodplains were plotted.

2.4 Slope

Slope measures the relative elevation over a given linear distance; it is expressed as a percentage (rise/run), a slope of 5 percent meaning that the ground rises 5 feet over a 100 foot distance. Slope can raise problems to development both if it does not exist (level ground) or if it exists in excess. Level ground may have flooding problems due to inadequate runoff, as well as making gravity flows in public utility lines more problematic. Areas of high slope raise problems to construction in general (higher foundation costs, pumping requirements).

The following categories were used in Old Bridge's Environmental Resource Inventory to map slope:

Severe	16+%
Moderate-severe	0-2%
Moderate	6-15%
Slight	3-5%



A Portion of:

OLD BRIDGE TOWNSHIP

Middlesex County, N.J.

1 Acre
16 Acre Grid

0 500 1000 2000 4000
One Inch Equals One Thousand Feet

100 Year Flood Boundary and Floodway

500 Year Flood Boundary

HINTZ / NELESSEN ASSOCIATES, P.C.
Pennington, N.J.

March 1987
May 1987

Property Boundaries for Olympia and York, and Woodhaven Villages.

FLOOD PLAINS

All FLOODPLAINS are subject to field verification.

SOURCE: Floodway Map, Old Bridge Township, National Flood Insurance Program
Base Map: Old Bridge Township Tax Maps

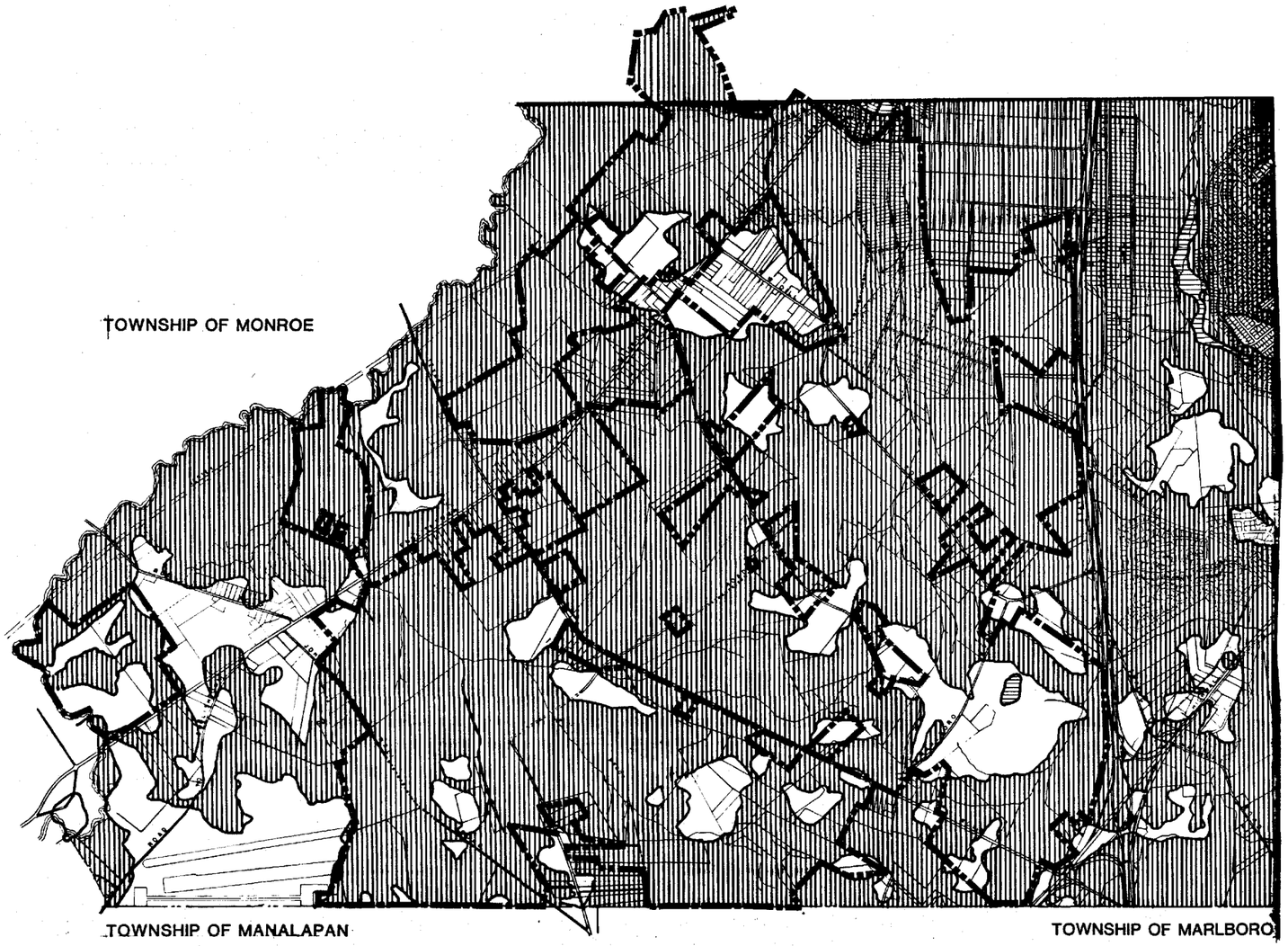
Slopes in the 0-2 percent category drain poorly, and special engineering and grading are required to overcome this limitation. Development costs increase with pumping requirements in sewer lines. Slopes in the 3-5 percent group present no restrictions for development. Moderate slopes (6-15 percent) raise construction costs, the possibility of erosion, difficulties in applying septic tanks, and greater flood hazard, but careful design and construction can take advantage of the topography and overcome these difficulties. Slopes over 16 percent present more serious development problems.

