

Urban Law Annual ; Journal of Urban and Contemporary Law

Volume 1970 Symposium: *Urban Transportation Systems—Problems, Policies and Planning*

January 1970

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Recommended Citation

John M. Courtney and Lois Dean, *Joint Development and Multiple Use of Highway Rights of Way—A Concept Team Approach*, 1970 URB. L. ANN. 39 (1970)

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JOINT DEVELOPMENT AND MULTIPLE USE
OF HIGHWAY RIGHTS OF WAY—
A CONCEPT TEAM APPROACH

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High hopes have been pinned on joint development as a solution to many problems, especially those which arise coincidentally with the introduction of massive-scale highways into low income residential areas and marginal commercial and industrial urban areas. The interstate, inter-urban highway system is an almost unqualified "good," until it suddenly thrusts into the intra-urban situation. As acquisition, dislocation and bulldozers follow in rapid succession, startled and resentful opposition mobilizes. Some conceive of joint development as a palliative to highway opponents.

As the interstate construction program goes into the home stretch, some of its most difficult mileage lies ahead. Highway conflicts exist in cities all across the United States. In an effort to dissolve or resolve these conflicts which threaten at the very least to obstruct completion of the system, wreak political havoc, and precipitate riots, positive side-effects of highways are being sought for exploitation. Joint development is one such concept. Conceived of as a physical solution it is easily comprehended and appreciated by the highway builders. Conceived of as action necessary to carry out the highway building process in accordance with the law, it finds advocates among planners, civic leaders, mayors and others concerned with the nation's cities.

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Joint development as a concept is difficult to define, for its precise meaning is being constantly expanded as a result of the highway *brou-haha* of the 60's. The evolution of the concept of joint development, legislatively and in the case of Baltimore's Urban Design Concept Team will be discussed, hopefully shedding some light on the real issues which joint development is hoped to deal with, and illuminating some new paths to be explored.

DEFINITION

In its most limited definition, highway joint development is physical development using air rights or land in the highway right of way, constructed jointly with the highway within its right-of-way. In its broader definition, highway joint development is action taken in conjunction with highway location and construction for the purpose of successfully introducing the facility into the area in accord with highway standards and with the area's goals and objectives.

The hurdles to be cleared for any specific joint development program have been formidable. However, as more and more individual solutions for specific highway development issues are proposed, the way becomes cleared for subsequent proposals.

In the case of joint development in conjunction with the Interstate program, the central topic to be discussed here, the Department of Transportation is the key federal agency. Its actions are defined in the case of the Interstate system by Title 23 of the U. S. Code. The chief interpreter of policy at the federal level is effectively the Federal Highway Administrator. The Federal Highway Administration, and the Bureau of Public Roads, within its jurisdiction, traditionally play a "partnership" role with the State Roads Commissions. These, in turn, must deal with the needs of urban areas through the metropolitan and regional planning process and through ordinary political pressure mechanisms.

However, not until 1962 (23 U.S.C. § 134) was there any specific requirements to coordinate highway plans with local development plans and goals. Even today, seven years later, these regional and metropolitan development plans are sparse and of necessity superficial, since they are dismally underfunded. More significantly, with their broad scope and limited funds, they tend to paint the broad picture and hardly provide a framework for highway planning in their core cities. Planning in the core cities has in the past

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tended to accept highway plans into its schemes, after the fact, willingly or unwillingly.

Section 109 of the U.S. Code requires, however, that the Secretary of Transportation "shall not approve plans and specifications for proposed projects on any federal-aid system if they fail to provide for a facility (1) that will adequately meet the existing and probably future traffic needs and conditions in a manner conducive to safety, durability, and economy of maintenance; (2) that will be designed and constructed in accordance with standards best suited to accomplish the foregoing objectives and *to conform to the particular needs of each locality.*"

Section 128 (a) indicates a more active approach to needs of 'each locality.' Amended by Section 24 of the Federal Aid Highway Act of 1968 it reads as follows:

"Any State highway department which submits plans for a Federal-Aid Highway project involving the by-passing of, or going through, any city, town, or village, either incorporated or unincorporated, shall certify to the Secretary that it has had public hearings, or has afforded the opportunity for such hearings, *and has considered the economic and social effects of such location, its impact upon the environment, and the consistency with the goals and objectives of such urban planning as has been promulgated by the community*" (Emphasis added).

