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DEVELOPMENT
POTENTIALS
OF A
NEW COMMUNITY
NEAR
CHESTERTON,
INDIANA

Prepared
for the
Bethlehem Steel Corporation
by
Barton-Archman Associates, Inc.
May 1970



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LESLIE S. POLLOCK

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The Chesterton, Indiana Area. The Bethlehem Steel Corporation has acquired 556 acres east of the Town of Chesterton.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

In order to stimulate the construction of new housing and related services in northern Porter County, the Bethlehem Steel Corporation has acquired 556 acres of farm land east of Chesterton. Barton-Aschman Associates, Inc. was selected to undertake the initial step directed toward planning of a new community on this site. The assignment was to examine the potentials and perspectives of the new community, including the evaluation of the possible character of site development and the identification of policy issues that must be resolved by the Corporation prior to subsequent steps in the planning and development program.

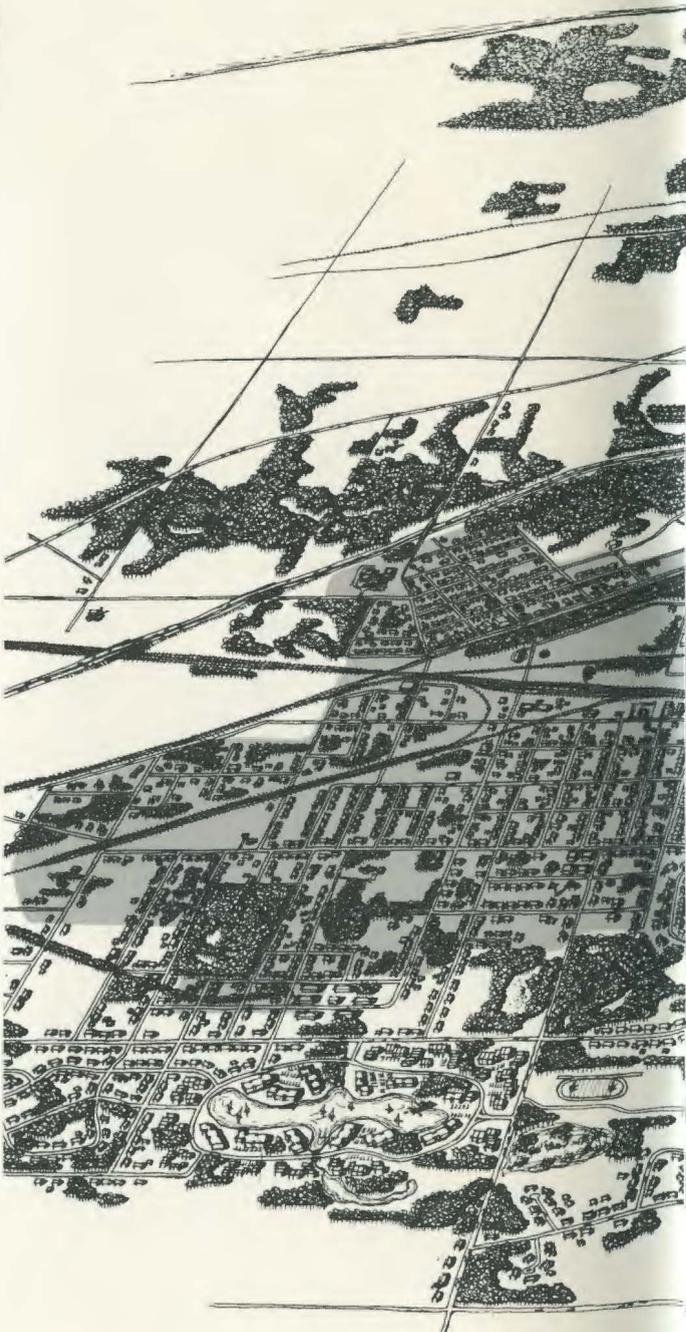
The new community site is strategically located within the regional high-accessibility corridor between Chicago and Detroit, and at the mid-point of the triangle created by the municipalities of East Gary, Michigan City, and Valparaiso. It is within the highly regarded and well financed Duneland School District. Within the decade of the 1970's Porter County is expected to increase its population from approximately 95,000 to 155,000 persons, requiring almost 13,000 new housing units.

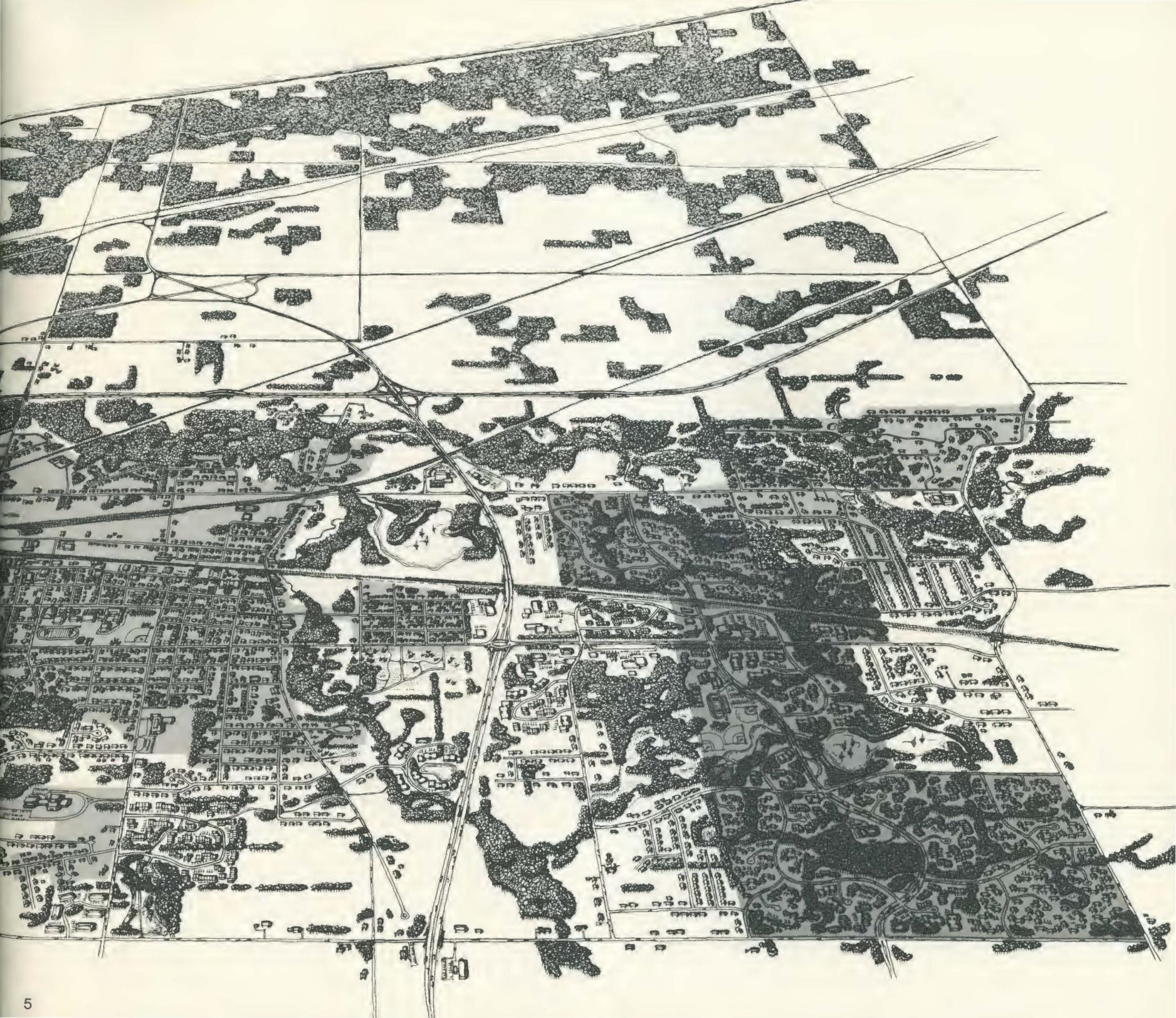
These and other factors indicate that a new community of 7,000 to 9,000 persons could become a reality on the proposed site within ten years, assuming development began in 1971. To accomplish this would require the attraction of only 19 percent of all new residents of northern Porter County. During the period, the Corporation alone will need to add 6,000 new employees who will require approximately 4,800 new housing units.

The concept of the proposed new community is that of a single village of 2,000 to 2,600 households, composed of four distinctive neighborhoods and fully integrated into the growth pattern of the Town of Chesterton. The concept emphasizes the natural environment, a wide-range of housing choices, supporting services, effective local government, and sound fiscal characteristics.

The infra-structure is composed of those essential public and private improvements which together establish the basic form and function of the new community. The village will be enclosed by a system of arterial highways and streets, including STH 49, Indian Boundary Road, 250 East Road, and 1100 North Road. Porter Avenue is the primary gateway to the village as well as to the existing Town of Chesterton. Within the proposed village two major collector streets (north-south, and east-west), provide access to and from the primary entrances of the village. Two grade separations should be provided at the Penn-Central Railroad, one along the north-south collector street and another along 250 East Road.

Development Potentials.
The proposed village for 2,000 to 2,600 households can become a reality within ten years and will emphasize the natural environment, a range of housing choices, supporting services, effective local government, and sound fiscal characteristics.





A 40-acre recreational core and a system of environmental corridors and pedestrianways will serve the recreational needs of all age groups. They are designed to take advantage of the natural features of the site, especially the existing lakes and streams.

The public sanitary waste water (sewer) system and the water supply system for the village can be provided by extensions of the Town of Chesterton utilities, or by separate systems.

A 14-acre village center located between Porter Avenue and the Penn-Central Railroad adjacent to Sand Creek will provide the focal point for supporting services and daily activity. It is appropriately scaled so as not to compete with downtown Chesterton.

New schools will be required. One, 12-acre elementary school site has been provided to meet the needs of families living south of the Penn-Central Railroad. Elementary school children living north of the railroad will attend the new Brummitt Acres School to be opened in 1971. A 19-acre junior high school site has also been reserved adjacent to the recreational core to serve children in grades 6-8 who live east of STH 49 and north of I-90.

The proposed densities and design treatments of the village are intended to create an urbane environment, community identity and interaction, and a strong visual relationship to the natural features of the site. Each of the four proposed neighborhoods will have its own distinctive character.

In order to achieve the desired environmental quality, full advantage should be taken of key opportunities which are afforded by the site and its adjacent properties. Among these are: the Porter Avenue gateway, the village center, the recreational core, the environmental corridors, and the collector streets. The historic, one-room school house which presently exists along Porter Avenue should be incorporated into the design of the village to provide a link with the past and contribute to a sense scale and intimacy that fosters community life.

A review of the traffic forecasts and existing designs for STH 49, prepared by the State Highway Commission, indicate that it would be wise for the Corporation to join with the Town of Chesterton in recommending modifications to the proposed designs of intersections along that route. Design flexibility is required so that ultimately an interchange or grade separation may be provided at each intersection.

A preliminary development schedule indicates that Neighborhood No. 1 can begin development as early as 1971, Neighborhood No. 2 can begin in 1973, and Neighborhoods No. 3 and No. 4 can begin in

1976 so that the entire community is substantially completed by 1981.

The interdependence of the village and the existing Town of Chesterton cannot be overemphasized. Together they form the nucleus of an important growth center in northern Indiana. This growth center should be planned, programmed, and developed as a single functional unit. Close cooperation will be required between the Corporation and the Town to develop environmental corridors, utility systems, and roads, and for the control of land-uses on properties between the Town and the new village. Such cooperative action has already been initiated.

Many questions and issues must be resolved largely by the Bethlehem Steel Corporation before it can proceed with next steps. These issues deal with housing, real estate development, environmental quality, balanced development, annexation and zoning, and state and federal assistance. Three major decisions are required immediately:

1. Should the new community be annexed to the Town of Chesterton?
2. Who will be the private developers, and how can developers of adjacent properties be coordinated?
3. What will be the specific role of the Corporation in all subsequent stages?

In response to these questions the consultant recommends that the Corporation pursue annexation to the Town of Chesterton; that it seek only developers of known quality and sensitivity for social and environmental objectives; and that it assume the role of a "development corporation" whose primary interest is the long-range living and environmental quality of the new village and adjacent properties. This would require its continued involvement in all phases, but only to the degree necessary to achieve the ultimate objectives of the Corporation and the Chesterton area. The Corporation itself would not build housing.

In conclusion, the Corporation will long be remembered for its role in the development process of a new community and for the standards which it achieves. In pursuit of a dependable, resident labor force it can not afford to accomplish anything less than the highest possible quality of living environment.

PART I: RECOMMENDATIONS

INTRODUCTION

The Bethlehem Steel Corporation has acquired clear title to 556 acres of farm land due east of Chesterton, Indiana. This site is strategically located between I-90 and I-94, east of relocated Indiana STH 49. The primary motivation of this venture is to stimulate and accelerate the construction of new housing and related services which are needed to accommodate employees of the Bethlehem Steel Corporation and other nearby industries and businesses.

In keeping with a policy of encouraging the sound planning and development of northern Porter County, it is the intention of the Corporation that the development of this site be of the highest possible environmental quality.

PURPOSE OF THIS ASSIGNMENT

In November, 1969, the Bethlehem Steel Corporation retained Barton-Aschman Associates, Inc. to undertake the initial step directed toward the planning of a new community on the 556-acre site. The assignment was to examine the potentials and perspectives of the new community, with evaluation of the possible character of site development and the identification of policy issues that must be resolved by the Bethlehem Steel Corporation prior to subsequent steps in the planning and development program.

This assignment included the following steps which are summarized in this report:

1. *Aerial photography.* A current photographic record of the entire Chesterton area was acquired and presented separately in the form of semi-controlled mosaics at scales of 1"–1000ft. and 1"–2000ft.
2. *Review of market studies and potentials.* This step included a review of existing forecasts and market studies augmented by our own professional judgment.
3. *Examination of existing environmental factors.* Each of 11 factors was examined in general and to the degree necessary to obtain adequate technical information for the subsequent evaluation of potentials and perspectives. This examination is documented in Part II of this report.
4. *Evaluation of Potentials and Perspectives.* All previous information was assimilated and evaluated in terms of the overall development potentials of the proposed site of the Chesterton area. Brief studies were conducted to test the feasibility and character of site development alternatives.
5. *Summary of policy alternatives.* The foregoing evaluation identified questions and issues that must

be resolved before the Corporation can proceed with next steps in the process of development. Policy alternatives were identified, and desirable policy choices were recommended.

RELATION TO THE ENVIRONMENTAL CONTROL STUDY

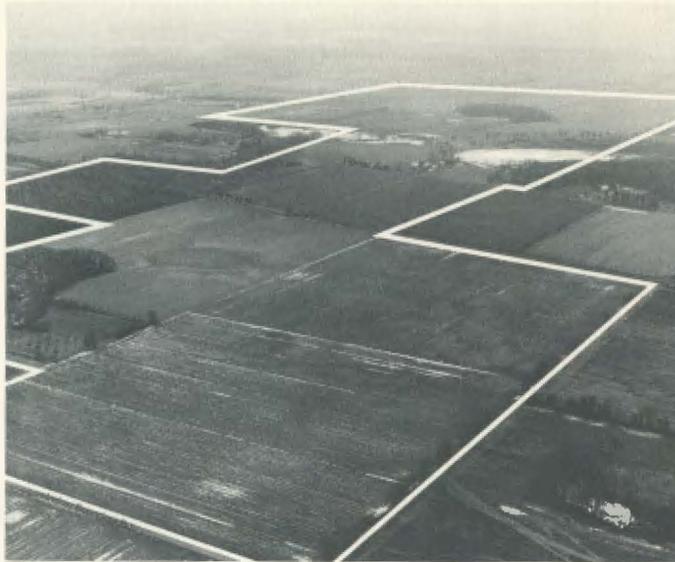
This assignment and its recommendations are intimately related to the Environmental Control Study presented to the Bethlehem Steel Corporation by Barton-Aschman Associates, Inc. in December, 1968. The proposed new community is in direct response to two recommendations in that report:

1. Of all local factors affecting the productivity of the Burns Harbor Plant, the creation of a stable, resident labor force is the most important.
2. The primary means of attracting a resident labor force will be to greatly expand the number of housing starts, the range of housing costs, and the variety of living environments in the area.