The major slope categories for the sites were plotted following contour line information from USGS Topographic Maps (See Slope map, page 17). It was found that large portions of both sites are nearly flat, therefore falling in the "moderate-severe" category of constraints.

2.5 Conclusions

The spatial distribution of environmental constraints within potentially developable properties is an important consideration in new town planning and design. If all of the environmentally sensitive lands are found in a corner of the land holdings, or located in such a way as to leave unaffected areas free for the planning of distinct villages or other nuclei, then these constraints can more easily be overcome. However, this is not the pattern which emerges for the sites under review, as can be seen depicted on the Developable Land map on page 20.

In the previous sections, three major environmental constraints were shown to be at work on these sites, namely the presence of wetlands, of flood hazard areas, and of areas with a seasonal high water table at or near the surface (0-1'). Although the existing sources do not permit the exact mapping of each of these constraints -- which can only be overcome through extensive field checks -- an approximate delineation can be traced, which can be considered sufficiently accurate for the purposes at hand.



A Portion of:

OLD BRIDGE TOWNSHIP

Middlesex County, N.J.

1 Acre
16 Acre Grid

0 500 1000 2000 4000

One Inch Equals One Thousand Feet

Severe / Moderate

Moderate

Slight

HINTZ / NELESSEN ASSOCIATES, P.C.
Pennington, N.J.

March 1987
May 1987

Property Boundaries for Olympia and York, and Woodhaven Villages.

SLOPE

All SLOPES are subject to field verification.