Prior to this 1968 amendment, there had been recognition of the necessity to plan highways in the light of probable effects of a given highway corridor and design on the community through which it might pass. Serious stalemates between localities and highway departments had erupted in Baltimore, New Orleans, San Francisco, Philadelphia, New York, Chicago, San Antonio, Memphis, Minneapolis and Nashville, to name a few cities.

To help develop a method to resolve these specific issues, and to develop a successful approach to urban highway planning, the "Urban Design Concept Team" was initiated. The essential idea was to unite the skills, expertise and insights of engineers, architects, urban planners and the kaleidoscope of emerging "urbanologists" in a massive, concerted effort to creatively resolve the issues of the freeway in the city, using a specific city. The first such city was Baltimore, and the first such team, the "Urban Design Concept Associates."

The contract, announced on September 27, 1967, by Secretary of Transportation, Alan S. Boyd, states that "the Interstate System in **Baltimore** must function as an efficient transportation facility, *as well*

as meet the social, economic and aesthetic needs of the city's environment" (Emphasis added).

The two-year \$4.8 million contract included design criteria, urban design-opportunities, study design and engineering design. The two latter standard procedures accounted for the lion's share of the amount; however, the design criteria and urban design-opportunities included a broad scope of work which in itself was a giant step ahead in the development of enlightened highway planning. Urban design in the scope of service is defined to include (a) determination of the characteristics of the neighborhoods through which the facility passes; (b) the formulation of opportunities and recommendations by which the facility can be made to blend with and become an integral part of the area traversed; (c) the architectural concepts for structures, landscaping, air rights and collateral development are also developed in the urban design phase. The opportunities concept includes "(a) best development of highway facilities on the established rights of way; (b) development of the joint use potential of highway rights of way for other than highway purposes; (c) best use and development of land areas adjacent to the highway for development and redevelopment of the urban area according to established or proposed land uses."

The assignment, although imaginative, comprehensive and well-funded, had some inherent problems, some of them too well-documented to review again here. Perhaps the most significant for the present discussion however, was the fact common to highway planning in most major urban areas: the chosen corridors had a long past history of controversy associated with them, and as a consequence had already undergone as much as 20 years of consequent transition and blight in anticipation of ultimate demolition. Secondly, the charge was to minimize problems and maximize opportunities within a fixed set of factors of right-of-way, alignment, or grade of road. These factors had previously been set without benefit of comparable "urban design concept" study.

With the social, economic and aesthetic needs of the city's environment as a beacon, the project got underway late in 1967. In January, 1968, the urban design members of the four-firm consortium began to review the city in terms of the road segments, the affected neighborhoods, and the overall regional context. The goal was to understand the impacts of the interstate system in its entirety. As the facts and relationships were collected, certain clear patterns began to emerge.

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In response to these, initial formulation of recommendations and opportunities began.

The potential for joint development in each segment of the road was assessed, and all initial proposals recorded. The analysis of these alone may indicate the limitations of the joint development approach to solving highway impact problems, as well as illustrate examples and guidelines for its effective use.