Other recommendations endorsed the concept of providing and maintaining a living environment in northern Porter County the quality of which is significantly higher than other reasonable alternatives available to an industrial labor force. They included:

- Viewing growth and development in the context of the Chicago-Detroit industrial corridor.
- Developing an excellent educational system as the single most important environmental factor.
- Continually improving an already efficient transportation system within the area.
- Broadening the economic base of the entire county to reduce its dependence upon the steel industry.
- Encouraging greater effectiveness in all governmental units.
- Expanding short and long range public planning efforts in the region.

The conclusions of this report are based upon those previous recommendations.



The Site. Predominantly farmland, the site includes portions of Billington (on the left) and Morgan Lakes.

EVALUATION OF POTENTIALS

The development potentials of the proposed site and of the entire Chesterton area are outstanding. The locational advantages and the accelerated growth generated by nearby industries combine to provide an unique combination of jobs, convenient services, and recreational activities.

THE REGIONAL SETTING

The Corporation's proposed site is strategically located east of and adjacent to the Town of Chesterton which itself is located within the regional high accessibility corridor between Chicago and Detroit. This corridor is a part of the Great Lakes megalopolis which contains 25,000,000 people and is one of only 12 such urban complexes in the world. Because of its accessibility, growth of the Chesterton area is inevitable; however, the rate and quality of growth may fluctuate substantially depending upon its guidance by the Corporation and local municipalities.

The specific site is located along STH 49 approximately at the midpoint of the triangle created by the existing municipalities of East Gary, Michigan City, and Valparaiso. It is approximately six miles from the entrance of the Bethlehem Steel Corporation Burns Harbor Plant, and is only 1½ miles from the Indiana Dunes State Park and National Lake Shore. Several major business districts and regional shopping centers are within twenty minutes driving time from the site, as are Valparaiso University and Purdue University at Westville. Furthermore, it is located within the highly regarded and well financed Duneland School District.

SOCIO-ECONOMIC POTENTIALS

Forecasts for northern Porter County indicate that a new community of 7,000 to 9,000 persons would be feasible by 1981, if it attracted the equivalent of 40 percent or more of all new families generated by the Bethlehem Steel Corporation itself, or only 19 percent of all new residents of northern Porter County.

Within the decade of the 1970's the Lake-Porter County region will grow from approximately 640,000 to 780,000 persons. Porter County will continue to increase its share of the net population increase (about 40 percent), and will grow from approximately 95,000 to 155,000 persons. Over two-thirds of this growth (or 42,600 new persons) will be added to the northern one-half of Porter County, requiring almost 13,000 new housing units.

The economy of the area will continue to be dependent upon the steel industry. The Bethlehem Steel Corporation alone will need to add 6,000 new employees

by 1980 to complete its expansion program. Beyond that date growth will continue but will become more diversified.

Most new employees will be blue collar workers, and the bulk of the demand for housing will be from those earning \$6,000-7,500 per year, or with family incomes of \$8,000-9,500 per year. Most will want to own their homes but many will seek rental housing. This supports a national and regional trend which will see multiple-family housing units increase as a proportion of total new units from 40 percent to 60 percent. The heaviest demand will be for single family homes costing between \$16,000 and \$25,000, and for garden apartments or townhouses renting between \$150 and \$225 per month.

In categories of population, annual income, and housing costs, the Chesterton area has grown significantly in the past decade.

The Federal Housing Administration forecasts the following annual housing demand for Porter County for 1970 and 1971:

Non-assisted single family homes	—900 per year
Non-assisted multiple family units	—400 per year
Subsidized sales and rental housing, including rent subsidy units, Sec. 235; and Sec. 236	—555 per year

The annual demand will increase after 1971.

These forecasts indicate substantial potentials for development in the Chesterton area and the opportunity for attracting a relatively heterogeneous group of residents to the new community, requiring a wide variety of housing types. Currently, it appears that the above rates of construction are being exceeded, at least for non-assisted units. Other potentials exist for supporting non-residential activities to serve the new community and surrounding areas.



Site Location. The new community is strategically located within the regional high-accessibility corridor between Chicago and Detroit.

- C Chesterton
- CH Chicago
- BH Burns Harbor Plant
- T Toledo
- D Detroit

THE NEW COMMUNITY CONCEPT

The concept of the proposed new community is that of a single village of 2,000 to 2,600 households, composed of four distinctive neighborhoods and fully integrated into the growth pattern of the Town of Chesterton. Five primary goals complement the concept:

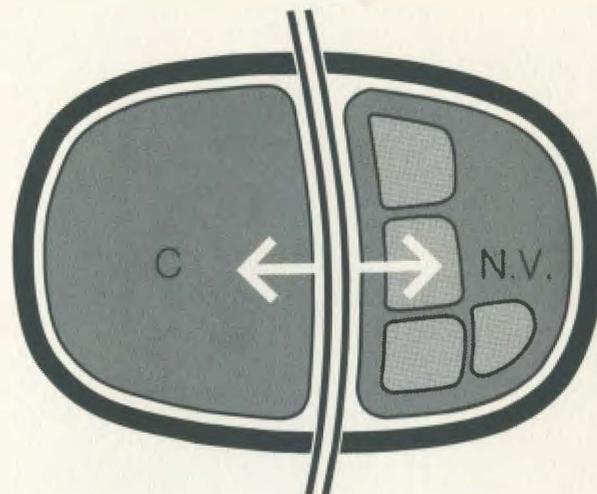
1. Preserve and maintain the natural environment of the new community site, and guide the manmade environment to the highest possible level of quality.
2. Provide a range of housing choices which is adequate in quantity, quality, and price to satisfy the requirements of the growing labor force of northern Porter County.
3. Provide public, semi-public, and private services to meet the needs of residents of the new community and adjacent neighborhoods, and to strengthen and complement the full range of such services provided in the Chesterton area.
4. Facilitate effective governmental management in the Chesterton area, and provide opportunities for the participation of village residents in civic and public affairs. The latter is essential to achieving a *stable*, resident labor force.
5. Contribute to a sound fiscal character and a balanced tax base in local jurisdictions.

This concept and these goals underlie the recommended general development plan. Estimates of land-use, population, housing and school children are contained in Appendix Tables 1, 2 and 3.

THE INFRA-STRUCTURE

The infra-structure is composed of those essential public and few private improvements which together establish the basic form and function of the new community. They include the major streets, open spaces, utility systems, and the village center. The recommended infra-structure is that part of the development plan which is most permanent and subject only to minor refinements, whereas a considerable degree of flexibility may be retained for all other elements.

The proposed village will be enclosed by a system of arterial highways and streets, including STH 49, Indian Boundary Road, 250 East Road, and 1100 North Road. Porter Avenue is the primary entrance to the village as well as to the existing Town of Chesterton. It forms the local development corridor which unites the two communities and along which is located the major concentration of community facilities. It is recommended that Porter Avenue be relocated several hundred feet to the north as it extends eastward to meet 250 East Road. This relocation will reduce the



New Community Concept. A single village will be composed of four distinctive neighborhoods and will be fully integrated into the growth pattern of Chesterton.

C Town of Chesterton
N.V. New Village

problems associated with land development between Porter Avenue and the Penn-Central Railroad.

Within the proposed village two major collector streets (north-south, and east-west) provide access to and from the primary entrances of the village. The north-south collector street forms a secondary corridor (subordinate only to Porter Avenue) for the location of public, semi-public, and private services supporting the residents of the village. It is also the street whose design character most represents and influences the quality of the entire village. The proposed alignment of this collector street permits a grade separation at the Penn-Central Railroad when it is considered financially feasible. 150 East Road, Wake Robin Road, and the easterly portion of the existing Porter Avenue may form similar collector streets outside the site. Another railroad grade separation should be provided on 250 East Road.

The next most important group of determinants in the infra-structure is the recreational core and the system of environmental corridors, major pedestrianways, and recreational open spaces. The recreational core will be located on 40 acres in the vicinity of Morgan and Billington Lakes to serve the active recreational needs of all age groups. The environmental corridors and wooded areas will provide for natural storm drainage as well as nature-oriented activities. The major pedestrianways located throughout the village will connect neighborhood playgrounds. Unfortunately, this cor-

ridor system is not entirely within the boundaries of the Bethlehem Steel Corporation site, and every effort should be made to complete and fulfill this essential system.

The public sanitary waste water (sewer) system will extend from the Chesterton treatment plant via a new interceptor under Indian Boundary Road and then southward under the north-south collector street to serve the entire village. The public water supply system will be extended under Porter Avenue from the existing Town of Chesterton wells west of relocated STH 49. A new water tank will be constructed in the vicinity of the village center from where the local distribution system will serve the village by gravity flow.

The proposed new community will focus its form and its daily activities on a 14-acre village center located between Porter Avenue and the Penn-Central Railroad adjacent to Sand Creek. The village center will contain a full range of retail shops and services required to meet the daily needs of nearby residents. It will be appropriately scaled so as not to compete with downtown Chesterton as a central business district. Also included in the village center will be meeting places for local civic organizations.

COMMUNITY SERVICES

A full range of urban services will need to be made available to the residents of the new community and adjacent neighborhoods. Basic day-to-day services which are required include convenience centers, playgrounds, schools, police and fire protection, solid waste disposal, and mass transit.

In addition to the village center, two convenience centers of 3 to 5 acres each are provided along the north-south collector street, one near Indian Boundary Road and the other near 1100 North Road. They will serve the hourly and daily needs of nearby residents, especially those who do not have access to an automobile throughout the day. These convenience centers may include activities such as a grocery and drug store, a day-care center, a cleaning establishment and a well designed service station.

Public playgrounds will be provided in each neighborhood to serve the needs of children. Each of the four neighborhoods should also be provided with its own swimming pool.

One, 12-acre elementary school site has been provided to meet the needs of families living south of the Penn-Central Railroad. It is located so that practically all students living within the village can walk to school.

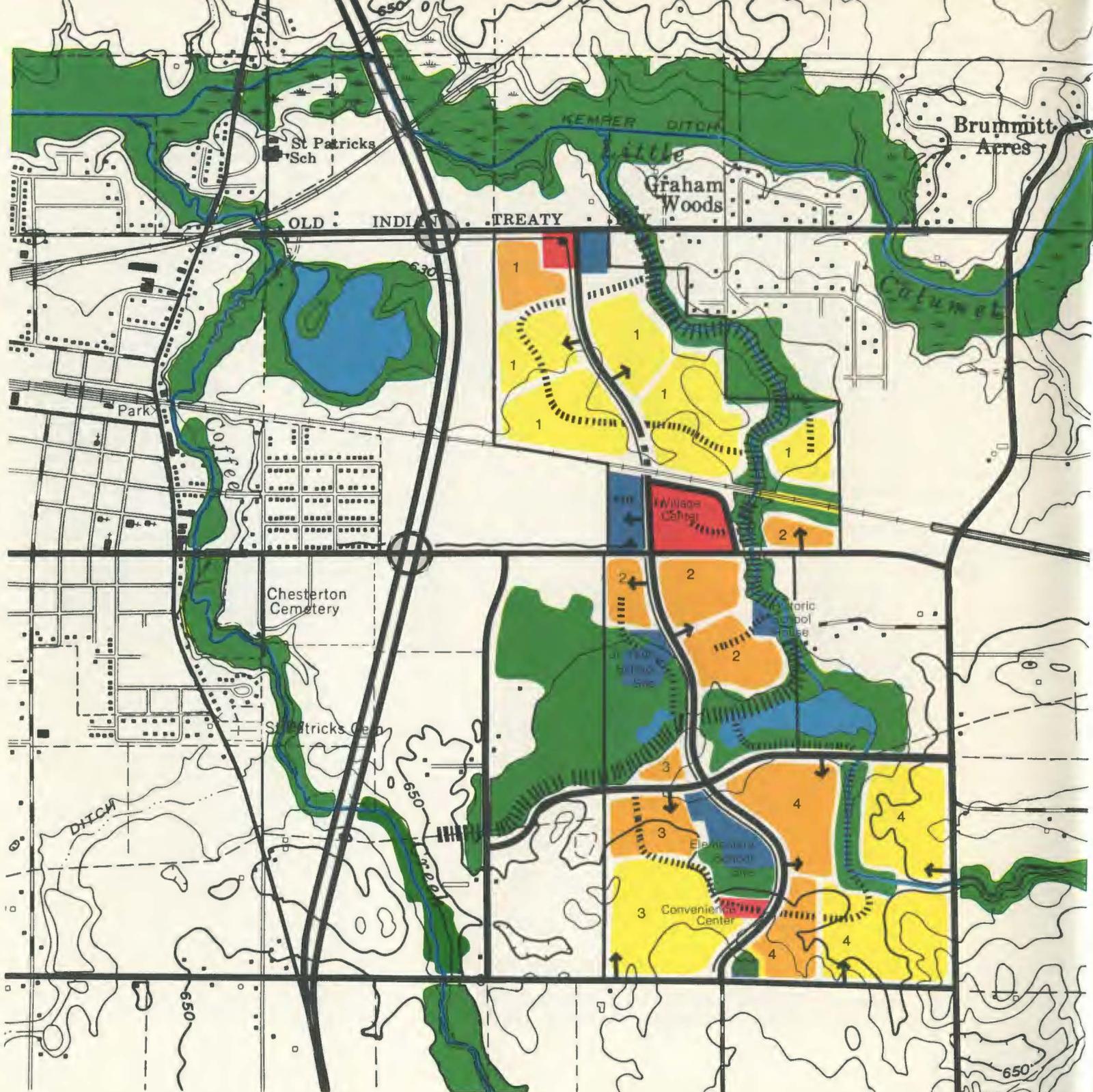
Elementary school children living north of the Penn-Central Railroad will be provided for in the new Brummitt Acres School to be built on Indian Boundary Road and ready for occupancy in September, 1971. A 19-acre junior high school site has been reserved adjacent to the recreational core to serve all Duneland students in grades 6-8 who live east of STH 49 and north of I-90. This school and its facilities would be so designed as to be available for community use after school hours for purposes such as adult education and crafts, youth activities, civic organization meetings, and organized recreation.

Several sites have been reserved along Porter Avenue and the north-south collector street for public and semi-public facilities, especially churches.

Police and fire protection will be provided for the new village. It is probable that a new fire station site will be required along Porter Avenue east of relocated STH 49. Police protection will primarily be by means of patrol cars from a central headquarters in Chesterton. Solid waste disposal service can be provided effectively by existing collection systems. On-site public facilities will not be required.

Finally, the excellent location of the village, and the high percentage of residents employed in the Bethlehem Steel Corporation complex suggests the very real possibility of mass transit service between home and place of work. The routing and schedule can be such as to provide daily service to the South Shore Commuter Railroad, and the Indiana Dunes State Park and National Lakeshore in summer months.

- Low Density Residences 
- Medium Density Residences 
- Pedestrian System 
- Sanitary Sewer Interceptor 
- Water Main 
- Open Space 
- Watercourses 
- Business 
- Institutions 
- Collector Streets 
- Access Points 
- Water Storage Point 
- Neighborhood Boundary 
- Lift Station 



General Development Plan. Residential clusters of low and medium density are organized about the infrastructure composed of collector streets, the village center, the 40-acre recreational core, schools and utilities.