SOURCE: U.S.G.S. Topographic Maps
Base Map: Old Bridge Township Tax Maps

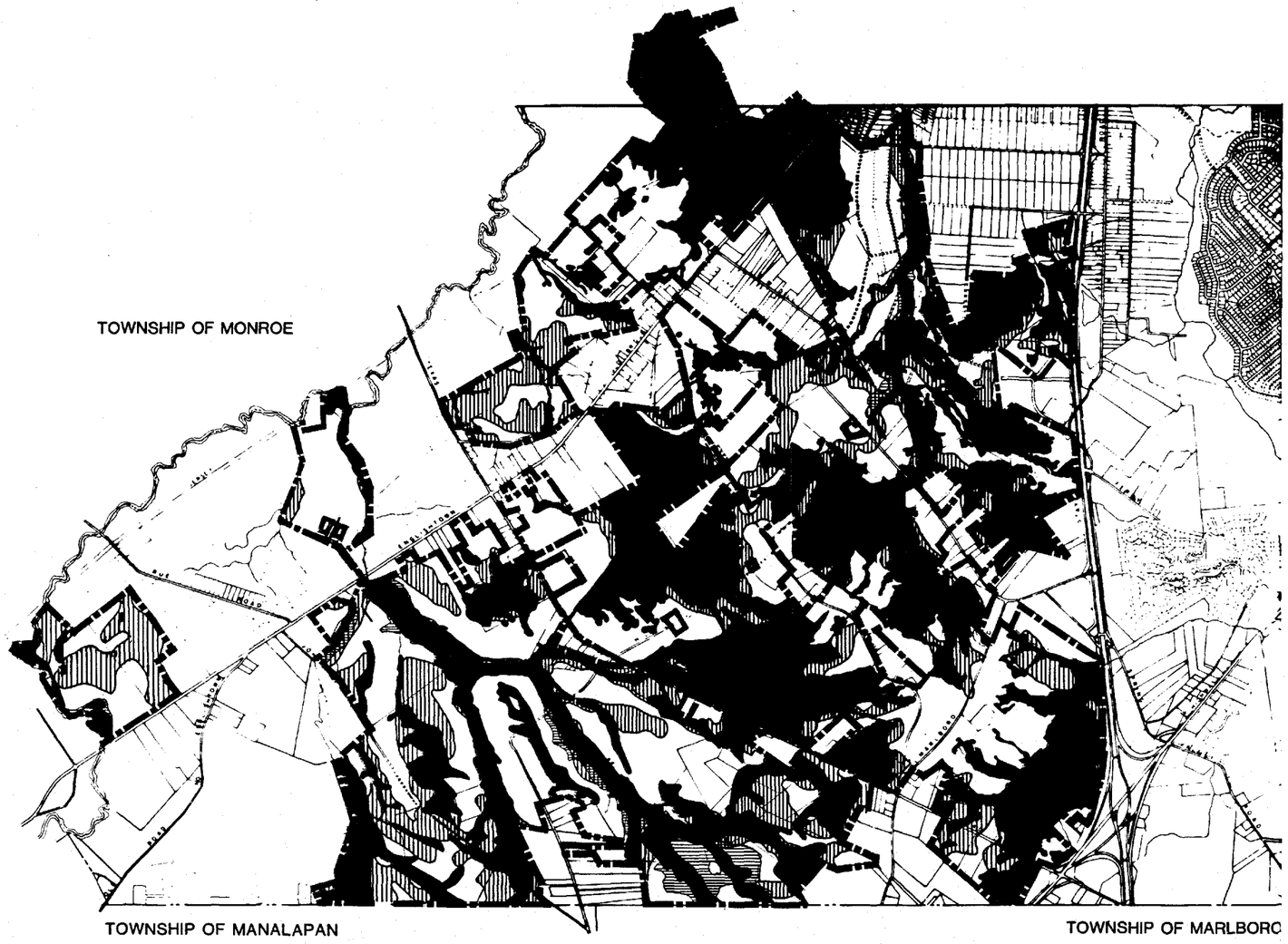
A map was thus prepared, blocking out the areas affected by any one of the three constraints mentioned above (or combinations thereof), and highlighting the remaining parcels of developable land, i.e. land unaffected by the more severe environmental limitations -- see Non-developable Land map, page 19. These parcels were in turn measured (see Tables 2 and 3 in Appendix).

It was found that, for the O&Y holdings, only about 784 acres are free from these constraints. This area is highly fragmented, with an average parcel consisting of approximately 15.7 acres. The largest parcel was found to contain approximately 144 acres. Similarly, for the WHV holdings, it was found that only about 587 acres were free from these environmental constraints. Again, this area consists of many parcels, forming a highly fragmented pattern, with an average parcel size consisting of approximately 17.3 acres, and the largest parcel containing 106 acres (see Appendix and Developable Land map, page 20).

Altogether, it was found that only about 30 percent of the O&Y site, and 40 percent of the WHV site, are free from these environmental constraints and that, far from constituting contiguous tracts of land, they represent a scattering of small parcels surrounded by environmentally sensitive lands.

In addition, it was found that large portions of the sites, including considerable portions of the areas unaffected by the three environmental constraints mentioned above, were nearly flat, i.e. fell into the slope category of 0-2 percent. This implies that development of these unaffected parcels will not be able to rely on gravity flows in the sewer system, therefore raising development costs substantially.

The combination of these four features -- flat land, traversed by stream corridors, with high seasonal water table, and abundant wetlands -- portrays an environmentally sensitive land, inadequate for any type of intensive, large scale development such as proposed by O&Y and WHV.



A Portion of:

OLD BRIDGE TOWNSHIP

Middlesex County, N.J.

1 Acre

16 Acre Grid

0 500 1000 2000 4000

One Inch Equals One Thousand Feet

HINTZ / NELESSEN ASSOCIATES, P.C.
Pennington, N.J.

March 1987
May 1987

Wetlands

Depth to Seasonal High Water Table (Severe)

100 Year Flood Boundary

Property Boundaries for Olympia and York, and Woodhaven Villages.