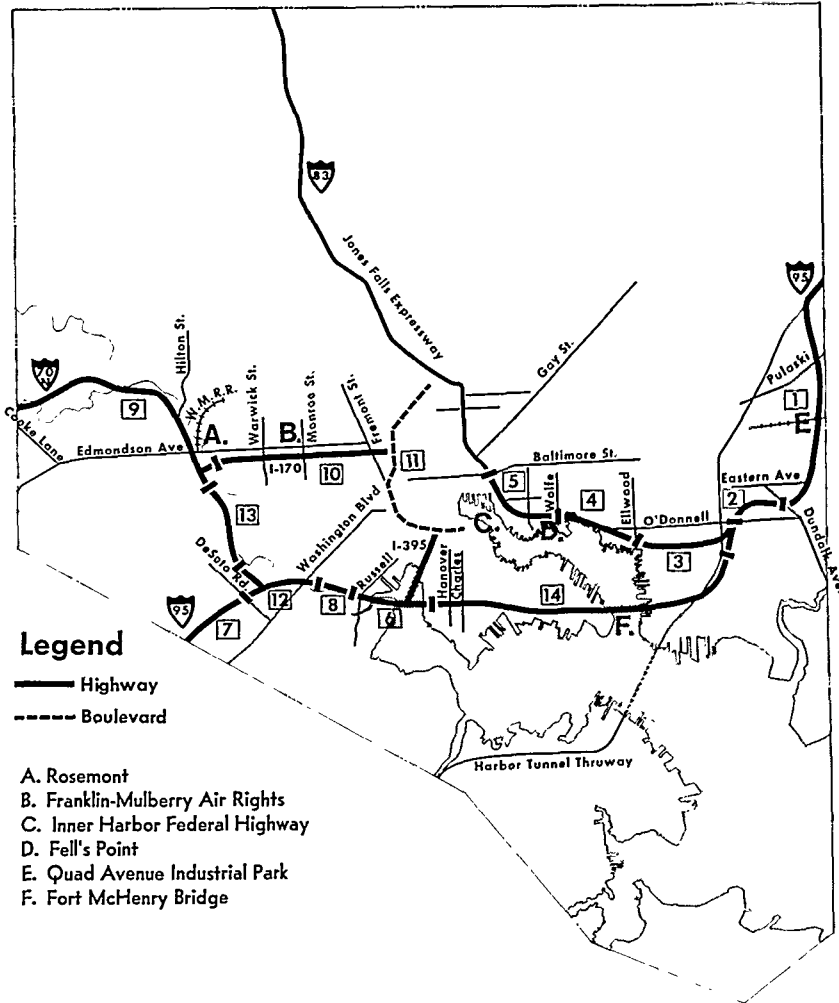
JOINT DEVELOPMENT STUDIES IN BALTIMORE

Late in 1967, the Concept Team began a preliminary survey of the 24 miles of proposed highway corridor that passes through parks, the Negro ghettos, and low income areas, waterfront, historical and industrial areas, as well as undeveloped open space areas.

The project began by developing schematic initial concepts for joint development at locations along the corridor. In one particular area, the Franklin-Mulberry Corridor, an initial study of this depressed, already blighted Negro ghetto area indicated a need for a wide range of facilities including job and commercial facilities, recreation, housing, and schools.

A more detailed study was made together with the Baltimore City Planning Department and School Board out of which developed a proposal for a three-block school complex for the neighborhood. The Concept-Team developed preliminary design and cost analyses for the facility and submitted them to the Federal Highway Administration.

In addition to this study, several other key proposals were analyzed. These included a proposed 500-foot covering of the highway in an important area of Leakin Park as well as a project entitled the Quad Street Industrial Park which placed the highway on structure instead of on fill, thereby generating space for industrial development below it. Also of importance were: the Inner Harbor crossing which was catalytic in having alternate routes studied; the Rosemont neighborhood study, a design analysis which was responsible for the relocation of the highway in this stable middle class Negro neighborhood; and finally Fells Point, a study in accessibility versus the historical environment which is yet to be resolved but is presently gaining very strong support at the community level. A total of 16 locations for potential joint development complexes were identified in the initial stages of the project. A team made up of representatives of key city agencies and departments, the regional planning agency and the consultants to the mass transportation agency met with key members of



Baltimore Interstate Highway Segments. This map shows the currently approved interstate system in Baltimore with the addition of I-95 for McHenry Bypass and deletion of the Inner Harbor Crossing.

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the Concept Team to review and modify these proposals and to attempt to narrow them down to an economically feasible number.

It became clear that many agencies and jurisdictions would be involved in the implementation of most of the joint development proposals. It was clearly necessary to set up a special organization to implement them. A proposal to set up an urban development corporation in Baltimore to manage joint development projects within portions of the highway corridor has been agreed upon and now awaits final (seed money) funding from HUD. Among its purposes are the following:

1. To provide professional staff capable of identifying, planning and implementing the development of required housing, commercial, and community facilities;
2. To develop methods of maximizing private and non-city public financing of required facilities;
3. To coordinate participation of the several local, state, and federal public and private agencies, and necessary individual and joint developments; and
4. To prepare or assist in the preparation of applications to appropriate public and private agencies to provide requisite financing.

It is visualized as a non-profit action agency organized for the single purpose of developing solutions to minimize the impact of highway construction on the Baltimore community.

Initially, the priority joint development project was the school complex in the Franklin-Mulberry Corridor. The Baltimore School Board, City Planning Department, the Mayor's office, the Housing and Community Development Agency, the State Roads Commission, the Bureau of Public Roads, the U. S. Department of Health, Education and Welfare jointly studied the proposal and are all on record as supporting it. A revised submittal was made to the Federal Highway Administration and a decision is still forthcoming as to what extent they are prepared to participate financially.