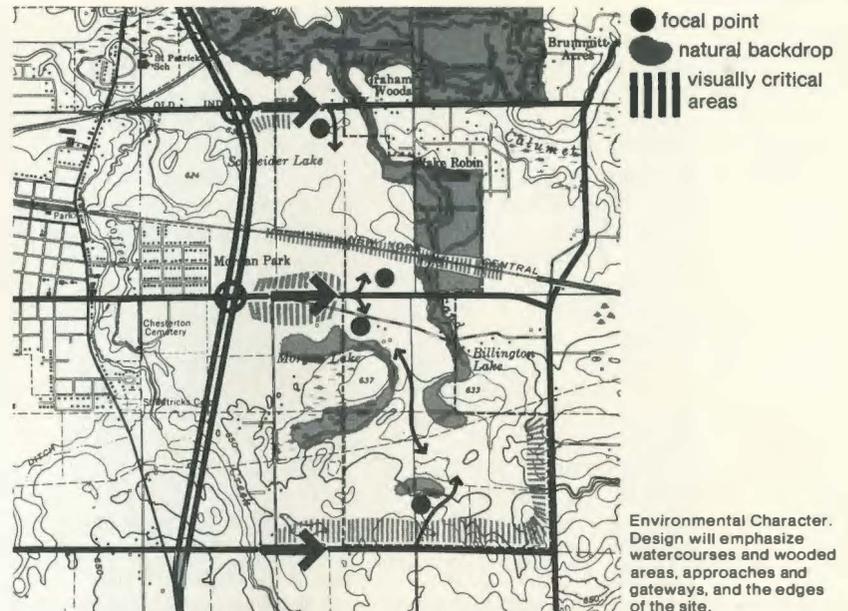
ENVIRONMENTAL CHARACTER

The proposed densities and design treatments of the new village are intended to create an urbane environment, community identity and interaction, and a strong visual relationship with the natural features of the site. Each of the four proposed neighborhoods will have its own distinctive character, including a reasonable variety of housing types and living environments. The overall environmental character of the neighborhood north of the Penn-Central Railroad will be similar to that of established nearby neighborhoods. The neighborhood south of Porter Avenue will be the most intense and urbane, and should be designed in harmony with the village center. The remaining two neighborhoods will each establish its own character, and will include a wide range of housing types, densities, and costs. Lower cost housing will be located in close proximity to collector streets, public open spaces, and natural amenities so that residents may participate fully in community life.

Development will be strongly oriented toward the Sand Creek environmental corridor and pedestrianways which connect with it. Natural features, including new landscape treatments, will meander throughout all neighborhoods.

Porter Avenue deserves a special design treatment and landuse guidance commensurate with its role as the entrance to the new community. It should present an image of community life and concern-for the natural environment, all of which should be predominant over the frequently undesirable characteristics of roadside commerce. All street rights-of-way within the new community, especially the major collector streets, should be carefully designed and protected to set environmental standards for the entire community and to be a source of pleasure and pride for all residents. With the exception of schools, no other single factor is likely to have a more lasting and beneficial impact on marketability and on property values in the village than the environmental quality.

Single Family Cluster



Environmental Character. Design will emphasize watercourses and wooded areas, approaches and gateways, and the edges of the site.

Townhouse Cluster



Housing Types. A variety of distinctive housing types and prices will be available and will emphasize the residential cluster principle.

Garden Apartment Cluster



KEY OPPORTUNITIES

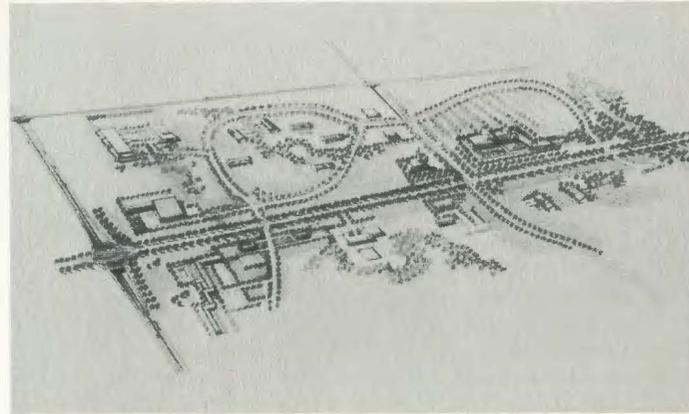
In order to achieve the desired environmental quality, full advantage should be taken of key opportunities which are afforded by the site and adjacent properties. Among the key opportunities are: the Porter Avenue gateway, the village center, the recreational core, the environmental corridors, and the collector streets.

The gateway to the new village consists of the interchange of relocated STH 49 and Porter Avenue and that section of Porter Avenue eastward to the village center. A special design treatment will be required for the interchange itself to establish a character worthy of the focal point of the Chesterton area, rather than haphazard roadside development. The selection, location and design of land-uses abutting the interchange and Porter Avenue should be carefully studied and controlled. The right-of-way of Porter Avenue should be attractively landscaped, and the roadway itself should be designed to a high visual standard as well as to achieve operational efficiency. The quality of this gateway area is critical to the marketing potentials of the new community.

The village center offers an opportunity to coordinate retail shops and stores, offices and services, and public and semi-public activities into a single complex of design excellence. The village center will not only be the "nerve center" for day-to-day community activities, but will be a symbolic expression of the standards and pride of local residents. Its location permits it to contribute to the enhancement of Porter Avenue, to take advantage of the Sand Creek environmental corridor, and to buffer the Penn-Central Railroad. Parking should be located in the rear of the center so that the front may be attractively landscaped.

The recreational core, including the enlargement of Billington Lake, will offer outstanding leisure time and aesthetic potentials. It is here that all members of the family can enjoy a wide variety of outdoor activities throughout all seasons of the year, including organized sports, individual recreation, fishing and boating, ice skating, outdoor theatre, etc.

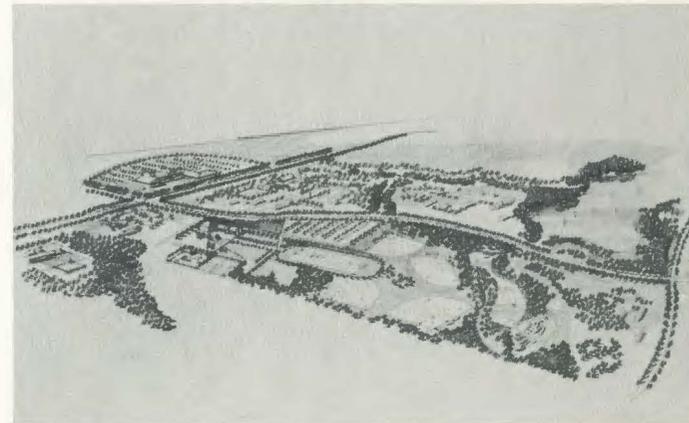
The environmental corridors of Sand and Coffee Creeks and the mini-corridors (or pedestrianways) which lead to them will offer yet another leisure experience. They provide an ecological balance to the village by preserving valuable natural landscape features, and permit continuous hiking and biking paths to all parts of the village, to downtown Chesterton, and to the National Lake Shore. Opportunities for canoe trails should also be explored in cooperation with the Town of Chesterton and the National Lake Shore.



Porter Avenue Gateway. Special design treatments of the road and right-of-way and control of abutting land-uses are critical to Chesterton and the Village.



Village Center. This is the nerve center and symbol of daily community activities and it is worthy of design excellence.



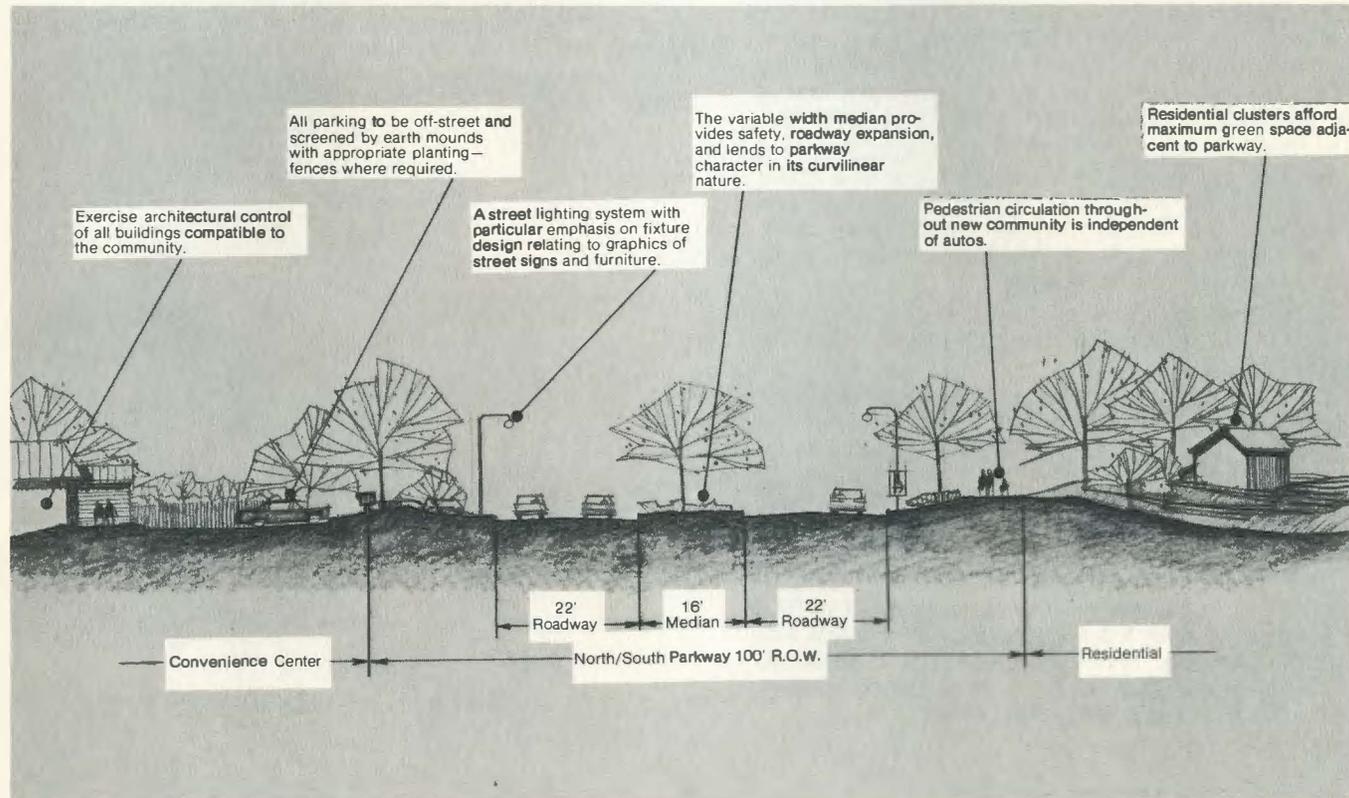
Recreational Core. This 40-acre park, including small lakes, will offer leisure time facilities and amenities for all members of the family.

Even the design of internal collector streets will offer unique opportunities if the roads are considered to be environmental assets rather than simply transportation facilities. The design of the roadway, the curbs and gutters and the sidewalks, and the landscape features within the right-of-way (including street lighting, fire hydrants, traffic signs, etc.) will all contribute to the character of the new community and to the design and maintenance of abutting properties. The horizontal and vertical alignment should not only take into account the topography and storm water drainage, but should consider subtleties such as the variety of visual experiences and the views from autos of attractive landscape or building features which contribute to the enjoyment of the residents. In essence they will be parkways.

Finally, the historic, one-room school house which presently exists along Porter Avenue should be incorporated into the design of the village to provide a link with the past and to contribute to the sense of scale and intimacy that fosters community life.



Environmental Corridors. These natural features preserve an ecological balance and provide hiking and biking paths throughout the community.



Collector Streets. The design of road alignments, paved and landscaped areas, and street fixtures contribute to the character of the village.

RECOMMENDED IMPROVEMENTS TO STH 49

The development potentials of the Chesterton area appear to be far greater than indicated in previous studies prepared by the State Highway Commission. The primary reason is the proposed village itself, and the capability of the Bethlehem Steel Corporation to foster a development of outstanding merit. In addition, the potential development of the Norfolk and Western Railroad industrial tract would also affect traffic generation and travel patterns to a substantial degree. These factors alone made it desirable to review the traffic forecasts and existing design and construction drawings for STH 49 which were prepared several years ago by the State Highway Commission.

It is significant that current development trends indicate the daily peak hour traffic volumes on STH 49 will almost double those forecasted by the State Highway Commission and that traffic on intersecting arterial streets (especially Porter Avenue) would exceed by many times the State Highway Commission forecasts. Seasonal traffic generated by the National Lake Shore will add substantially to these daily traffic volumes in the area of STH 49. Therefore, despite the fact that contracts have already been executed and work has begun on the construction of this highway, it is recommended that the Bethlehem Steel Corporation join the Town of Chesterton in recommending the following modifications to the proposed design of the STH 49:

1. The function of STH 49 is no longer that of a by-pass, but should be considered that of a major urban arterial connecting interstate highways, and accommodating high volumes of traffic of all types. The continuous and unimpeded flow of traffic along this arterial will be imperative.
2. No change is contemplated for the horizontal alignment nor the acquisition of rights-of-way for STH 49.
3. It is recommended that a grade-separated interchange be the ultimate objective at the intersection of Porter Avenue and STH 49. This is to provide for the continuous flow of traffic between both sides of the Chesterton area, as well as along STH 49 itself, to provide for large volumes of turning movements, and to achieve land-use controls. An interim treatment, satisfactory for the 1970's alone, can be achieved by elevating the vertical alignment of STH 49 approximately 5 ft. at its point of intersection with Porter Avenue, and by widening the proposed median from 50 ft. to 70 ft. to ultimately accommodate a four lane underpass along STH 49.

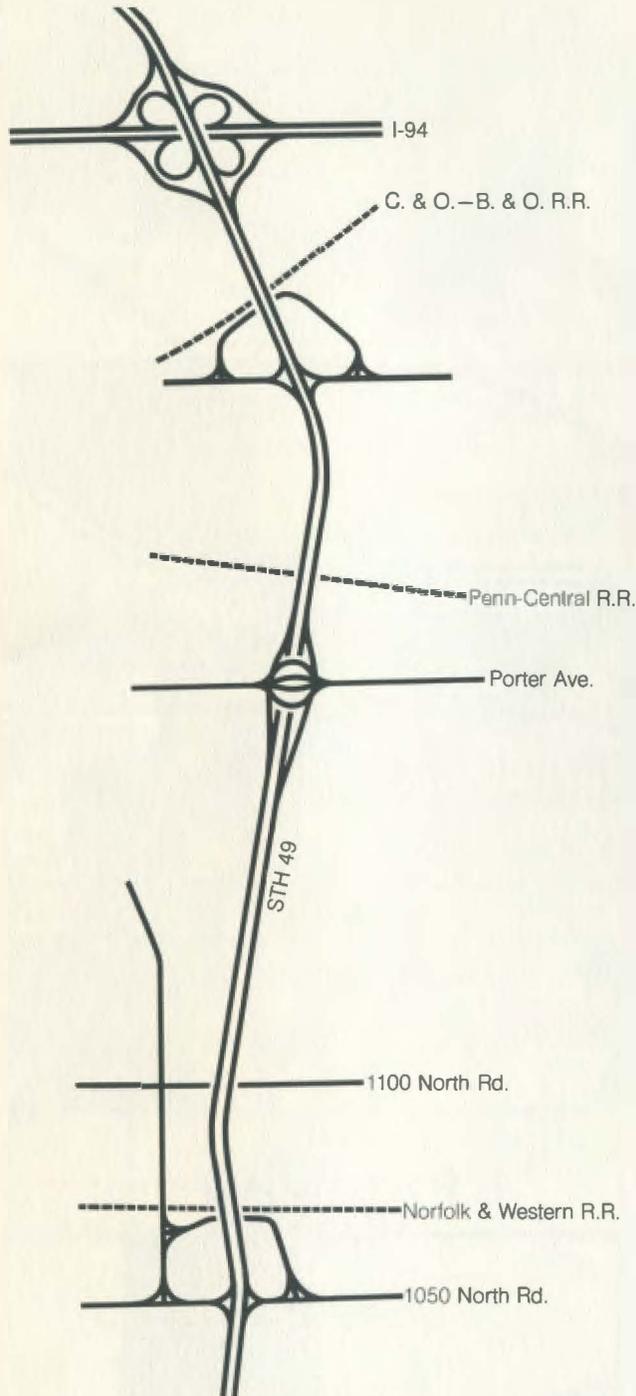
4. Primarily for safety purposes, especially related to school busing, it is recommended that a grade-separation be provided at the intersection of STH 49 and Indian Boundary Road. This can be accomplished with no change to the vertical or horizontal alignment of STH 49, and at little additional cost, by rerouting Indian Boundary Road under the proposed overpass at the Little Calumet River. Right-turn movements on and off STH 49 would be provided for by acceleration and deceleration lanes.

5. It is proposed that the vertical alignment of STH 49 be elevated approximately 5 ft. at the intersection of 1100 North Road, so that ultimately a complete grade-separation with no interchange can be accommodated.