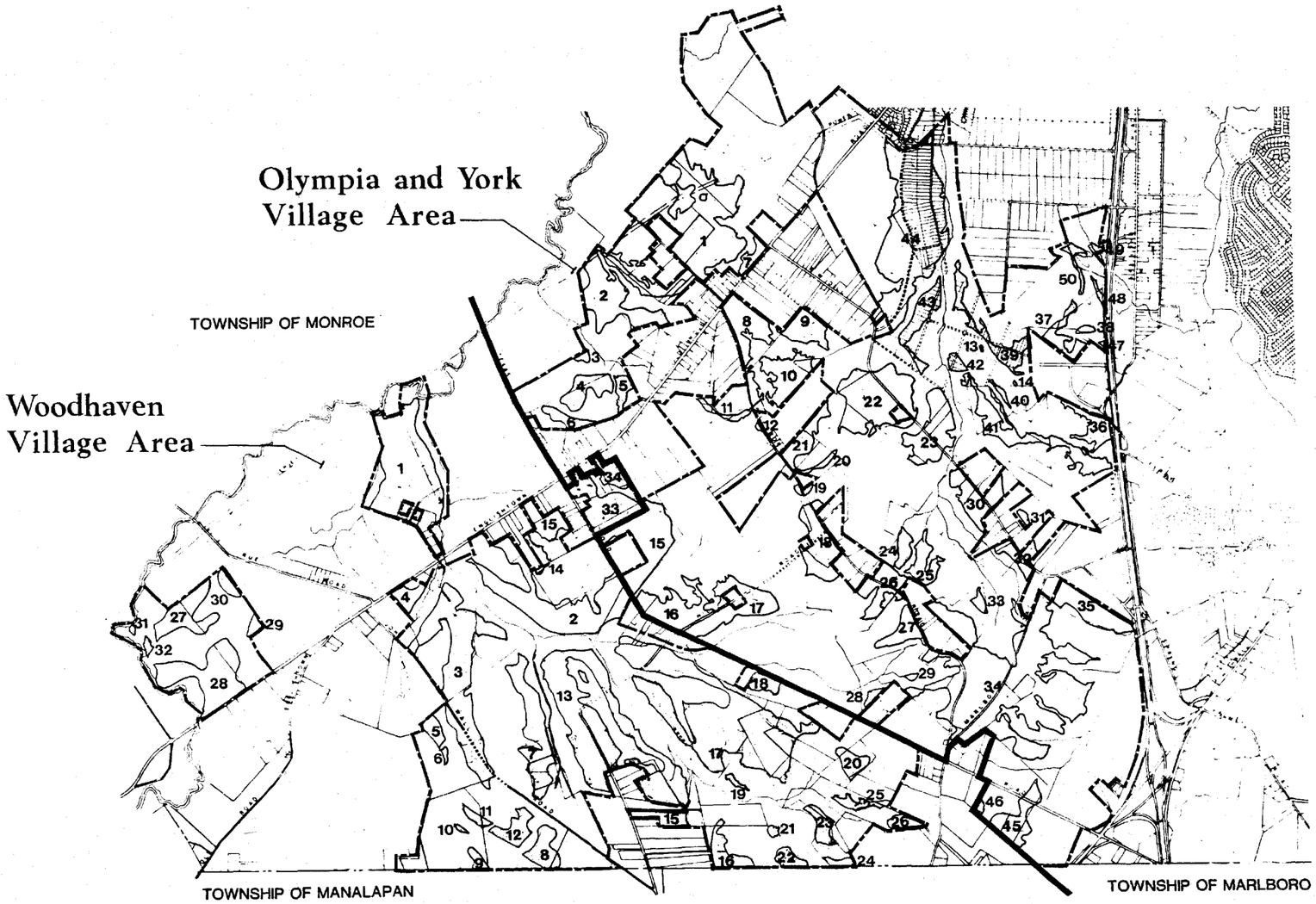
NON-DEVELOPABLE LANDS

SOURCES: Wetlands Map
Depth to Seasonal High Water Table Map
Floodplains Map
Base Map: Old Bridge Township Tax Maps

A Portion of:

OLD BRIDGE TOWNSHIP

Middlesex County, N.J.



00 **Developable Land***

(refer to Tables 2 and 3 in Appendix)

1 Acre

16 Acre Grid

0 500 1000 2000 4000

One Inch Equals One Thousand Feet

HINTZ / NELESSEN ASSOCIATES, P.C.

Pennington, N.J.

March 1987
May 1987

Property Boundaries for Olympia and York, and Woodhaven Villages.

DEVELOPABLE LAND

* Net of Wetlands, Seasonal High Water (0-1') and Floodplains

SOURCES: see Wetlands map; Depth to Seasonal High Water Map; Floodways map

3. ENVIRONMENTAL LIMITATIONS AND THEIR IMPACT ON PROJECT LAY-OUT AND DESIGN

Once the environmentally sensitive lands are removed from the realm of potential development, the remaining tracts constitute a pattern of dispersed and isolated parcels of varying sizes and configurations. This disjointed pattern presents substantial difficulties in terms of an adequate lay-out for development (see Developable Land map, page 20).