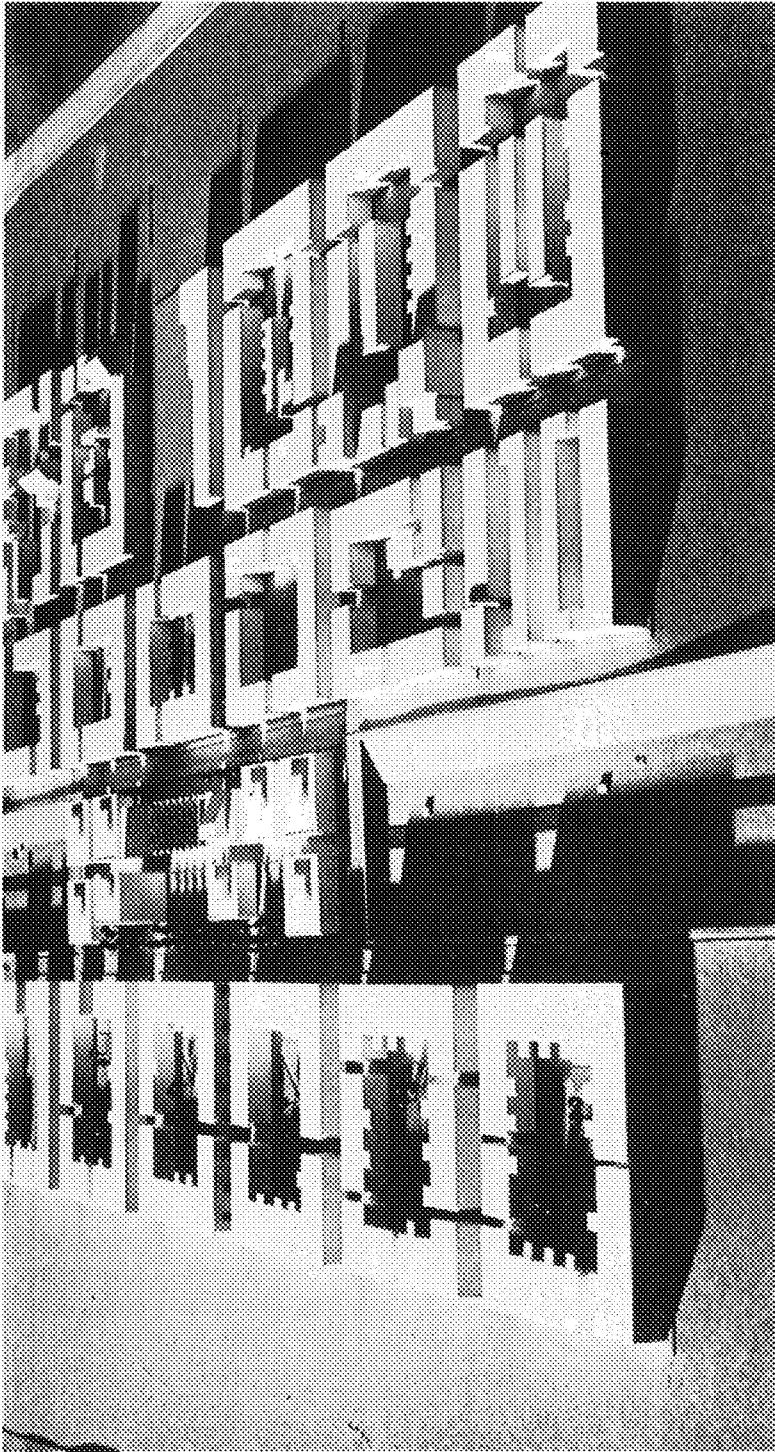
I. FRANKLIN-MULBERRY SCHOOL COMPLEX

The Franklin-Mulberry corridor in West Baltimore already constitutes a badly blighted and dilapidated area, a result of premature highway right-of-way acquisition and demolition. The objectives of the joint development are to stabilize and link together the two fragmented neighborhoods by intensifying development at their common border, the highway corridor. Three schools were programmed in the area as part of the Baltimore Capital Improvements Program.