6. A grade-separation similar to that at Indian Boundary Road is also recommended at the intersection of STH 49 and 1050 North Road in order to accommodate high volumes of traffic generated by the potential industrial complex employing as many as 6,500 persons.

These improvements are critical to the effective development of the entire area and its transportation system, and are also consistent with the proposed level of service and design standards of STH 49 south of I-90.

Design Modifications for STH 49. Provision should be made for future interchanges or grade separations at all proposed intersections.



STAGING OF DEVELOPMENT

Estimates of market demand indicate that the new community can be fully developed within a period of 10 to 15 years without a major promotional effort. Assuming a promotional program in addition to its overall high quality, the new community might be developed within ten years. This would correspond with the completion of the Burns Harbor Plant.

Development should follow a carefully staged program which cannot be determined with finality until a detailed economic model is analyzed. However, the general strategy of such a program is recommended as follows:

1970 *Pre-Development Stage*

- Finalize the new community site plan and program
- Construct and analyze socio-economic model
- Negotiate governmental agreements
- Negotiate disposition contracts with private developers

1971-

1975 *Development Stage 1*

- Develop Neighborhood No. 1
- Extend sewer and water utilities
- Complete relocated STH 49
- Complete Brummitt Acres School

1973-

1977 *Development Stage 2*

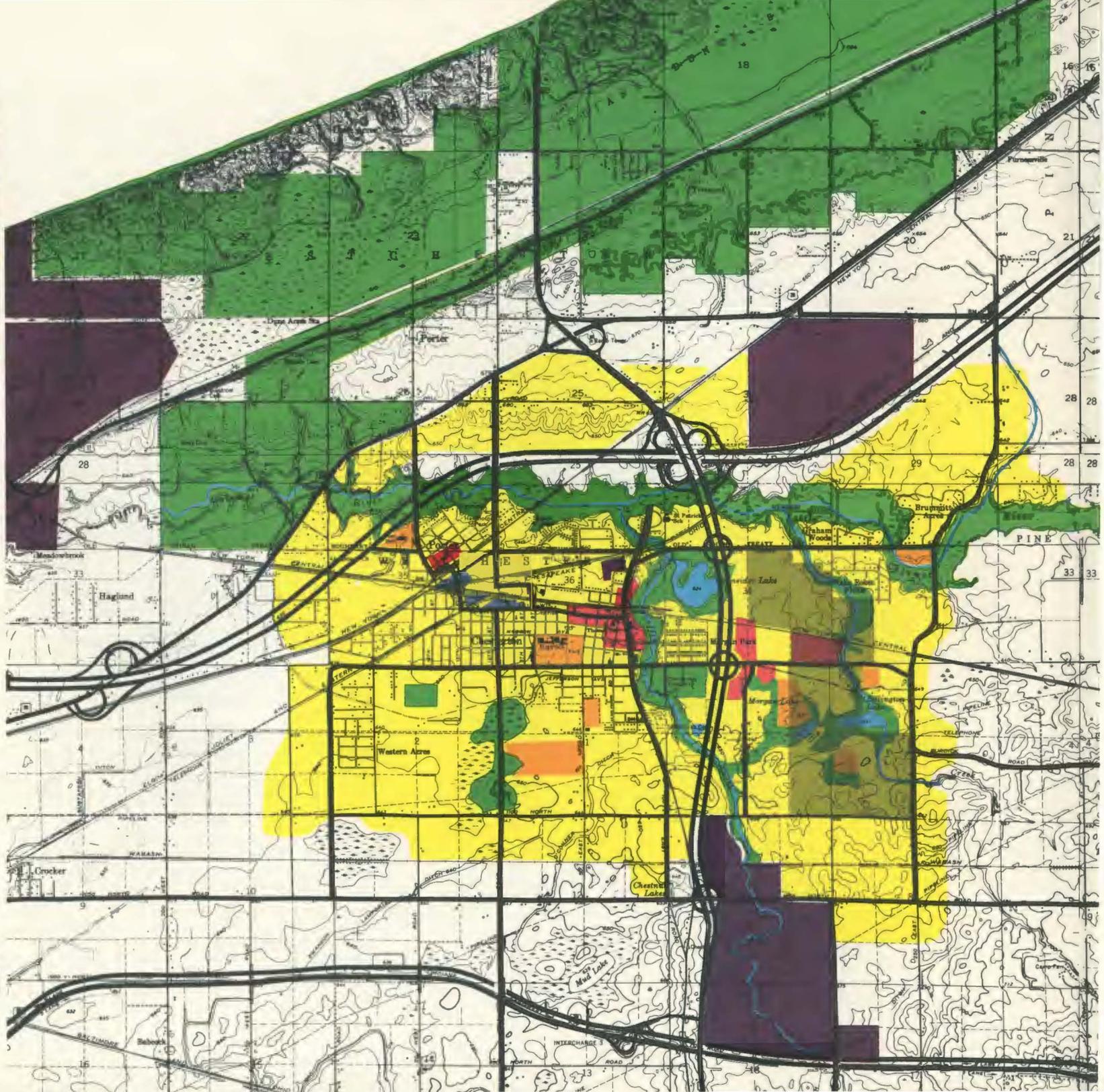
- Relocate and improve Porter Avenue
- Improve 250 East Road (north of Porter Avenue)
- Develop Neighborhood No. 2
- Develop village center
- Construct new junior high school
- Construct recreational core and lake

1976-

1981 *Development Stage 3*

- Develop Neighborhood No. 3 and No. 4
- Extend and improve 1100 North Road
- Construct new elementary school

- Watercourses 
- Open Space 
- Business 
- Highways and Arterials 
- New Community Site 
- Industry 
- Residential Areas 
- Possible Interchanges 
- Schools 



Relationship to Chesteron.
 The Town and village
 form the nucleus of an
 important growth center
 which should be planned
 as a single functional unit.

RELATIONSHIP TO THE TOWN OF CHESTERTON

The Town of Chesterton itself will expand to the south and to the west, and together with the Town of Porter it will contain a population of approximately 20,000 persons by 1990. However, the major focus of development will be east of STH 49 where new construction may accommodate up to 15,000 residents and 10,000 employees.

The interdependence of development in the two areas east and west of STH 49 cannot be overemphasized. Together they form the nucleus of an important growth center in northern Indiana. This growth center should be planned, programmed, and developed as a single functional unit in order to achieve effective management, efficient services, and an attractive overall environment for all residents. Otherwise, traffic congestion, pollution, inadequate public services, and mixed development standards will severely jeopardize development potentials.

It is recommended that the Bethlehem Steel Corporation and the Town of Chesterton work together closely to achieve these potentials.

Serious consideration should be given to, and maximum advantage should be taken of, the environmental assets of the Indiana Dunes State Park and the National Lake Shore. A major policy of the Town of Chesterton and the new community should be to cooperate to preserve and develop the unique system of natural environmental corridors which penetrate and potentially connect the new community with the Town of Chesterton and the National Lake Shore. The overall scale of the growth center makes access to all activity centers possible on bicycle through the corridors, and greatly enhances opportunities available especially to young people. Features such as these are a "free" increment in living quality which makes the new community more competitive and marketable.

Concern must be expressed about the development of properties between the Town of Chesterton and the new community. For this reason, care has been taken to suggest a plan and design which will enhance the potential of adjacent properties and encourage their compatibility with the new community and the entire growth center. It is recommended that these properties be annexed to the Town of Chesterton as soon as possible to assure local control over development. Coordinated planning has already been initiated through contacts with local officials and the comprehensive planning consultant for the Town of Chesterton. These efforts have been highlighted by the joint reevaluation of design specifications for STH 49 and its relationship to the overall street and highway system of the area. Porter Avenue clearly becomes the most important local arterial street and the entrance to the communities, along which is to be located activities of community-wide importance.

The new community, therefore, will not only achieve its own potentials and identify, but is specifically planned to enhance the overall potentials and identify of the Town of Chesterton.

POLICY ALTERNATIVES

The process of formulating the new community concept has identified many questions and issues that must be resolved largely by the Bethlehem Steel Corporation before it can proceed with next steps. The answers or solutions may require the selection and adoption of corporate policies from among the available alternatives. These policies themselves may have a substantial effect on the potentials of the new community.

HOUSING

At least four key issues related to housing will require corporate policy consideration:

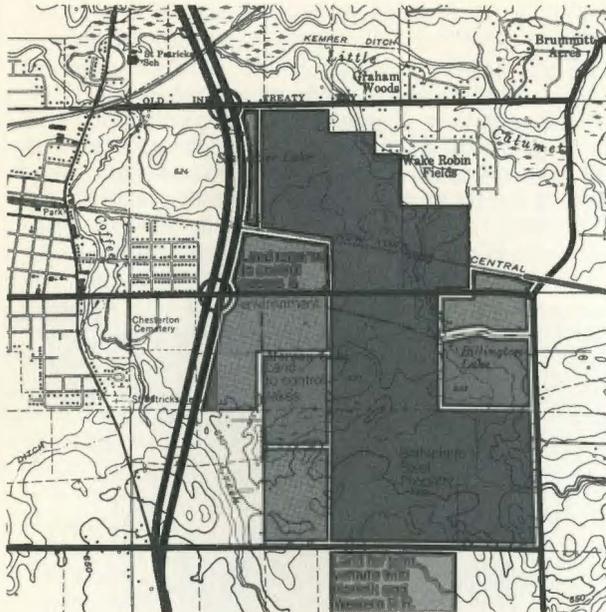
1. The extent to which the new community will be utilized as an opportunity for housing built by the Bethlehem Steel Corporation subsidiary (Multicon Properties, Inc.) should be determined. This project would be an excellent opportunity for this recently acquired corporation.
2. Though most housing types and costs will be dictated by market demand, consideration should be given to housing a number of elderly persons living on fixed incomes and low-income service workers, and to the manner in which these residents can share the advantages of the new community.
3. The large-scale, planned-unit development of high quality is a potentially effective device for achieving a stable, heterogeneous resident population. The Corporation needs to consider ways in which the varied housing and living preferences of potential residents can be determined and provided for. This process might begin with an inventory of existing Burns Harbor Plant employees to determine their housing, service, recreational, aesthetic and institutional preferences.

REAL ESTATE DEVELOPMENT

Several issues deal with the role of the Bethlehem Steel Corporation as an entrepreneur in the real estate development process. Among these are the following:

1. As alternatives the Corporation could assume the role as the single developer of the new community, or it could choose the short-term role of a broker and dispose of all property to others to develop at the earliest opportunity; this short-range role may forgo the opportunity to influence the long-range objectives of the Corporation. The third and *recommended* alternative is the role of the "development corporation" whose primary interest is the long-range living and environmental quality of the new village and adjacent properties; this role would assure a continued involvement in *all* phases to the degree necessary to achieve the ultimate objectives of the Corporation and the Chesterton area. But the Corporation itself would not build housing.
2. The Corporation should evaluate carefully its reliance upon merchant builders. National developers of known quality and sensitivity for social objectives may offer the most effective means of building at least the key portions of the community. However, there would be substantial advantages in strengthening the local home-building industry, even though such local participation would require closer supervision by the Corporation. The main result of this would be to expedite the overall development of Porter County, since a viable home-building industry is always an asset in circumstances such as these.
3. The Corporation can proceed solely with the land it now owns, or it can extend its control over adjacent properties. It is recommended that the Corporation extend its real estate control to include acquisition of all properties adjacent to Morgan Lake and Billington Lake and of all properties between the existing site and STH 49 in the vicinity of Porter Avenue and Indian Boundary Road, or (as an alternative) it should enter into cooperative ventures to assure the compatible development of these properties. A special investigation will be required into the legal development of those portions of lakes within the site and the legal use of those portions of the lakes outside the site. Cooperation with the Norfolk and Western Railroad should also be pursued as well as a cooperative venture for the development of vacant lands between the two sites.

Land Control. Use of on-site watercourses and the quality of adjacent development should be assured by cooperation, joint ventures, or acquisition of critical properties.



ENVIRONMENTAL QUALITY

The environmental quality of the new community is of paramount concern to the Bethlehem Steel Corporation. The following issues are to be dealt with:

1. Effective environmental controls must be developed. The name of the Corporation is already clearly identified with the site. A mediocre level of achievement will long be remembered by future as well as existing residents of the area. This effort will involve a variety of corporate actions, including encouragement of the county and the Town of Chesterton to strengthen their own commitments and resources.
2. The Corporation's posture with regard to achieving environmental objectives through the merchant developers must be finalized. Well conceived disposition contracts and other techniques can accomplish this objective—if the Corporation monitors and enforces the terms of the contract. A single interdisciplinary team of consultants and advisors should be retained by the Corporation to finalize overall plans and programs and to provide continuity through detailed design and development phases.
3. Another issue is to what extent land and/or professional services should be made available for public improvements (or even the improvements themselves), so as to assure their proper location and design. It is recommended that land be made available to local governments for streets, the elementary and junior high school sites, a water tower, and open spaces. Other dedications would depend upon further study.
4. Whether or not it is necessary and desirable for the Corporation to design and construct major portions of the infra-structure of the new community for the sake of harmony and efficiency is a significant question. This includes arterial and collector streets, major sewer interceptors and water mains, watercourses and open spaces, and the village center. Compensation might be in the form of increased land values in disposition contracts to merchant builders. Prior to this decision detailed financial analyses should be undertaken to determine the feasibility of various alternatives.
5. Local governments should be called upon to participate in the development program, but to what extent? The Corporation should encourage governmental units in the area to achieve similar standards of environmental control and to assure adequate maintenance of donated public facilities. An immediate opportunity is the commitment that should be made by the Town of Chesterton and Porter County for improving Porter Avenue and Indian Boundary Road in the vicinity of STH 49, and the control of abutting land uses.

BALANCED DEVELOPMENT

One of the criticisms to be anticipated from existing residents of the Chesterton area is the impact of the new community on the local tax base. Since the Burns Harbor Plant is within the Duneland School District the Corporation is making a major contribution to education revenues—enough to offset the tax deficits of a predominantly residential village. Being outside the Town of Chesterton, however, its assessed valuation does not help the municipality offset the cost of public services to the new community.

Therefore, the Corporation must be concerned with a policy of encouraging balanced development within the Town or, conversely, annexation of commercial and industrial properties as well as residential properties. Efforts would include promotion of diversified, revenue-producing development on land near the new community which can be supported by the 7,000-9,000 new residents. Four such areas are the vicinity of the intersections along STH 49, the industrially zoned area northeast of Chesterton, the Norfolk and Western industrial site, and downtown Chesterton.

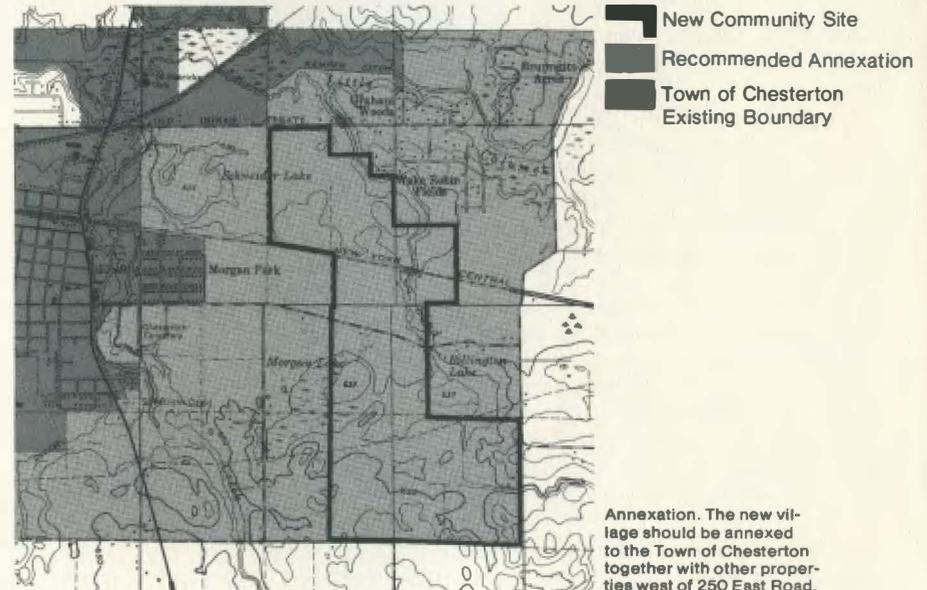
ANNEXATION AND ZONING

The proposed new community will require a change in zoning, and numerous public facilities and services. The development of adjacent properties, especially those which lie between the new community and the Town of Chesterton will also be subject to zoning changes and will require similar public facilities and services. The Corporation should consider the following:

1. Whether to seek annexation to the Town of Chesterton, remain unincorporated, or seek incorporation as a new municipality. Annexation to the Town of Chesterton is recommended as the most desirable course of action. This course would offer the best possibility for providing general governmental services to the village, and it would help the Town of Chesterton reach a population level that is conducive to more effective professional city management.
2. Development of a strategy and procedure for requesting annexation. The pre-annexation agreement should include agreements on deferred property taxation, zoning changes, public services and improvements, and building codes. At this time it would appear most desirable to seek a zoning change for the entire new community as a planned-unit development under the existing Open Space Ordinance. However, this would first (or simultaneously) require rezoning of the site to standard residential, apartment, and building districts. Preferably,

the opportunity would arise to cooperate with the Town and its planning consultant to completely rewrite the zoning ordinance and PUD sections.