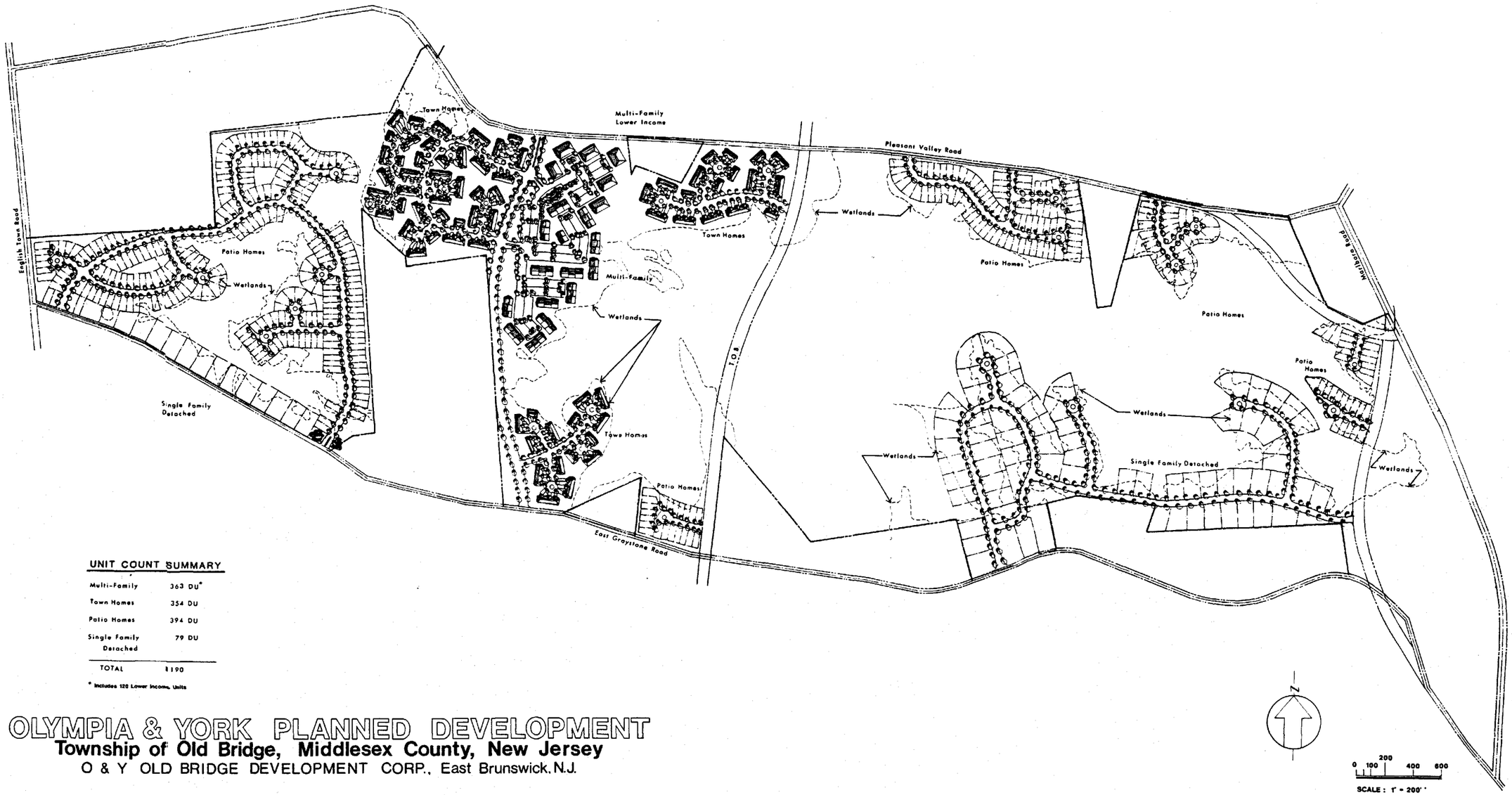
Compact shape, preferably square or rectangular, allows for the most efficient site lay-out and design. Sites which have highly irregular shapes are less efficient because of setbacks and internal site circulation requirements. However, the majority of the remaining developable parcels have an average width no greater than 1,500 feet, and can only be accessed with new roads by crossing wetlands. Further, these parcels are not in large relatively square or rectangular shapes, but are very elongated and of irregular shapes. If these tracts are developed, their shape will entail a linear plan of development, with services, community facilities, etc., out of walking distance. Because these tracts are scattered, their development will result in sprawl, failing to create neighborhood character, and ultimately placing a large burden on the municipality in terms of their maintenance.