The major goal was to intensify the educational opportunities available in this area by building an educational spine bridging the highway, and to repair damage to the community fabric caused by premature demolition in an area of low income Negro families. The complex will act as a bridge between two schools on the north side of the corridor and one on the south. The initially-recommended platform included some 342,000 square feet but this was, after study, reduced to a minimum for the school facilities of 173,000 square feet. Construction of platform and tunnel at \$24.00 per square foot amounted to \$4,152,703 for 173,000 square feet. Equivalent purchase of land surrounding is \$2.00 per square foot which ($\$2.00 \times 173,000$) is \$346,000. Thus the additional cost using the platform would be \$3,806,703 premium. The capital improvements program for Baltimore provides \$9 million for the school facilities which are to be included in the complex. This does not allow for the platform costs, it only allows for site acquisition and construction of three schools. As can be seen, an amount of nearly \$4 million would need to be provided by the Bureau of Public Roads in order to make this project feasible.

2. QUAD AVENUE INDUSTRIAL PARK

The objectives of this joint development proposal were to provide additional industrial development potential in Eastern Baltimore and to encourage local industries displaced by the highway construction to remain in the city. Only 700 acres of vacant land remain available for industrial development within the city. Two hundred of these acres were in proximity to the proposal area. Presently, these adjoining areas contain 79 firms employing some 43,000 persons. The construction of this segment of the highway will remove 140 acres of these potential sites from the Eastern Baltimore industrial real estate market. The construction of the total freeway system will displace an estimated 150 industrial firms. City consensus indicates that these



Franklin-Mulberry Air Rights Proposal. An initial concept study showing the platform over a depressed roadway.

firms should be encouraged to remain within the city, both to maintain the industrial tax base and the available in-city job opportunities. In view of this objective, efforts were made to decrease the amount of industrial land taken by the freeway through joint development. To alleviate the losses of land, a proposal for joint development was initiated which involved the building of a segment of the highway on an elevated structure to allow development beneath the highway. This provided 25 acres of developable industrial land for additional cost to the roadway of some \$310,000 which would return itself to the city in taxes in less than seven years at a rate of \$57,000 per year. This was considered a justifiable additional expenditure for joint development with directly quantifiable benefits.

3. FELLS POINT

The joint development study for Fells Point falls into the same category of the Rosemont study as a case of compensatory joint development. However, in this situation the community is in a somewhat more transient state yet still retains a strong framework of ethnic groupings and historical structures. Many of these 18th century small-scale brick homes have recently been purchased and are in the process of rehabilitation. The charm, scale of environment, unique waterfront location and proximity to downtown Baltimore have made these housing units attractive for investment and redevelopment. The high potential of the area has been recognized and has many supporters among preservationists, urban planners, architects, people who prefer in-city living opportunities and others who appreciate the small-scale charm and setting of the Fells Point area. The issue is what price should one place on an environment such as this. How does one weigh the value of environment against accessibility which, in this case, is accessibility through this area to another with no direct benefit to the area? The cost to the area, to the neighborhood in the case of Fells Point, is total destruction of its potential for redevelopment as a waterfront settlement with authentic historic credentials. The compromise which was proposed utilizing the joint development concept required that a major joint development complex be developed to reclaim the use of the waterfront for city as well as neighborhood residents by providing needed services and facilities in a revitalized and attractive environment and by maximizing the area's potential as an historic site and waterfront recreation area. The price tag, however, which would have to be placed on this development would be