3. Ways by which to assure the appropriate and complementary zoning of adjacent parcels and to deter premature zoning changes prior to the Corporation's own request. An immediate request for annexation of the new village site might encourage adjacent property owners to do likewise and thereby reduce the possibility that their properties would remain unincorporated subject to county zoning.



STATE AND FEDERAL ASSISTANCE

A wide variety of state and federal assistance programs may be applicable to the development of the village and the growth center, including the Town of Chesterton. Serious consideration should be given to all eligible projects and each available program to determine its potential benefits, the availability of funds or other types of assistance, the timing of such assistance, and the effort required to request and utilize such assistance.

Among the most important legislation to be reviewed and evaluated is Title IV of the Housing and Urban Development Act of 1968. It provides for federal financial guarantees to help developers finance certain land and land development costs in the establishment of new communities. Also to be seriously watched is the proposed Urban Growth and New Community Development Act of 1970 currently under consideration in Congress. It would provide extensive assistance well beyond that of existing legislation.

The ultimate policy of the Bethlehem Steel Corporation should consider three factors:

1. The extent to which state and federal assistance programs can help achieve area-wide objectives which are not otherwise achievable.
2. Which assistance programs will specifically benefit the Town of Chesterton as well as the new village.

At this time it would appear that those elements of the new community which would best qualify for state and federal assistance would be STH 49 interchanges, housing, sewer and water utilities, public open spaces, and certain community facilities.

Assistance Programs.
These sources should be considered for financial or technical assistance to the village and the Town of Chesterton.

Assistance to the Town of Chesterton

- U.S. Department of Housing and Urban Development:
Advance Acquisition of Land for Public Works and Facilities
Basic Water and Sewer Facilities
Open Space Land
Public Facility Loans
Historic Preservation Grant
Public Works Planning Advances
Comprehensive Planning Assistance
- U.S. Department of Interior:
Outdoor Recreation Financial Assistance; provided through the State of Indiana

Assistance to the Village:

- U.S. Department of Housing and Urban Development:
New Communities Guarantees; also Supplemental Grants to Local Bodies
Home Mortgage Insurance
Interest Supplements on Mortgages for Home Ownership for Lower Income Families
Interest Supplements on Mortgages for Rental Housing for Lower Income Families
Low and Moderate Income Housing – Financial Assistance for Nonprofit Sponsors
Mortgage Insurance for Condominium Housing
Mortgage Insurance for Cooperative Housing
Mortgage Insurance for Land Development and New Communities
Rent Supplements
Mortgage Insurance for Experimental Housing
Mortgage Insurance for Low and Moderate Income Housing – Market Rate
Mortgage Insurance for Moderate Income Homes
Mortgage Insurance for Multi-family Rental Housing
- U.S. Small Business Administration:
Lease Guarantees for Small Businesses
Small Business Loans

THE DECISION PROCESS

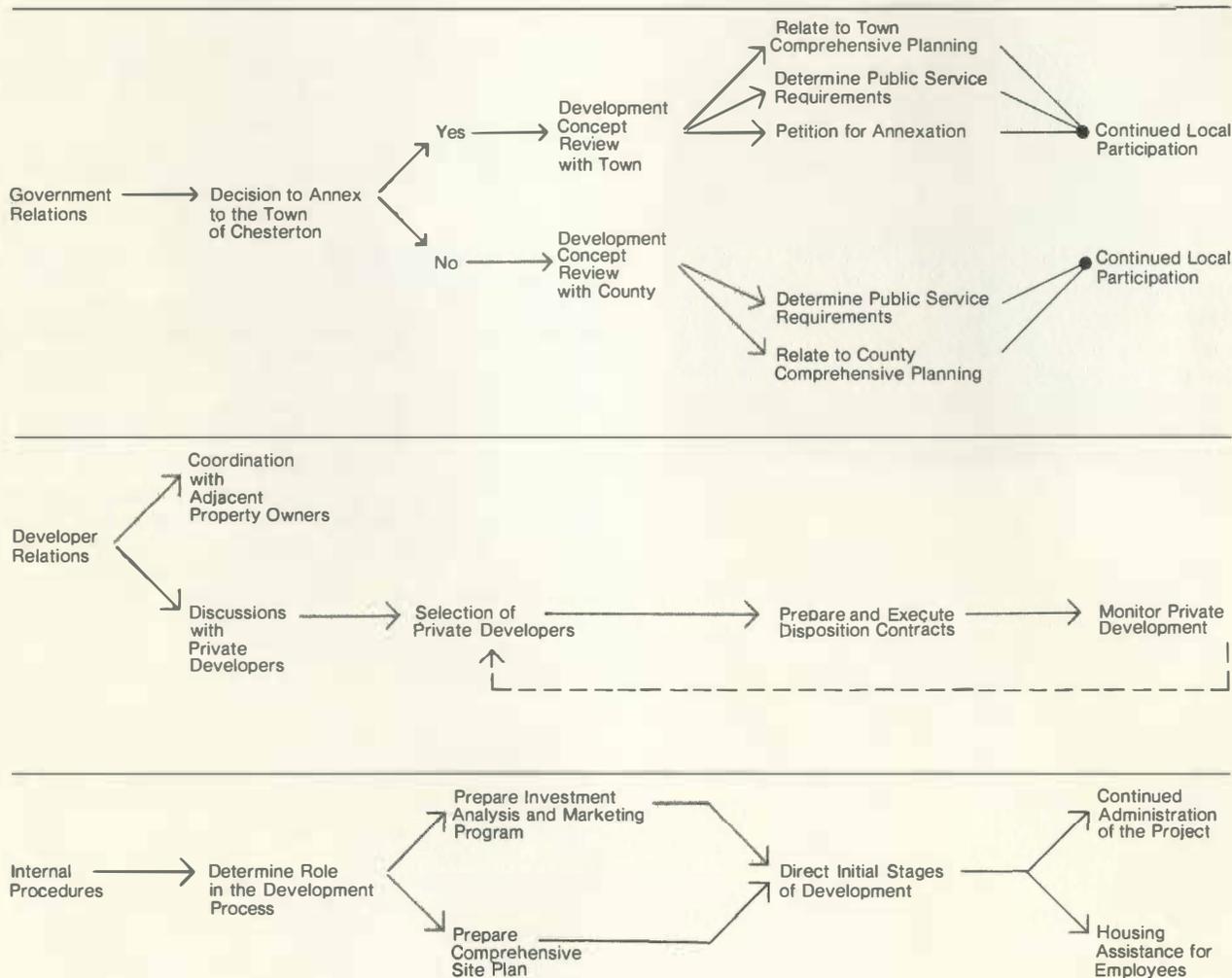
The inherent flexibility of the recommended new community concept and the importance of the foregoing policy issues requires a methodical procedure for decision-making in subsequent stages of the planning and development process. The Corporation has already given substantial thought to such a decision-making process and has established its basic guidelines.

To assist in the finalization of these procedures the foregoing issues requiring decisions may be organized into three general categories—government relations, developer relations, and internal procedures.

Three major decisions are required immediately:

1. Should the new community be annexed to the Town of Chesterton?
2. Who will be the private developers, and how can adjacent property owners or their developers be coordinated?
3. What will the specific role of the Corporation be in all subsequent stages?

Preferably, the answers to these and related questions will result in a continuing, long-range involvement by the Corporation in the development of the new community and the Chesterton area to assure their ultimate quality.



The Decision Process. Corporate decisions on planning and development issues are interrelated and can best follow a methodical procedure.

**REVIEW OF MARKET STUDIES
AVAILABLE STUDIES**

In recent years a significant number of economic, population and housing forecasts have been made for northwestern Indiana and its local jurisdictions. Yet, no single study has been of sufficient depth and breadth to provide a complete and final forecast upon which to base the economic feasibility of developing the Bethlehem Steel Corporation site. However, as a group they do endorse the growth potentials of northern Porter County, and the question is not whether there will be a market for new housing, but rather at what pace it should be built.

The consultant assignment was to review available forecasts, compare them with each other, and provide its own professional judgment as to market demand. A complete economic model will be developed at a later stage in the planning and development program.

Among the forecasts reviewed were the following:

1. Bureau of Business Research, Indiana University, 1966.
2. Lake-Porter County Regional Transportation and Planning Commission, 1969.
3. Real Estate Research Corporation, November, 1968.
4. Levitt and Son, August, 1969.
5. Federal Housing Administration, January, 1970.
6. Town of Chesterton (Beckman, Swenson & Associates) March, 1970.

All sources estimated the 1970 population of Porter County to be from 87,000 to 100,000 persons—the most conservative of which was the FHA estimate. Forecasts for 1980 range from 155,000 to 162,000 persons. Although growth has progressed more slowly than anticipated in the late 1960's throughout the Gary-Hammond-East Chicago SMSA, the growth of Porter County has been the most rapid and represents about 30 percent of all regional growth. In the 1970's it will represent about 40 percent of all regional growth. Refer also to Tables 4-8 in the Appendix.

Likewise, the various reports indicated a range of annual new housing demand in Porter County of from 1600 units to 1855 units during the coming decade. Approximately 200 units per year will be generated by new Bethlehem Steel Corporation employees alone, according to plant officials. The bulk of the housing demand from all sources will be for moderate priced housing.

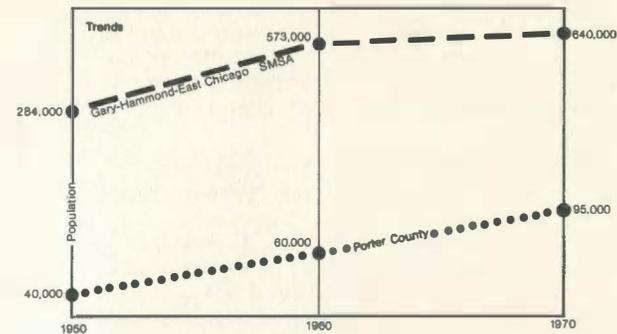
POPULATION FORECASTS

A reliable current forecast for Westchester Township is that it will grow from 19,000 persons in 1970 to 35,000 persons in 1980—an increase of 16,000 persons.

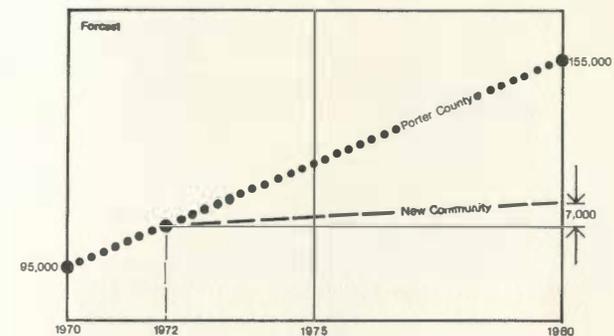
A preliminary estimate of the holding capacity of the Corporation's 556-acre site, assuming a range of desired densities, is from 7,000 to 9,000 persons.

Given this population level the next question is, "How fast could this level be reasonably reached?" Assuming that the new community was developed from zero to 8,000 persons in the decade 1971 to 1981, it would have to attract about 19 percent of northern Porter County's growth or 50 percent of Westchester Township's growth. Assuming the new community was to grow at half that rate (over a 20 year period), it would have to attract about 10 percent of northern Porter County growth the first decade and 6 percent the second.

The attraction of 20 percent of all northern Porter County growth within the next decade appears to be near the upper bound of expectation for the new community. The 20 percent level of growth would be obtainable only with an outstanding housing package combined with an active marketing program. This is certainly within the realm of possibility if inducements are granted to some 6,000 new employees and their families to be brought into the area by the Corporation prior to 1980.



Population Forecast. Recent and future population trends indicate that the new community needs to attract 19 percent of total growth in northern Porter County in next ten years.



HOUSING FORECASTS

An estimate of the demand for housing on the new community site can be determined by relating it to the anticipated increase in the labor force of the region. The labor force can usually be determined by multiplying the forecasted population by a range of 0.3 to 0.4.

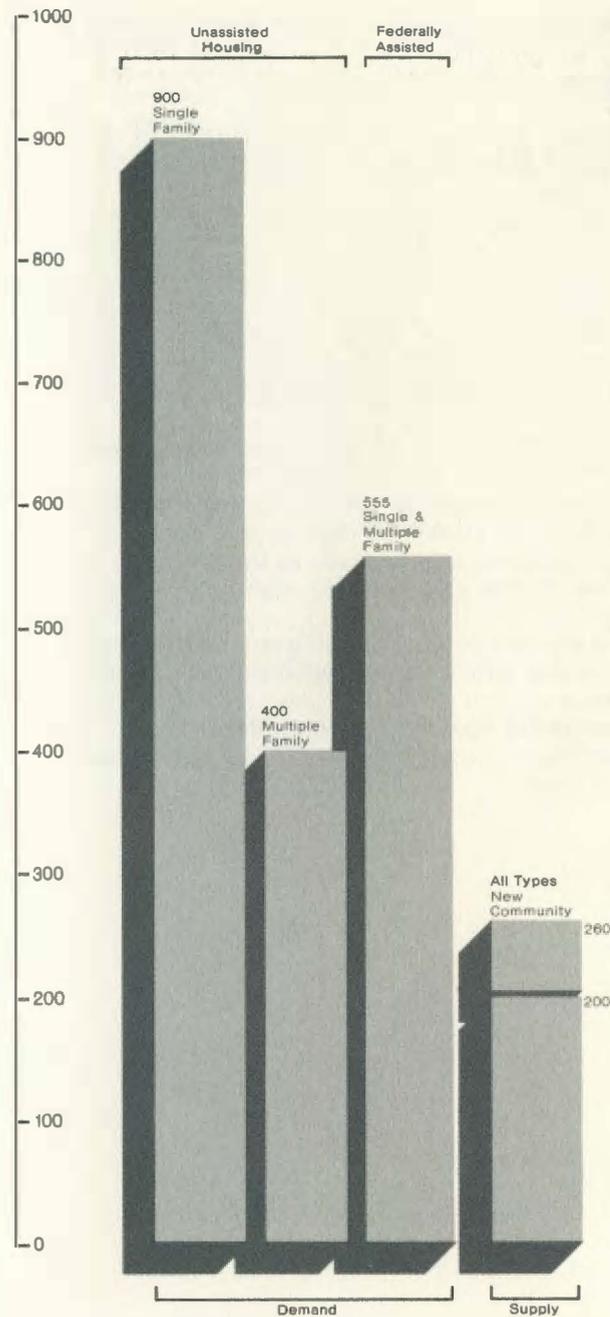
Accepting the population forecast and assuming that Bethlehem Steel Corporation will add 6,000 employees by 1980, the jobs provided by the Corporation alone will absorb 20 percent of the total labor force of Porter County and about 30 percent of northern Porter County. After 1980, when the full employment level of the plant is reached, the Corporation's percentage of the total county employment is anticipated to drop significantly, resulting in a more diversified housing demand.

The demand for housing can be approximated by assuming that for every additional person added to the labor force 0.8 additional housing units will be required; this accounts for single persons and multiple workers in a family.