A new town/planned unit development's viability depends upon the planning of reasonably sized neighborhoods. In projects of significant size, it is an important design concept (for social, transportation and physical considerations) to develop neighborhoods which are interrelated amongst themselves as well as to the non-residential components. Normally, a neighborhood of 500+ units is considered the minimum size. However, with the pattern of scattered holdings now emerging, it is not possible to design self-contained neighborhoods.

The planners for O&Y, Sullivan Associates, have submitted a "conceptual layout for a typical neighborhood" net of the redelineated wetlands (see reproduction on page 23). This sketch map illustrates these points clearly, revealing the sprawled pattern of development which results from a design that is guided primarily by the need to avoid wetlands and other environmentally sensitive areas, in detriment of all other planning criteria. In addition, this sketch map does not indicate any commercial space, community facilities, active recreation, etc., suggesting that the new development profile would consist exclusively of housing at high net densities. This completely alters the terms of the court settlement, and is unacceptable to Old Bridge Township.

Another key element in a new town/planned unit development's success lies in the ways in which open space is allocated for specific uses, and how it organizes and separates different land uses within the development. Normally, usable open space for active/passive recreation constitutes 25 percent of a planned community's total area. However, in O&Y and WHV's current submissions, active recreational areas are not shown, and passive recreational areas follow a lay-out which is set in an arbitrary manner, situated only where wetlands exist. If the recreational areas were <u>not</u> located on environmentally sensitive land, this would further reduce the land available for development.

New town/planned unit developments can generate considerable savings in the construction and maintenance of roads and utilities, as well as in other services. However, when the developable lands are dispersed and surrounded by environmentally sensitive ones, these advantages become dubious, since accessing isolated developable parcels through a new road network requires traversing wetlands and other critical areas, further fragmenting the landscape. The ability to cross wetlands in a reasonable way with roads and utilities becomes a critical consideration.



UNIT COUNT SUMMARY

Multi-Family	363 DU*
Town Homes	354 DU
Patio Homes	394 DU
Single Family Detached	79 DU
TOTAL	1190

* Includes 120 Lower Income Units

OLYMPIA & YORK PLANNED DEVELOPMENT

Township of Old Bridge, Middlesex County, New Jersey

O & Y OLD BRIDGE DEVELOPMENT CORP., East Brunswick, N.J.

SITE DEVELOPMENT PLAN

The Army Corps of Engineers can allow crossings, after review, and in certain instances. Permission will depend on the length and frequency of such crossings. Pilings can be used to minimize disruptions caused by crossings, but of course this technique increases the costs substantially. It is extremely doubtful, for example, if the Trans-Old Bridge Turnpike, as projected, remains feasible, given the number of crossings it would imply.

The lay-out presented as part of the court settlement showed a new town with an internal road system which would carry most of the additional traffic generated by the development. However, a pattern of scattered holdings entails necessarily a substantial reduction in this internal road network, (with only collector roads, not arterials, being built -- see "conceptual lay-out of typical neighborhood" on page 23), and consequently internal transportation, as well as sub-regional and regional transportation linkages, become highly questionable. Most, if not all, additional traffic will be loaded onto the existing rural road system -- Old Bridge Englishtown Road, East Greystone Road, Texas Road, Pleasant Valley Road, Marlboro Road and Hawkins Road -- which is totally inadequate for the type of traffic which would be generated. Furthermore, substantial improvements to this rural road network can not be carried out by the developers because they do not own the necessary land. The township or county's ability to service such developments would also become doubtful, for it would be extremely expensive, therefore straining municipal services.

As referred to previously, low lying areas with minimal slopes can not take advantage of gravity flows in sewage disposal. Generally, a 1.5 to 2 percent grade is desirable for this type of service. If the terrain is flat, pumping stations are required to transport solids to treatment facilities. In such areas unified development is preferable. The practice of constructing numerous facilities designed to serve only their immediate area is less desirable than a few larger facilities designed to cover greater service areas. A system of scattered pumping stations indicates a lack of coordinated planning.

Scattered development also increases the cost of solid waste collection, placing a continuous undue financial burden on the community.

Piecemeal development runs contrary to the most basic principles of a planned unit development. Without a form of development evolving around a group of neighborhoods of 500 to 1,000 units, there can be no integration of shopping, cultural and community services. School children will have to be bussed to school, since sidewalks cannot be laid through wetlands and schools will not be within walking distance from housing. It is ultimately the township which must, after the developers have left, assume the burden of providing emergency services as well as maintaining projects that have been poorly designed.

4. ENVIRONMENTAL LIMITATIONS, PROJECT FEASIBILITY AND THE COURT SETTLEMENT

The "Mount Laurel" cases, decided by the NJ Supreme Court, have made it clear that, while housing for low and moderate income households is a major concern and goal, environmental concerns and sound planning principles can not be cast aside.