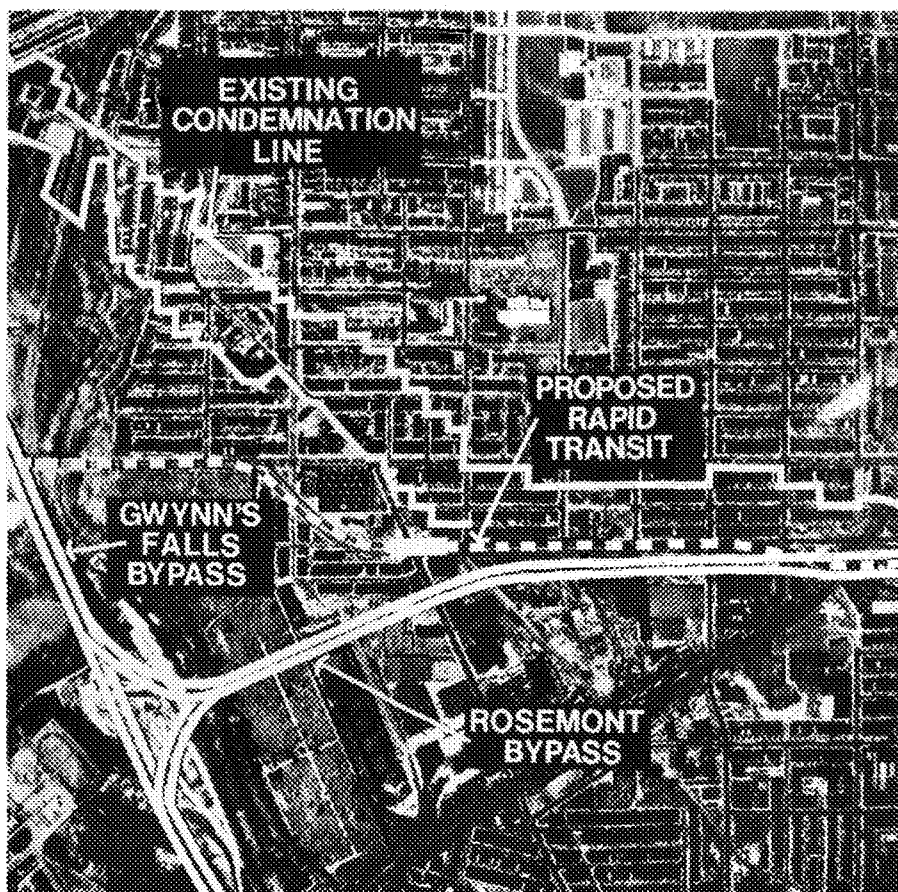
far beyond the consideration of the Bureau of Public Roads. The only satisfactory way of retaining the assets of the neighborhood and its relationship to the waterfront would be to place the road in a tunnel rather than on an on-grade or elevated facility as originally proposed, at an additional cost of approximately \$25 to \$30 million. Clearly, the cost and benefits must be seriously weighed. If the integrity of this neighborhood is to be retained then the following choices arise:

- (1) Spend an additional \$30 million to tunnel the road and retain areas as is;
- (2) Find an alternate route; or
- (3) Delete this road segment all together.

The debate on these alternatives continues while the local community concerns continue to mount as to whether or not the necessary funds can be assured for the joint development which would be required to go with the construction of the road.

4. INNER HARBOR CROSSING

The Inner Harbor Crossing is closely related to the Fells Point proposal. Originally, the given route across the inner harbor constituted a 14-lane interstate system incorporating the three major interstate freeways, I-95, I-83 and I-70N. The requirements of interstate standards are such that they do not lend themselves to flexibility of design or scale in urban areas. This was particularly evident in the case of the Inner Harbor Crossing. Extensive studies were made of different types of crossings of the harbor with joint development concepts for the abutting areas. Still, the impact on the harbor and adjoining areas was excessive even with a drastic reduction of the crossing from 14 to 6 lanes. After extensive studies of harbor crossings and joint development, it was decided that the location, scale and impact of the highway facility created an impossible situation. As a consequence of detailed studies of the bridge crossing, and of the environments to be affected socially, economically, and physically, and of the impact on the immediate localities and the overall impact on nearby city investment areas and on the city as a whole, a bypass was given serious consideration which has eliminated the necessity for the harbor crossing and major sections of the highway in the central city area. Subsequently, a more detailed study of the bypass system (known as the 3A system) was made and finally adopted in January, 1969, by the Department of Transportation. This alternate route location