This results in a 1970-1975 annual demand for housing of 1600 units in Porter County. This figure is 255 units per year less than FHA forecasts of housing needs for the Porter County area in the 1969-1971 period. More specifically, the FHA anticipated the need for 1300 non-assisted housing units and 555 government assisted units. Slightly over 50 percent would be single-family homes.

A major question related to the Corporation's site is "How many years will be required to complete ultimate development?" If, for example, one-half of the new Bethlehem Steel employees could be attracted to the new community site, about 2,400 dwelling units or 8,400 persons would be generated in a decade. This constitutes the entire holding capacity of the site. If only one-quarter of the new employees of Bethlehem Steel were attracted to the site, about half of the new community holding capacity could be achieved within ten years. Alternatively, if one-fifth of the anticipated demand for new dwelling units in northern Porter County could be accommodated on this site, the holding capacity could be reached within ten years.

To attract sufficient population for complete development of the new community by 1980 with equal portions of population attributed to the Bethlehem Steel Corporation labor force and to the remainder of the labor force in northern Porter County, 24 percent of Bethlehem Steel employees plus 17 percent of the remainder of the labor force gains of northern Porter County would have to be attracted.



Housing Forecast. The Federal Housing Administration forecasts a demand for 1,855 new housing units per year in Porter County in 1970 and 1971; and demand will increase thereafter. The new community supply will be 200-260 per year beginning in 1971.

SUPPORTING ACTIVITIES FORECASTS

To attract sufficient population for complete development of the new community with 1/4 of the population attributed to the Bethlehem Steel Corporation labor force and 3/4 to the remainder of the northern Porter County labor force, 12 percent and 26 percent of the respective labor force gains would have to be attracted to housing in the new community.

A major constraint in the design of the community will be the predominantly low price and rental levels of the housing units to be provided. Half of the non-assisted ownership units will have to cost \$20,000 or under and about 80 percent under \$25,000. Over 50 percent of the non-assisted rental units must be under \$200 monthly and over 90 percent under \$260 monthly. These figures do not include the government assisted units.

In the final analysis, the actual market demand will require determination of the following factors:

1. The confirmed rate at which the Bethlehem Steel Corporation will expand its labor force.
2. The inducements to be made by the Corporation to entice its new employees to reside in the new community.
3. The amount of additional "basic" employment opportunities which are created in northern Porter County.
4. Competition from other developments.
5. The attractiveness of the new community in the market place.

The Duneland *School system* is converting to a 6-3-4 plan (grades K-5, 6-8, and 9-12). The design module accepted by the school system calls for 700 students in elementary (K-5) schools and 1,000 for junior high (6-8) schools.

Based upon reasonable assumptions of housing types and population characteristics of the new community, ultimate development will yield an approximate total of 2,360 students of which 1145 will be elementary, 755 junior high, and 460 senior high students.

The recent reorganization of the Duneland School District provides excess capacity for the existing senior high school. The school is expected to be sufficient to handle the supply of senior high students for the next several years. This factor, combined with the proximity of the high school to the new community dictates that a new senior high school site need not be provided within the new community. Ultimately, a second senior high school will need to be provided elsewhere in the school district.

The ultimate population within the new community is expected to supply about 75 percent of the demand for a junior high school of 1,000 students. This percentage, combined with demand from the area immediately adjacent to the new community site, is enough to justify the reservation of a site within new community for a junior high school. Such a facility is also a positive environmental factor for attracting residents.

Elementary school population demand, estimated at approximately 1145 students, is more than sufficient to support at least one grade school. For school planning purposes, it is assumed that all of the grade school students north of the Penn-Central Railroad tracks will attend the new Brummitt Acres school to the northeast of the new community. Subtracting these students from the total estimated demand, approximately 868 students from residences south of the railroad tracks will require new elementary schools. At a minimum, one new elementary school site will be required within the development. Since there is considerable potential for residential development in the immediate vicinity of the new community, especially east of STH 49 and south of Porter Avenue, the possibility of a second elementary school site in or near the development should be considered.

Commercial development sufficient for providing basic services to the new community and its immediate surrounding area should be provided. The range of population necessary to serve a community (sometimes termed "neighborhood") center is from 10,000 to 15,000 persons. The new community alone would

be almost large enough to support such a center. Based upon the entire trade area east of STH 49, the community center could serve a substantially larger population in the reasonably near future. The gross leasable square footage within the community center should range between 30,000 to 50,000 square feet.

The development should contain at a minimum the following establishments:

1. a large full line super market
2. an apparel store (or stores) for men and women
3. a drug store
4. medical offices
5. a dry cleaning and laundering establishment
6. a bank
7. a general merchandise store
8. a restaurant
9. public meeting rooms

In addition to the community center, which is expected to draw patronage from both inside and outside the new community, a population level of 8,000 persons can additionally support convenience type shopping at a minimum of two locations within the development. Convenience shopping trips are those trips which are within walking distance or a very short drive from place of residence.

Church sites should be provided within a development of this scale. Standards for Protestant churches are often quoted in the 2,000 to 2,500 persons per parish range. Based on this standard, the new community site could support three Protestant churches at ultimate development. Catholic and Jewish places of worship generally require larger base population as they generally have relatively larger congregations. A total of four sites should be set aside for all denominations, initially.

EXISTING ENVIRONMENTAL FACTORS

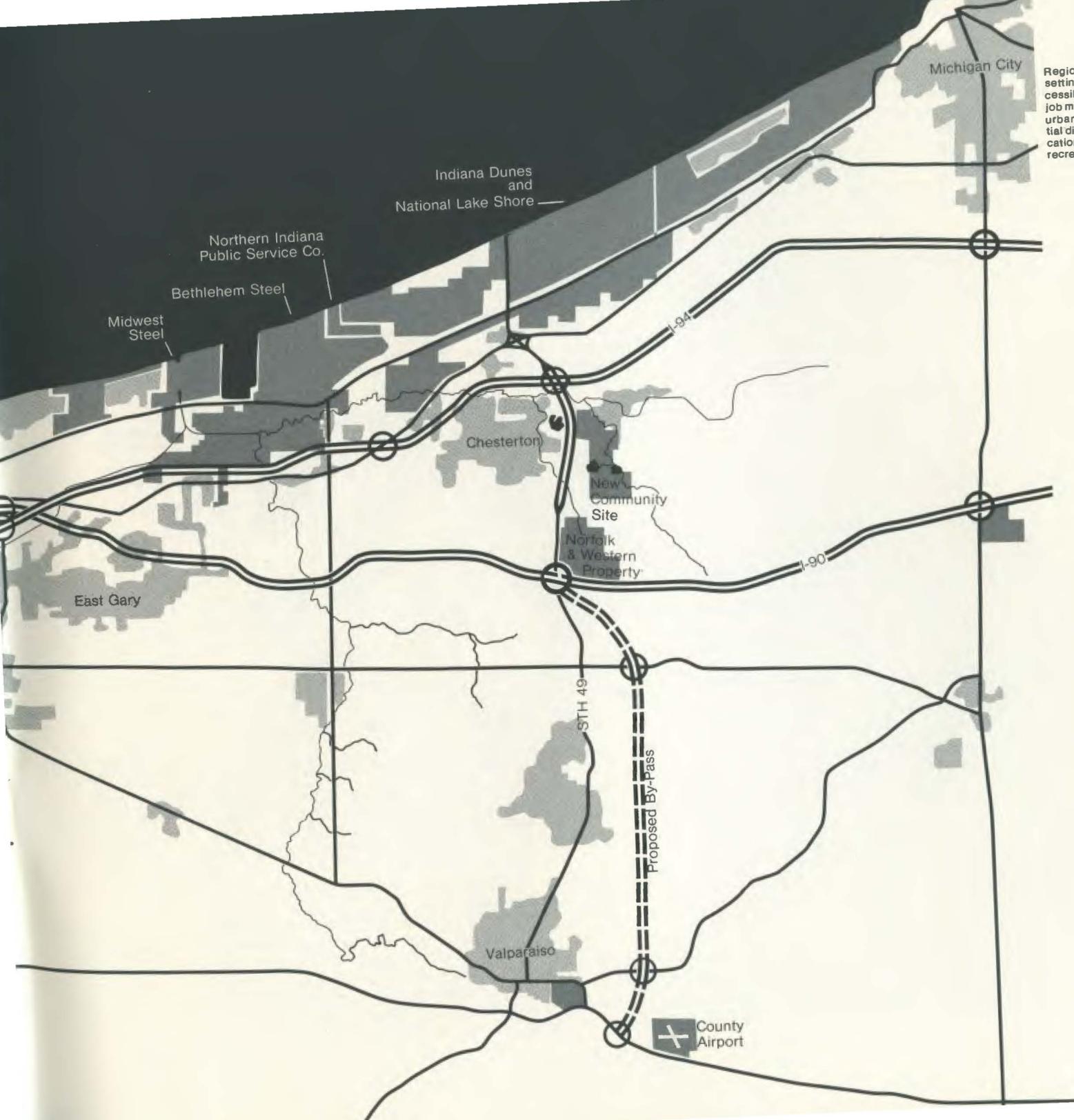
This chapter summarizes findings and conclusions from the examination of existing environmental factors. Each factor was examined to the degree necessary for the evaluation of new community potentials and perspectives.

THE REGIONAL SETTING

The regional setting provides high accessibility, an expanding job market, established urban centers of substantial diversity, and outstanding recreational opportunities. These factors combine to make an excellent setting for a new community at the proposed site.

Findings:

1. The proposed site is located in the Chicago-Detroit regional corridor which is a part of the Great Lakes megalopolis stretching from Milwaukee to Pittsburgh and containing 25,000,000 people; this is one of only 12 such urban complexes in the entire world, and is second only in the United States to the eastern megalopolis (Boston-Washington).
2. The site is located in northern Porter County which is part of the Gary-Hammond-East Chicago Standard Metropolitan Statistical Area; this SMSA (Lake and Porter Counties) is a part of the interstate regional planning district of Northeastern Illinois and Northwestern Indiana.
3. The site is located amidst what is likely to be the heaviest concentration of transportation, communication, and utility lines in the nation, connecting the east, midwestern, and western sections of the country around the southern-most tip of Lake Michigan. Its vicinity will be attractive to other industries and distribution activities which will offset the Corporation's existing one-industry burden.
4. Porter County, a traditionally rural county, is experiencing rapid urbanization as a result of the new steel related industries, and it is anticipated that the entire northern one-half of the county will be committed to urban uses by the year 2000 or sooner.
5. The Town of Chesterton, adjacent to the proposed site, is a natural focal point for intensified development because it is located along STH 49 at the midpoint of a triangle composed of Easy Gary, Michigan City, and Valparaiso.
6. The region is enhanced by expanding opportunities for higher education at the University of Indiana-Hammond, Purdue University-Westville, Valparaiso University, and Valparaiso Technical Institute.
7. The site is located less than two miles from the main entrance to the Indiana Dunes State Park and the National Lake Shore, one of the largest and most accessible waterfront park complexes in the nation; the parks occupy 2,000 acres and 6,000 acres respectively, and anticipate between 2 and 2½ million visitors per year.



Regional Setting. The setting provides high accessibility, an expanding job market, established urban centers of substantial diversity, higher education, and outstanding recreational opportunities.

LAND CHARACTERISTICS

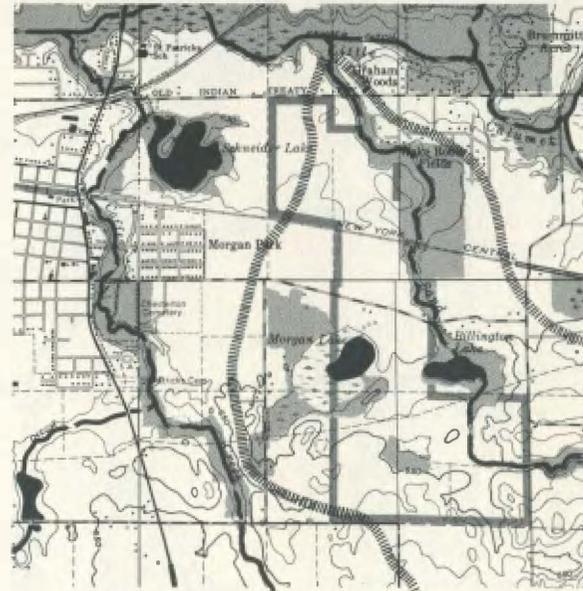
The characteristics of the land on and about the site include physiography, land-use, and ownership. The land characteristics are generally suitable for development of high quality. However, the existing boundaries of the site and the lack of control over adjacent properties seriously jeopardizes both market and environmental potentials. The desirability of a recreational lake or lakes warrants further engineering and legal studies.

Findings:

1. The site is located within a highly attractive, mid-western landscape, between the unique sand dunes near Lake Michigan and the hilly, wooded, lake area of the Valparaiso moraine.
2. The major environmental corridor of the Little Calumet River (the watercourse and adjacent wooded area) and the minor environmental corridors of Sand Creek and Coffee Creek surround the proposed site. Portions of Morgan and Billington Lakes fall within the site boundaries.
3. The site itself is predominantly open farm land, relatively flat, and partially wooded. It conveniently lies within a single drainage basin served by Sand Creek.
4. A preliminary soil investigation by Testing Service Corporation and Chas. W. Cole & Son concludes that conditions are generally suitable for low and medium density urban development. Low lands in the vicinity of Morgan and Billington Lakes are generally unsuitable, and the development of these lakes for recreational purposes is questionable, requiring further study.
5. Urban land-uses in the area are concentrated almost entirely west of relocated STH 49 and are typical of small midwestern towns; since 1960 new residential subdivisions have been developed in the vicinity of Indian Boundary Road northeast of the proposed site and are occupied by approximately 300 single family homes. Scattered residential lots are being developed along several highways in the area.
6. The concentration of railroad rights-of-way in the Town of Chesterton present obstacles to sound community development. Likewise the Penn-Central Railroad which bisects the proposed site carries approximately 40 freight trains per day and is an undesirable influence.
7. The 556-acre Bethlehem Steel Corporation site is irregular in shape. Although its development is entirely feasible, the present boundaries do not include properties which are important to its ultimate

potentials. The proposed site does not control the entire environmental corridor and drainage system of Sand Creek, nor does it control the two potential recreation lakes. This presents numerous technical and legal problems related to providing storm water drainage for the site, protecting the landscape features of these corridors, and providing water-oriented recreation. The site does not have adequate visual exposure to relocated STH 49, nor does it include properties adjacent to critical highway intersections. This site does not "sell itself" to passersby on STH 49, nor does it protect the capacity of access roads and the character of abutting properties.

8. Communications with nearby property owners indicate that they may be willing to sell their land, consider joint ventures, or cooperate in other ways if they are adequately compensated.



- Boundary of drainage basin
- Streams and direction of flow
- Wooded Areas

Land Characteristics. The site conveniently lies within a single drainage basin served by Sand Creek and is generally suitable for urban development.

COMMUNITY FACILITIES

The availability of adequate community facilities is essential. These facilities include transportation, education, recreation, utilities, and other public services.

Findings:

1. Northern Porter County is extremely well served by east-west highways, including four U.S. routes and three interstate routes (I-80, I-90, I-94); it is less well served by north-south highways. However, the proposed site is strategically located on relocated STH 49, the principal north-south highway.

2. The current State Highway Commission building program allocates as much as one-third of all state construction funds to highways in northwestern Indiana; nearby improvements are programmed or planned for I-94, STH 49, STH 149, STH 249, U.S. 12, and U.S. 20. A review of highway plans indicates that the proposed design for relocated STH 49 in the vicinity of the site will be inadequate to serve nearby developments which are being committed subsequent to State Highway Commission forecasts and designs.

3. Generally, the county and local road system within the area is grossly deficient to accommodate anticipated urban development. The road system as a whole lacks continuity, and many sections of local roads will need to be widened and improved, especially near intersections with major highways. In the vicinity of the site Indian Boundary Road, Porter Avenue, 1100 North Road, and 250 East Road must all be improved, including a grade separation on 250 East Road at the Penn-Central Railroad crossing.

4. The area is currently served by the South Shore Commuter Railroad to Chicago, but does not have local public transit. However, northern Porter County is included in the Southward Transit Area Coordination (STAC) Study, and preliminary findings of this study indicate that commuter railroad service can be maintained or improved, and local public transit may be feasible in the future. At this time it would appear that local transit service between the new community and the steel complex is a strong possibility.