The first and most important statement to this effect was made by Justice Wilentz in So. Burlington County NAACP v. Mt. Laurel Township, 92 N.J. 158 (1983), as follows:

> "We hold that where a developer succeeds in Mt. Laurel litigation and proposes a project providing a substantial amount of lower income housing, a builder's remedy should be granted unless the municipality establishes that because of environmental or other substantial planning concerns, the plaintiff's proposed project is clearly contrary to sound land use planning. We emphasize that the builder's remedy should not be denied solely because the municipality prefers some other location for lower income housing, even if it is in fact a better site. Nor is it essential that considerable funds be invested or that the litigation be intensive." (p.279-280)

The effect of approving these two developments, which can no longer be considered as free-standing new communities, will be greater reliance on township facilities -- schools, employment centers, shopping, cultural facilities, etc., with the concurrent strain on the tax base.

From the point of view of Old Bridge Township, the most important points resulting from the court settlements with O&Y and WHV are as follows:

(a) A total of 1,638 Mt. Laurel housing units would be provided by O&Y (1,Ø56) and WHV (582), as well as 15Ø senior citizen housing units;

(b) O&Y would construct over six million gross square feet of office/retail and commercial/industrial space on two separate parcels; while WHV would construct an office/retail/commercial and/or industrial complex on a parcel of 73 acres;

(c) O&Y would construct a regional shopping center of up to 1,35Ø,ØØØ square feet on a parcel of 93 acres of land;

(d) O&Y and WHV would underwrite one half of the contruction costs for a pipeline which would provide 3Ø million gallons of water per day.

Once the environmental constraints to development are adequately considered, it seems clear that the terms of this settlement can not be adhered to, for reasons stated in the discussion presented in the previous section. Firstly, if the overall developable land area is substantially reduced, to 3Ø percent (O&Y) and 4Ø percent (WHV) of initial holdings, as seems inevitable, the overall number of housing units constructed will also necessarily drop, therefore reducing the possibility of providing Mt. Laurel housing. Obviously, the 1Ø% set-aside would have to be increased to 2Ø% for both projects, given the loss of units.

Secondly, every parcel on which the non-residential development would be located under the court settlement is severely affected by these environmental constraints, therefore eliminating or substantially reducing the non-residential component of the projects. This would leave these new communities without a focal point or employment center, and the township without these sources of revenue.

These losses in developable area are illustrated in Table 1 below.

Table 1

Settlement and Post-Settlement Acreages for O&Y and WHV

	OLYMPIA & YORK			
	Settlement (1)		Post-Settlement (2)	
	Acreage	Percent	Acreage	Percent
Total	2,640	100	2,640	100
Non-developable (3)	336	13	1,856	70
Developable	2,304	87	784	30
Residential	1,721	65	(a)	(a)
Commercial	441	17	(a)	(a)
Public Purpose & Undesignated Park land	50	2	(a)	(a)
Road Right-of-way	92	3	(a)	(a)

	WOODHAVEN VILLAGE			
	Settlement (1)		Post-Settlement (2)	
	Acreage	Percent	Acreage	Percent
Total	1,455	100	1,455	100
Non-Developable (3)	158	11	868	60
Developable	1,297	89	587	40
Residential	1,092	75	(a)	(a)
Commercial	73	5	(a)	(a)
Public Purpose & Undesignated Park Land	82	6	(a)	(a)
Road Right-of-way	50	3	(a)	(a)

Notes: (1) based on lay-outs submitted at time of settlement
(2) based on current delineation of wetlands on O&Y and WVH sites
(3) deducting wetlands, 0-1 seasonal high water and flood ways
(a) undetermined

These projects were intended to generate tax ratables for the township. This hardly seems possible now, given the small amount of land remaining (see Table 1), where every available acre must be allocated to residential uses. The result will be a further strain on the tax base of the township.

It is ironic that one of Old Bridge Township's major objectives in entering the court settlement with O&Y and WHV was the provision of cost effective development and the elimination of cost generating engineering. Yet, once the wetlands and other environmentally sensitive areas are more accurately mapped, it has become exceedingly clear that these proposed developments, as submitted, would be built in the least cost efficient way.

APPENDIX

The analysis of O&Y and WHV's landholdings, after the deduction of environmentally sensitive land (see Non-developable Land map, page 19), i.e. wetlands, flood ways, and areas of high seasonal water table (0-1 foot), is disaggregated in this Appendix into a list of all the remaining developable parcels. Thus, Table 2 presents the developable parcels in WHV's landholdings, while Table 3 presents the developable parcels in O&Y's landholdings. Each parcel has been numbered (see Developable Land map, page 20); its corresponding acreage has been estimated, rounded to the nearest acre; and accessibility to the existing road system is also shown.