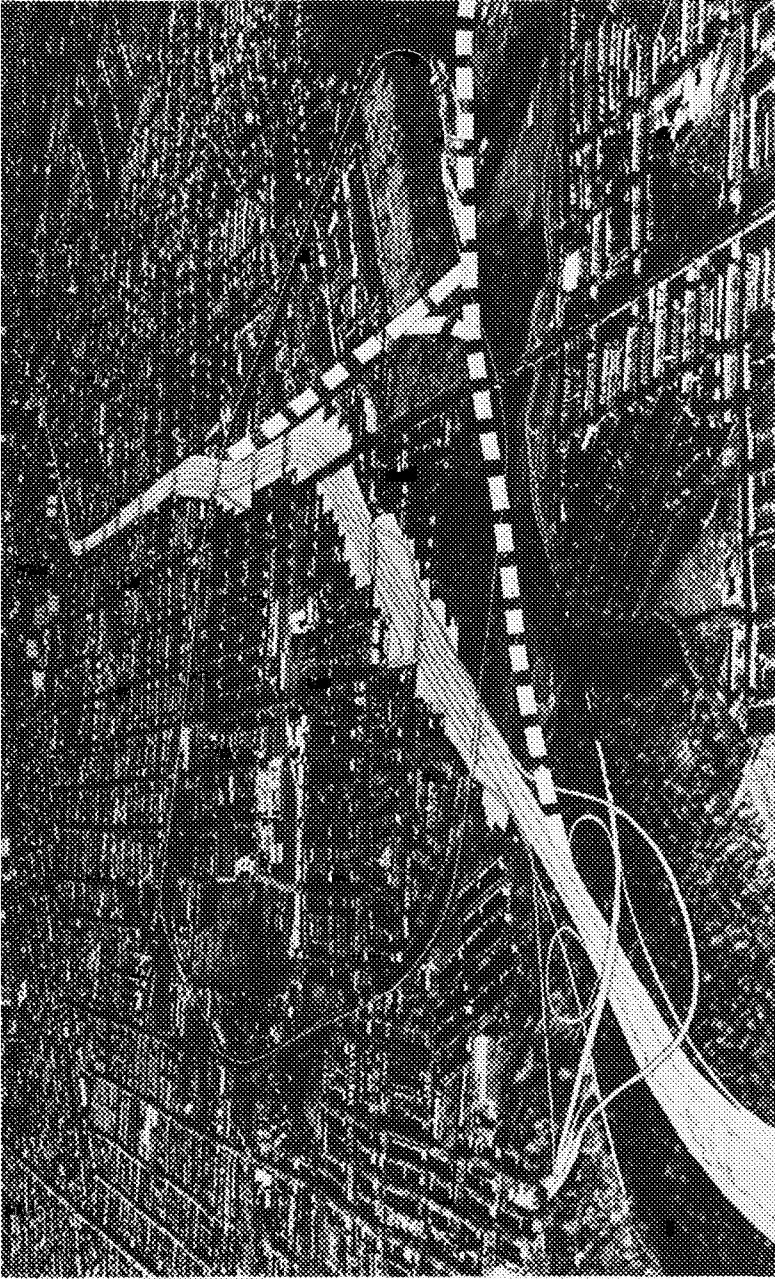
New route locations for I-70N through the Rosemont neighborhood, with condemnation lines as originally proposed indicated.

was a clear case of the joint development process being applied as an integral part of the highway planning process. The option in favor of the bypass was far outweighed by the excessive joint development and disruption costs which would be incurred by the Inner Harbor Crossing.

5. ROSEMONT

In the case of Rosemont the official alignment approved by the City of Baltimore and the State of Maryland in June, 1967, proposed to cut through the Rosemont area displacing 800 to 900 homes, seriously

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Area encircled indicates proposed condemnation lines in West Baltimore. The dashed lines, new route locations by-passing the Rosemont Neighborhood.

disrupting the commercial center and isolating part of the community. Given the tight housing market for Negro families in Baltimore and the high annual displacement of persons by public projects, the issue of relocation in this area was critical. It was found that the proposed route would remove part of a playfield of the local school and limit access to this elementary school from the residential area. The major part of the residential area would be denied access to the surrounding park, and the small residential area on the southwest would be cut off from the rest of the neighborhood. In addition, the route would act also as a barrier between the major part of the community and its main food stores, especially critical since the nearby local commercial area would be completely wiped out by the proposed facility. Some of the draw-backs could be reduced by the following solutions:

1. Elevated pathways over the freeway could give some access from the main residential area to the facilities shut off by the freeway;
2. New buildings could replace facilities dislocated;
3. The commercial center and the school playground could have been replaced on a platform over the freeway and planned to include a multi-service neighborhood center and a rapid transit and bus terminal.

However, these solutions are costly and difficult to implement. The minimal platform which would be needed to restore the facilities and functions would be 1,000 feet long and estimated to cost about \$10 million in excess of highway construction. Federal programs which might offer aid for the development of replacement building are limited, however, by HUD national priorities which give preference for the use of these programs to areas having higher concentrations of social and physical problems.