5. The Porter County airport is potentially adequate to serve the future needs of the area, but it should attract scheduled commuter air service to other principal airports such as Chicago, Detroit and Indianapolis. The status of the regional airport proposal for northern Indiana is active. Current information indicates that the preferred site is in the vicinity of Crown Point. Though technically feasible, the proposed regional airport site east of Chesterton is

not being actively promoted, and will have an adverse impact on the proposed new community.

6. The Duneland School District has become one of the most progressive and modern districts in northern Indiana due in part to the property tax revenues of Bethlehem Steel Corporation and its active school superintendent. Its potential level of quality can be a major factor in the development potentials of the site. At present there are no public schools located east of new STH 49, and all school children must be bused to schools in the Town of Chesterton. However, a new elementary school will be constructed and opened in September, 1971 at the intersection of Indian Boundary Road and 250 North Road. The capacity of this school is such as to serve that portion of the Bethlehem Steel site which lies north of the Penn-Central Railroad.

There is considerable flexibility in the graded structure of the local system, and the superintendent is dedicated to a single high school for a number of years to come, partly as a catalyst for racial integration. However, it will be necessary to provide new sites and school buildings for elementary school children living south of the Penn-Central Railroad and for all junior high school students living east of STH 49. The superintendent envisions an ultimate graded structure based on the K-5, 6-8, 9-12 system. Optimum capacities are considered to be 700 students for elementary schools and 1,000 students for junior high schools.

7. Vocational education programs have not yet been developed in the Duneland School District, but the Duneland School District is working with its counterparts in Portage and Valparaiso to consider a county-wide vocational school. This type of educational program should be considered in conjunction with the development of the new community.

8. Public parks and open spaces, with the exception of the Indiana Dunes State Park and National Lake Shore, are scarce. None are located east of STH 49. It will be necessary for the new community to provide for its own recreational and open space needs. Local governments must be encouraged to rapidly expand open space acquisition while the natural amenities can still be preserved, preferably along environmental corridors. The features of the Little Calumet environmental corridor may be of sufficient merit to attract financial participation of national organizations such as the Nature Conservancy.

9. Preliminary engineering studies by Chas. W. Cole & Son indicate that public sewer and water utilities can be effectively provided by the Town of Chester-

LOCAL GOVERNMENT

ton. However, the existing capacities of both treatment systems will need to be expanded at their source to accommodate all future development east of STH 49, and major extension of the underground utilities will be required. The most probable connection to the sanitary waste water system would be via a new interceptor along Indian Boundary Road and running southward through the site with residual capacity to serve the Norfolk and Western Railroad industrial complex to the south. A lift station will be required somewhere in the vicinity of STH 49 and Indian Boundary Road. The existing water supply wells near Porter Avenue west of STH 49 can be expanded and a water main can be extended eastward. An elevated water storage tank will be required to serve the new community. As alternatives it is technically feasible for the new community to provide its own public sewer and water system and treatment facilities.

10. There is a potential in the vicinity of Chesterton for other community facilities which would desirably be located in or adjacent to the new community. These include a new medical clinic, and a new YMCA.

The planning and development should take into account the boundaries, attitudes, capabilities, ordinances, and other aspects of local government.

The capabilities of local governmental units will need to be substantially improved if the overall level of the environmental quality, public services, and fiscal management is to complement the new community. Conversely, the proposed new community should be looked toward as a means of accomplishing these local objectives. The potential development seems to be compatible with the existing local planning programs which are generally in their infancy, but zoning and subdivision regulations will present certain obstacles which are not unusual in cases of fringe area development like this. The Building Code of the Town of Chesterton, as it is written, appears to offer flexibility for selecting various building materials and construction materials, but administration of the code to date has not made use of the appropriate provision.

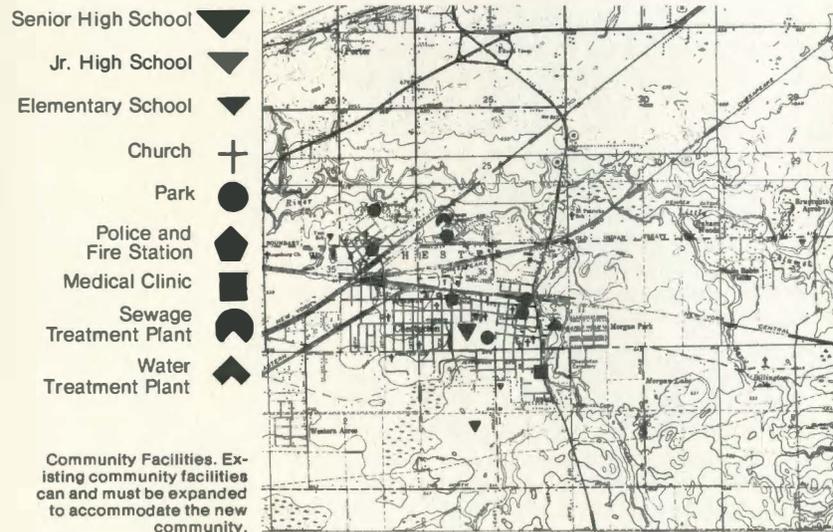
Findings:

1. The proposed site is located in the unincorporated portion of Westchester Township, and is presently subject to the control of Porter County Board of Supervisors. The property is presently zoned R-2 for single family residences on lots no smaller than 16,000 square feet with 100 ft. of frontage. This represents a new residential density of three units per acre.

2. The Zoning Ordinances of Porter County and the Town of Chesterton both allow for "planned-unit development". The Town, under its Open Space Development provision, permits flexibility of design but the PUD cannot include uses or densities not otherwise permitted in the existing zoning district, i.e. residence district, apartment building district, business district, etc. It can be expected that the existing zoning ordinance will present some technical obstacles. A new ordinance is to be prepared in 1970 and might be influenced by the Bethlehem Steel Corporation new community.

3. The Subdivision Ordinances of Porter County and the Town of Chesterton will provide some technical obstacles relative to design. Greater flexibility may exist with the administration of the Chesterton ordinance, which should be substantially rewritten.

4. Porter County and the Town of Chesterton have no building codes for single or two-family residences, but refer to building rules and regulations of the Administrative Building Council of Indiana pertaining to multiple-family residences. However, the



Town of Chesterton Building Code states, "New materials or methods of construction coming into use after adoption of this ordinance may be used in construction work in the Town of Chesterton after such materials and methods of construction have been approved by the Board of Trustees of the Town of Chesterton after due advice and consultation with the Building Commission." This ordinance appears to grant significant flexibilities for innovation which might not be granted at the county level. However administration of the code to date has been very strict and the potential flexibility has not been granted.

5. The site is adjacent to, but not yet contiguous with, the existing boundaries of the Town of Chesterton. The Town boundaries are very irregular and form an elongated municipality paralleling the Chesapeake and Ohio Railroad. The Town is in need of new annexation policies which will provide for an effective service area. Recently, the owners of the proposed Holiday Inn in the northwest quadrant of the intersection of Indian Boundary Road and relocated STH 49 have requested and received annexation. A distance of only several hundred feet will now separate the site from the Town. The site is approximately 1/2 mile from the existing Town limits in the vicinity of Porter Avenue.

6. The Town of Chesterton is presently governed by a Town Board of five elected members whose chairman is selected by the board itself. It also has an active Planning Commission. It is considering actions to upgrade its status to a fifth class city. The basic motive is to provide for the mayor-council form of government and full-time staff resources. Additional tax advantages could be received if the Town was to become a fourth class city (minimum population 10,000 persons), and still greater advantages of land-use control could accrue if it were a third class city (minimum population 20,000 persons).

7. In March of this year both the Town of Chesterton and the Town of Porter adopted resolutions permitting the question of merger (or consolidation) to be placed on the official May, 1970 ballot. However, the voters defeated the merger proposed by a very slight margin.

8. Until recently, the apparent local attitude of residents and public officials in the Town of Chesterton has been apathetic and at times negative with regard to growth and development. Several recent actions, however, indicate that this attitude is changing and that beneficial growth will be looked upon with favor, but will be closely monitored.

9. A potential problem is the fact that pressures for growth, especially scattered development on separate parcels, will outpace the capabilities of the Town of Chesterton to control it and service it. Therefore, the advantages of large scale, planned-unit developments with proposed community facilities and services would be beneficial.

10. The Town does not presently maintain a full-time professional staff. With the exception of a small, full-time police department, all other activities such as law, engineering, fire fighting, etc. are provided by part time or volunteer assistance, or paid consultants. It is imperative that the Town direct its efforts toward establishing the nucleus of a full-time professional management team.

11. The existing financial condition of the Town places serious constraints upon its capabilities. It has not yet met the qualifications for many financial assistance programs of various federal agencies which it must do as soon as possible to supplement its local resources.

12. Comprehensive planning activities related to the area are being conducted by the Lake-Porter Counties Regional Transportation and Planning Commission, the Porter County Planning Commission, the Town of Chesterton, and the Town of Porter. The only planning elements published to date are those of a limited nature produced by a consultant for the Porter County Planning Commission. The regional agency has not yet completed any of its proposed plans, and is only about to begin its three year transportation study. However, it is in the process of conducting a major study of the impact of the Indiana Dunes National Lake Shore on Northwestern Indiana. The professional consultant has produced his first report of background analyses in May, 1970. The Town of Chesterton and its planning consultant have also completed reports of background studies in March directed toward a comprehensive plan for the town. The planning phase will be carried out in 1970 and can be substantially influenced by proposals for the new community. Finally, the Town of Porter has also retained a consultant to begin work on a comprehensive plan.

VISUAL APPEARANCE

The visual appearance of the site and surrounding properties was examined. Visual appearance of the proposed site and nearby areas is presently attractive and unincumbered except for the Penn-Central Railroad. However, the narrow, north-south corridor occupied by relocated STH 49 and uncontrolled properties presents a serious threat to the overall visual appearance of the area and the quality of the new community.

Findings:

1. The general appearance of the area east of relocated STH 49 is good to excellent. New development along Indian Boundary Road has been of generally high quality and well controlled. Most other areas remain rural in character.
2. Because of the scarcity of vegetation in the area, all healthy existing groves of trees should be maintained to the extent possible. The general openness of the area will permit a single blighting influence to be viewed from afar and have an impact beyond its own boundaries.
3. The primary concern should be focused on the visual characteristics of relocated STH 49 and properties between it and the new community. The existing design of the highway and its intersections with local roads does not now adequately guarantee a visual appearance commensurate with the importance of these facilities to the Chesterton area and to the National Lake Shore. Greater efforts should be focused on the design details of these state and local roadway improvements.
4. More importantly, the proposed site does not include lands abutting relocated STH 49. Not only does this restrict exposure of the new community for marketing purposes and isolate its design qualities from public view, it leaves its own gateway areas unprotected and at the mercy of insensitive developers. Because of the high level of accessibility of these intervening parcels, great pressures can be anticipated for highway oriented commercial development of low visual quality. This can have a marked affect on the potentials and appearance of the new community itself. This type of development is now occurring in the vicinity of relocated STH 49 and 1100 North Road.
5. The Penn-Central Railroad presents definite visual problems that will need to be dealt with by the proper location of land-uses and by landscape design techniques.
6. The greatest assets of the site are the water-courses and the existing lakes. Site development should take maximum advantage of these features.

Visual Appearance. The appearance of the site and nearby areas is generally attractive and unincumbered, but the Penn-Central Railroad presents a special problem.



Approach to site (right side) along Indian Boundary Road.

Sand Creek north of Porter Avenue.



INTERPRETATION OF FINDINGS

The findings and conclusions of the previous chapter have been interpreted in the respect to three contemporary planning concepts: the high accessibility corridor, the accelerated growth center, and service thresholds.

These concepts are becoming well-accepted planning guidelines and were instrumental in formulation of the development concept for the Bethlehem Steel Corporation site.

They are of substantial importance not only because of their own inherent value, but because state, regional and local agencies have not yet completed comprehensive plans for northern Indiana. In lieu of such plans it is necessary for the Corporation to justify the compatibility of the new community concept with the best interests of the area as a whole. This will be required in each initial presentation to a public body. If it is not an actual requirement, such considerations will very likely result in a better reception and faster processing of proposals and official applications. Since delays usually represent additional costs these considerations now may also reduce future expenditures.



Approach to site (in background) along Porter Avenue.



Penn-Central Railroad within the site.

THE REGIONAL HIGH ACCESSIBILITY CORRIDOR

A generalized regional development concept is recommended as a basis for site planning; it is the high accessibility corridor concept. This concept is based on the principle of relating land uses and the level of accessibility they require to transportation systems and the level of accessibility they provide.

A high accessibility corridor is a strip-like concentration of land-uses, requiring accessibility to all or a large section of the metropolitan area, which is organized along one or more high-speed, high capacity transportation routes. It may be created largely by chance through a series of loosely related events, or it may be created through conscious effort based on the official policies of a comprehensive plan.

The corridor should contain high-speed, high-capacity transportation facilities both for private motor vehicles and for public transit and also may contain railways, waterways, or other forms of ground transportation.

Land-use within the corridor should require levels of accessibility compatible with the levels of accessibility provided by the transportation facilities and should be of such intensity as to support but not hinder the efficient operation of these facilities.

The corridor should be planned and programmed to maximize desirable relationships between transportation facilities and land-uses.

The corridor should function as a part of a total system of high accessibility corridors. Such a system is now a basic element of the comprehensive plans of North-eastern Illinois and Chicago.

A hypothetical section of high-accessibility corridor of regional proportions may be formed by two interstate highways located approximately 4 miles apart with principal arterials connecting them via grade-separated interchanges approximately 4 miles apart. The third-level roadways, principal arterials (area-wide), are located parallel to and a distance of one mile inside each interstate highway. Other minor arterials form a one-square-mile grid system throughout the corridor. Regional employment concentrations are best located in the narrow, one-mile corridors adjacent to interstate highways and in the vicinity of grade-separated interchanges. The concentrations produce high volumes of traffic daily, moving over relatively long distances to and from work. Between these employment corridors are a series of residential communities, each of which occupies approximately four square miles and contains between 10,000 to 20,000 persons. Two such communities located between principal arterials connecting interstate highways could form the basis of a small city. Two large cells, four miles on the

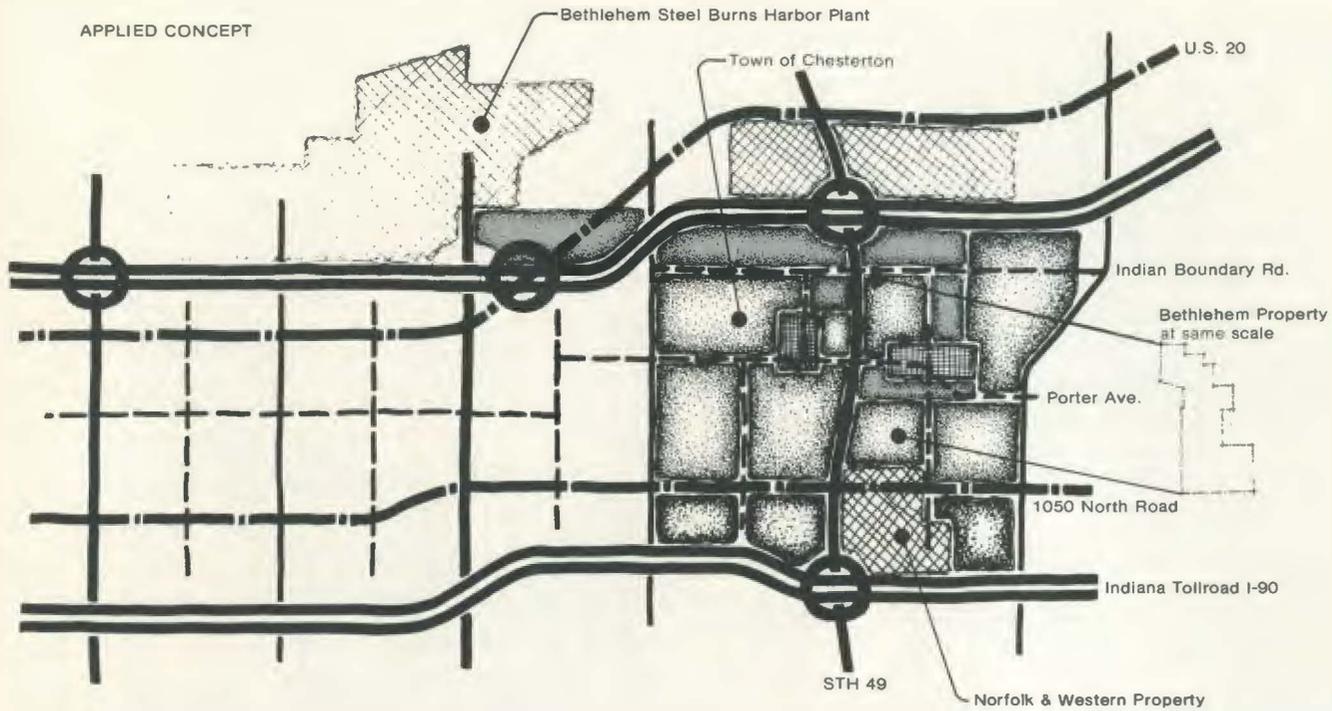
side, could form the basis of a medium-sized city. Therefore, the concept has a great deal of flexibility throughout time as growth expands and intensifies.