Table 2: Developable parcels in WHV holdings

Parcel number	Area(a) (acres)	Accessibility to existing roads	Parcel number	Area(a) (acres)	Accessibility to existing roads
WHV 1	64	Y	WHV21	(c)	N
WHV 2	57	Y	WHV22	4	N
WHV 3	65	Y	WHV23	6	N
WHV 4	6	Y	WHV24	2	N
WHV 5	3	N	WHV25	5	Y(b)
WHV 6	(c)	N	WHV26	5	Y(b)
WHV 7	27	Y(b)	WHV27	16	Y(b)
WHV 8	10	Y(b)	WHV28	28	Y
WHV 9	2	N	WHV29	3	Y(b)
WHV10	(c)	Y	WHV30	4	Y(b)
WHV11	3	N	WHV31	1	Y(b)
WHV12	9	Y(b)	WHV32	1	Y(b)
WHV13	93	Y	WHV33	25	Y
WHV14	5	Y(b)	WHV34	5	Y
WHV15	11	Y			
WHV16	9	N			
WHV17	106	Y			
WHV18	5	Y			
WHV19	1	N			
WHV20	5	N			

Notes: (a) all areas rounded to nearest acre
(b) only through land with high seasonal water table
(c) less than 1 acre

Table 3: Developable parcels in O&Y holdings

Parcel number	Area(a) (acres)	Accessibility to existing roads	Parcel number	Area(a) (acres)	Accessibility to existing roads
O&Y 1	71	N	O&Y41	25	Y
O&Y 2	25	N	O&Y42	2	Y
O&Y 3	30	N	O&Y43	13	N
O&Y 4	12	N	O&Y44	75	N
O&Y 5	4	N	O&Y45	13	Y
O&Y 6	6	N	O&Y46	(c)	Y(b)
O&Y 7	5	Y	O&Y47	(c)	Y
O&Y 8	20	Y	O&Y48	3	Y
O&Y 9	13	N	O&Y49	(c)	N
O&Y10	18	N	O&Y50	4	N
O&Y11	3	Y			
O&Y12	(c)	Y			
O&Y13	(c)	N			
O&Y14	(c)	N			
O&Y15	28	Y			
O&Y16	43	Y			
O&Y17	(c)	Y			
O&Y18	20	Y			
O&Y19	2	Y			
O&Y20	2	Y			
O&Y21	12	Y			
O&Y22	40	Y			
O&Y23	23	Y			
O&Y24	6	N			
O&Y25	10	N			
O&Y26	14	Y			
O&Y27	8	Y			
O&Y28	2	N			
O&Y29	1	Y(b)			
O&Y30	16	Y			
O&Y31	(c)	N			
O&Y32	7	Y			
O&Y33	3	N			
O&Y34	144	Y			
O&Y35	6	N			
O&Y36	12	Y			
O&Y37	8	Y(b)			
O&Y38	1	Y(b)			
O&Y39	14	N			
O&Y40	20	N			

Notes: (a) all areas rounded to nearest acre
(b) only through land with high seasonal water table
(c) less than 1 acre

LEGEND

- IMPROVED ROADWAY
- PROPOSED NEW ROADWAY
- WETLANDS
- UPLAND DEVELOPMENT PARCELS
- ADDITIONAL UPLAND PARCELS
- ROAD RIGHT-OF-WAY
- OUT PARCELS

LAND USE SUMMARY

UPLAND DEVELOPMENT AREA	911.2 AC.
WETLAND AREA	1458.9 AC.
ADDITIONAL UPLAND AREA	229.4 AC.
TOTAL TRACT AREA	2599.5 AC.

SOURCES:

1. TOPOGRAPHY - Based on Aerial Photography, 12/13/78.
2. WETLANDS - Taylor Wiseman Taylor Wetlands Location Map, 3/25/87

DEVELOPMENT PLAN

Revisions

Date	Description	By

0m 100m 200m 300m 500meters
0 300' 600' 900' 1300' 1800' Feet

NORTH

1 hectare = 10 Acre Grid

Date: 4/6/87
Drawn by: PS,MB
Checked by: RS,MB
Drawing No.: LU-001

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OLYMPIA & YORK PLANNED DEVELOPMENT

Township of Old Bridge, Middlesex County, New Jersey

O & Y OLD BRIDGE DEVELOPMENT CORP., East Brunswick, N.J.