Just south of the official Rosemont route, however, an underutilized industrial tract is located. If shifted to this location, the highway could have been designed to buffer existing industry from the Rosemont community. Further study of this alternative route showed that the dislocation would be reduced to 329 houses as compared to the 880 houses taken by the official route. The alternative route would not take the neighborhood's commercial center, nor the elementary school playground. The alternative route would require a cut and covered tunnel through a cemetery and the relocation of some 1,200 graves into vacant land in the cemetery and adjacent to it. Furthermore, all the industries to be dislocated and desiring to remain in the industrial sector could be relocated in new buildings on under-

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utilized land within the area, assuming they could afford the cost of new space. The capital costs for each highway alignment were compared. The basis of comparison considered that the alignments are brought to comparable levels of environmental restoration—a level considered minimal for the adequate reconstitution of the area through which the highway passes. In terms of basic highway construction costs alone, the recommended route costing \$36,273,000, is \$3,113,000 more than the official alignment. However, in terms of total cost including full neighborhood compensation, it is estimated to be \$6,886,800 less expensive than the total cost of the official route and the necessary joint development on a platform, and other measures to restore the Rosemont community. The alternate route now awaits final approval to become part of the official interstate highway plan in Baltimore. The Rosemont case is one in which the decision in favor of a new route was a result of the prohibitive costs of compensatory joint development. Where routes can be changed, as in this situation, it is a far wiser, and financially superior course of action.

CONCLUSION

Of these five examples, in only one is joint development in the narrow sense an adequate solution. However, as a planning tool to assist in clarifying issues for decision-makers, the joint development approach is effective in every case.

As a solution, in the Quad Avenue case, it permits the development potential of an industrial site to be maximized without withdrawing valuable land from the market. However, it cannot be construed as in any way compensating for the loss of 1123 jobs on nearby industrial land, out of an overall loss of 4457 jobs along the entire length of the facility as initially proposed. Nor do these numbers describe the real story of an entire area which employs persons of marginally mobile skills in a network of marginal industries which are not likely to be relocated at other sites. Bereft of income, residents of the already marginal housing area must somehow adapt. Decline of an entire residential area is the possible and predictable outcome of the sudden removal of its economic bases. The area in question, one of old structures requiring constant maintenance, and high instance of homeownership, is not likely to survive such abrupt impacts without significant deleterious social change. The marginal nature of the entire balanced "ecology" is poorly equipped to deal with the shocks of relocation, demolition, and construction, even though the ultimate

change may have a positive economic influence. In the light of these conditions, Quad Avenue is a welcome positive fact of highway benefits to non-users, but all the more significant because of its uniqueness.

Three other joint development proposals which have potential for positive impact on nearby employment are under consideration but have not yet secured a commitment.

In the case of Fells Point, the very special social and environmental qualities of the area, have enabled it to survive good and bad times, including the present threat of an elevated six-lane, 126-foot wide interstate facility in its area of highest potential. With generous public investment, it has the potential to become a modern in-city development area. But as a housing resource area of the kind Baltimore needs most, (stable, low cost, mixed income, developing economically) redevelopment and high investment become threats in themselves.

It has become abundantly clear in the Baltimore case that the legal basis must be expanded to include in highway planning and development process the costs of restoring communities disrupted (including those impacted by relocation and other changes, even though they may not be located along the highway corridor), businesses disrupted, economic impact on industry and communities, housing impact on city, disruption of ongoing city renewal, and relocation plans. Programs as prosaic as rat control are vital, since the long drawn out highway process of condemnation, preceded by stagnating blight, then demolition and construction, can breed serious infestation of nearby housing and school areas. This is but one example of the numerous social, economic and environmental programs which must be brought into play in the entire time phase, from pre-planning through post-construction and adjustment period.

In summary, a new built facility on or within the highway right-of-way is of limited good in the best of circumstances and inadequate to the overall situation. As in the Quad Avenue case, it is not necessarily expensive, although it often is prohibitively so. However, it is an effective planning tool, and can yield some gratifying solutions to selected issues.

The current limited interpretation of the obligations of highway builders in complex urban areas is incredibly inadequate to the task. However, major strides have recently been made at top departmental levels, and through the use of the multi-disciplinary Urban Design Concept Team approach.

Fortunately, the time may be coming to a close when a poor com-

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munity, "already deprived of the basic imperative for economic survival in the American system is asked to be subjected to the disrupting influences of a highway facility which will be of little economic or transportation value to them and in addition accept the social and economic disruptions with little or no compensation."

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