Existing transportation facilities and development trends in northern Indiana are compatible with the regional high-accessibility corridor concept. In the Chesterton sector Interstate Highways 90 and 94 are parallel to each other and approximately four miles apart. Routes 49 and 149 form principal arterials connecting interstate highways at four mile intervals. Principal arterials (area-wide) are available at 1050 North Road and at U.S. 20.

Existing, industrially zoned lands (including the Bethlehem Steel Corporation complex, the Norfolk and Western property and a third site northeast of Chesterton) all fall within or adjacent to the corridors established by the freeway system and parallel arterials. The Towns of Chesterton and Porter together conveniently occupy one, four-square-mile community cell with a population potential of over 15,000 persons. East of relocated STH Route 49 the proposed new community occupies a significant portion of another cell which has a potential for over 15,000 persons also.

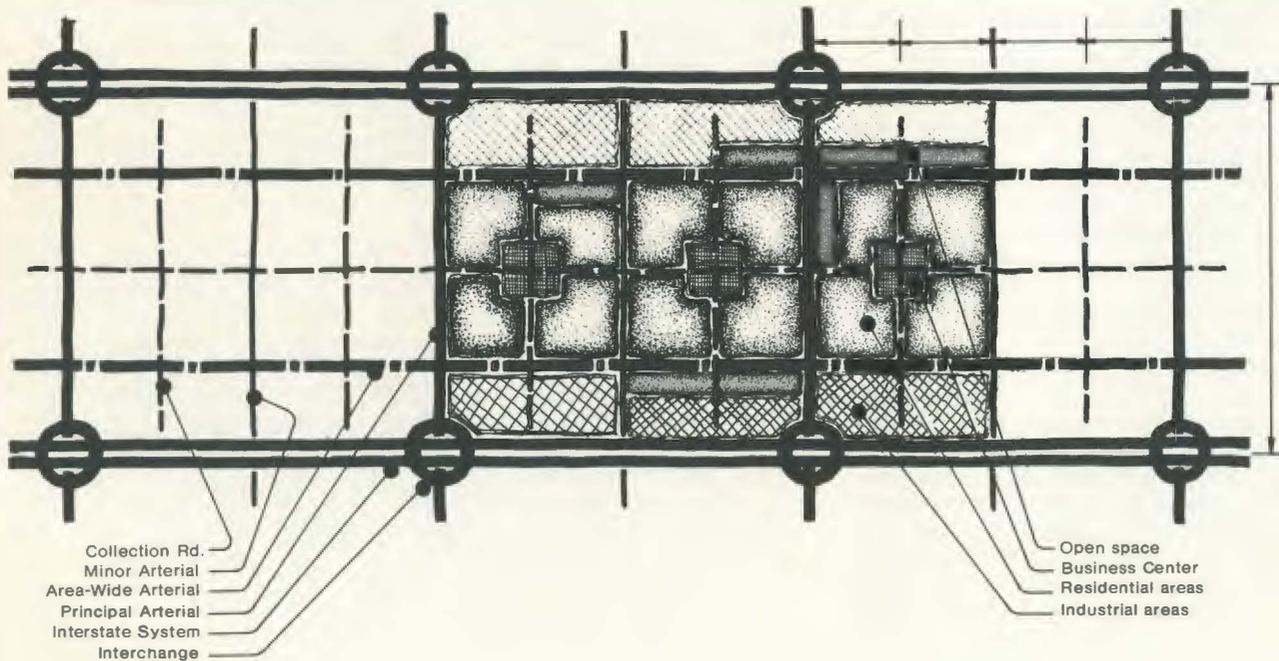
Therefore, the high-accessibility corridor concept as applied to northern Porter County has exceptional merit; its principal elements are evidenced in existing trends, and if applied with concerted effort they will enhance the orderly growth and development of the region.

APPLIED CONCEPT



High-Accessibility Corridor Concept. This recommended concept is based on the principle of relating land uses and the level of accessibility they require to transportation systems and the level of accessibility they provide.

THEORETICAL CONCEPT



THE ACCELERATED GROWTH CENTER

The concept of accelerated growth centers is that it may be desirable to enable selected smaller cities to grow at an accelerated pace through the attraction of economic activity that might otherwise be part of the continuing suburbanization of large metropolitan areas.

The accelerated growth centers would generally be created from among the smaller cities clustered about the metropolitan center, well within its economic area but also well beyond its urbanizing area. In many instances accelerated growth centers would be located in the high-accessibility corridors between metropolitan areas such as between Chicago and Detroit.

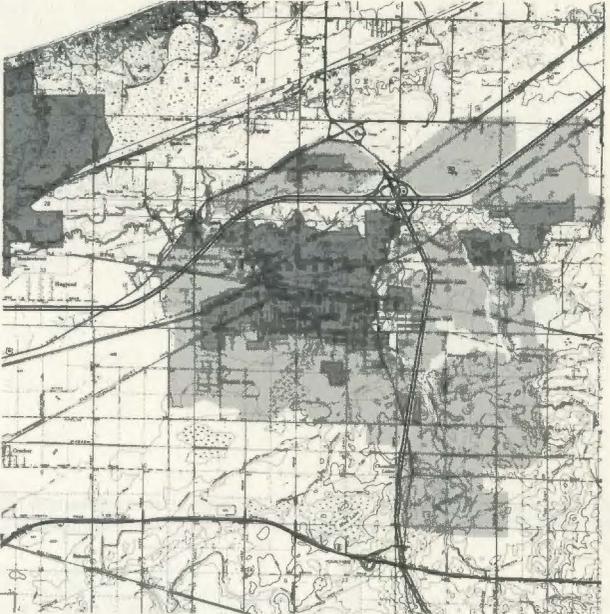
The concept is conceived as part of a balanced program to accommodate the some 100,000,000 people expected to be added in the population of major urbanized areas in the United States between 1970 and 2000. Within this balanced program, the objectives of the accelerated growth center concept would be:

1. To afford urban Americans a wider choice of environments.
2. To make more efficient use of natural resources.
3. To make more efficient use of existing public investments.
4. To secure a greater heterogeneity of population in the new growth areas.
5. To facilitate more effective planning for overall urban growth.

The distinction between the accelerated growth center concept and an "impacted area" is that the former would be clearly applied to a given geographic area in advance of development by official governmental bodies, including the local municipality. Its planning and development would be a conscious, cooperative effort on behalf of federal, state, local governments private developers of all types and sizes, and the residents themselves. This effort would also involve the concentration of state and federal financial assistance on the growth center.

On March 24, the Urban Growth and New Community Act of 1970 was introduced to the U.S. House of Representatives. This Act recommends the development of national urban growth policy; the appointment of a national Urban Growth Council to serve at the pleasure of the President; the creation of federal, state and local community development cooperations; and the development of free standing new communities new towns-in-town, and accelerated growth centers. This bill is among the most advanced of federal urban legis-

lation, and establishes the accelerated growth center concept as a part of the national urban growth policy. Our examination of northern Porter County and the Chesterton area indicates that the latter would be a highly suitable and readily adapted accelerated growth center with industry, residences, and recreational and educational opportunities. The Bethlehem Steel Corporation and the Town of Chesterton are already cooperating on planning for the area and should also solicit the active participation of the county, regional planning commission, and state.



Existing Development
Potential Development

Growth Center Concept
The Chesterton area would be a highly suitable and readily adapted accelerated growth center.

SERVICE THRESHOLDS

Threshold analysis is an effective means of guiding the development of an area. It is the concept of guiding the rate and location of growth in accordance with quantifiable targets which are considered to be effective optimums. Thresholds can be of three types: physical, quantitative, and structural. The first deals primarily with topographic features that might constrain the growth of an urban area, such as steep slopes, lakes and rivers, poor soils, etc.

An objective would be to best utilize land within a single drainage basin (a threshold) until it was necessary and economically desirable to exceed the boundaries of that threshold and extend service to the next drainage basin. Horizontal growth might be retarded as it approaches the boundaries of the drainage basin, but might be accelerated once the decision has been made to develop in the next basin.

An example of a quantitative threshold might be reflected in the planning of a new high school. When the capacity of the first high school is exceeded by several hundred students, it may be time to consider building a new high school, with a minimum desirable and financially feasible capacity, say 1,000 students. But several hundred students might not make it feasible to build if it will not be substantially occupied within a given period of time. Therefore, once the threshold is reached, it may then be desirable to change from a policy of deterring growth to a policy of encouraging growth to make the new investment financially feasible.

A structural threshold would deal with the form and function of the community. For example, when spendable income in the area exceeds the retail and business services provided by the downtown area, a threshold would be reached at which time redevelopment of the downtown will be required, or a new commercial center will be constructed elsewhere. Yet, without an adequate rate of growth over and above the threshold, neither development would occur locally and shoppers would travel further distances to shop where such investments were feasible.

Substantial consideration has been given to the threshold concept in planning for the new community. For example, the new community will assist the Town of Chesterton to accelerate its rate of growth so that it can reach certain desirable thresholds in the relatively near future. The first is a well accepted threshold population of approximately 10,000 persons which usually permits a community to retain a qualified full-time professional manager or administrator. The next threshold is reached by most communities at a population approaching 40,000 to 50,000 persons, a scale which can support a substantial municipal government

and professional staff capability. After reaching the first threshold, the Town of Chesterton must seriously consider its rate of growth vis-a-vis the second threshold which is also within its ultimate reach.

The threshold theory has also been effectively applied to the new community with regard to planning for new schools. The overall population of the new community and of each neighborhood relates directly to the desired optimums of school capacity determined by the superintendent of the Duneland School District. The new community will adequately support these new schools without overcrowding.

Similar consideration has been given to residential and activity densities in the new community which will provide for a diversity and interaction which is typically urban (in the small town sense) rather than rural or suburban.

TABLE 1: ESTIMATES OF LAND-USE IN ACRES FOR THE NEW VILLAGE

Neighborhood	Transportation R.O.W.			Commercial (3)	Institutional		Residential (4)				Total
	Collector Streets (1)	Railroads	Open Space (2)		Schools	Other Institutional	Very Low	Low	Medium	High	
North	6	3	12	3	0	3	129	0	13	0	169
Central	11	0	43	0	7	0	0	0	20	32	118
Southwest	5	0	7	3	8	2	0	46	11	9	91
Southeast	8	0	0	0	0	4	0	78	34	10	134
Community Center	8	2	6	11	0	9	0	0	8	0	44
Total	38	5	73	17	15	18	129	124	86	51	556
% of Total	6.8	0.9	13.1	3.1	2.7	3.2	23.2	22.3	15.4	9.2	100.0

Notes: (1) Does not include local streets.
 (2) Does not include neighborhood playgrounds, common land and minor environmental corridors.
 (3) Does not include recreation areas which are defined as open spaces.
 (4) includes local streets and open spaces

TABLE 2: ESTIMATES OF HOUSING, RESIDENT POPULATION, AND SCHOOL CHILDREN FOR THE NEW VILLAGE

Neighborhood	Dwelling Units at Various Densities (1)					Population (2)	School Children			
	Very Low (2.5)	Low (4.0)	Medium (8.0)	High (15)	Total		K-5	6-8	9-12	Total
North	322	0	104	0	426	1491	277	171	117	565
Central	0	0	160	480	640	2240	224	160	80	464
Southwest	0	184	88	135	407	1424	213	136	87	436
Southeast	0	312	272	150	734	2569	399	264	164	827
Community Center	0	0	64	0	64	222	32	26	13	71
Total	322	496	688	765	2271	7946	1145	757	461	2363

(1) Numbers in parenthesis indicate gross residential densities. This includes local streets, neighborhood playgrounds, common land and minor environmental corridors.
 (2) Population is based on an average of 3.5 persons per dwelling unit.

TABLE 3: ESTIMATES OF SCHOOL CHILDREN PER DWELLING UNIT

Grades	Single Family		Townhouse	Garden Apartments
	Very Low Density (2.5)*	Low Density (4.0)*	Medium Density (8.0)*	High Density (15.0)*
K-4	0.7	0.7	0.5	0.3
5-9	0.4	0.4	0.4	0.2
9-12	0.3	0.3	0.2	0.1
Total	1.4	1.4	1.1	0.6

*Densities are expressed in housing units per gross residential acre.

TABLE 4: PAST, EXISTING, AND FORECASTED POPULATION

Area	Population in Thousands								
	1940	1950	1960	1966	1970	1975	1980	1985	1990
Lake & Porter Counties	321	408	573	599	640	710	780	873	964
Lake County	293	368	513	524	545	585	625	669	714
Porter County	28	40	60	75	95	125	155	202	250
Northern Porter County ¹			30		54		96		161
Chesterton	2.5	3.2	4.3	5.1		4	8	8	8
New Community (A) ²					0				
New Community (B)					0	2	4	6	8

TABLE 5: INCREMENTS OF POPULATION GAIN

Area	Population in Thousands				
	1940-50	1950-60	1960-70	1970-80	1980-90
Lake & Porter Counties	87	165	67	140	184
Lake County	75	145	32	80	89
Porter County	12	30	35	60	95
Northern Porter County ¹	—	—	24	42	65
New Community (A) ²	0	0	0	8	0
New Community (B)	0	0	0	4	4

TABLE 6: PERCENTAGE GAIN OF LARGER AREA

Area	1940-50	1950-60	1960-70	1970-80	1980-90
Lake & Porter Counties	—	—	—	—	—
Lake County	86	88	48	57	48
Porter County	14	12	52	43	52
Northern Porter County ¹	—	—	36	70	68
New Community (A) ²	—	—	0	19	0
New Community (B)	—	—	0	10	6

Notes: All forecasts are by the Lake-Porter County Regional Transportation and Planning Commission unless otherwise indicated.

¹ Northern Porter County is defined as the Towns of Jackson, Liberty, Pine, Portage, and Westchester.

² The New Community options (A) and (B) assume that the site will be fully developed in ten and twenty years respectively with initial development commencing in 1970.

TABLE 7: EMPLOYMENT AND LABOR FORCE GAINS

	Thousands of Employees		
	1970-75	1975-80	1980-85
Bethlehem Steel	3.0	3.0	0
Porter County	10	13	16
Northern Porter County	7.2	7.2	11

Notes: Porter County and Northern Porter County labor force gains are based on 35% of forecasted population gains. Bethlehem Steel gains are based on assumed addition of 6,000 employees between 1970 and 1980.

TABLE 8: ANNUAL HOUSING DEMAND*

Area	Single Family	Unassisted Housing Demand				Assisted Housing Demand	Total Annual Housing Demand	
		1br	2br	3br	total			
Porter County	900	15	140	190	55	400	555	1855
Northern Porter County ¹	590	10	92	125	36	263	366	1219
New Community (A) ²	112	2	17	24	7	50	70	232
New Community (B) ³	56	1	9	12	3	25	35	116

* Based on FHA Field Market Analysis Service, *Analysis of the Gary-Hammond-East Chicago Indiana Housing Market*, January, 1970, for the period September 1969 to September 1971.

¹ 0.66 x Porter County Forecast.

² 0.19 x Northern Porter County Forecast.

³ 0.095 x Northern Porter County Forecast.

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