

## A PLANNER'S VIEW OF EXPRESS HIGHWAYS

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In this paper the important place of the express highway in the planning, building, and rebuilding of our urban communities and some of the principal evidences of ways in which cities are changing and the relation of expressways to these changes are discussed. The question of whether urban traffic congestion is correctible in cities as they are now and in cities as they may be later is considered. In discussing this question some possibilities in the relation of expressways to urban redevelopment are reviewed.

**EXPRESS HIGHWAYS IN URBAN REORGANIZATION.** The express highway is a major instrument for the physical reorganization of cities needed today. It is no longer news that the expressway is a highly efficient mover of traffic, assisting large volumes to flow at high speeds with maximum safety. These results are obtained from sound principles of engineering design brought to bear upon modern traffic characteristics and requirements.

The expressway is well adapted to penetrating the chaotic mass which present-day cities have become and separating this mass into proper functional divisions, for residence, business, industry, government, and other purposes. Our cities, inherited in large measure from earlier times, were built to serve other conditions. They may be redesigned and rebuilt, utilizing the expressway principle, so that they will better serve to-

day's requirements, as well as tomorrow's, to the extent that they can be foreseen.

Expressways are appropriate boundaries of the major elements of which cities are composed. They act as separators for these elements, helping to fit each to its place and as insulators, to assure proper separation of urban functions. Expressways provide both scope and physical definition, at the same time linking up the parts. Functional interdependence of the urban community or metropolitan region is recognized and assisted.

Uses and practical services performed by the modern expressway in physical organization and applicable in reorganization of cities will be indicated by the following elements of urban areas. Residential portions take up the most urban space. We spend most of our lives in them. These areas today are increasingly exhibiting an improved layout. Unified plans for large subdivisions, sometimes for whole neighborhoods, with grouped community facilities, are a trend.

Industrial sections are changing. The mass production factories are often too large to fit the crowded older sections. Most of them today are built outside central cities.

Urban transportation is changing the urban scene. The physical pattern of transportation is altering the appearance of cities. Local and intercity bus lines, inter-city and interstate trucking are increasing. These activities require terminal space in accessible loca-

tions. Air terminals present another aspect; cities have water transportation to consider in many cases.

Then there is the central business district. This shows the impact of the automobile, in an extent and volume of traffic congestion scarcely under control anywhere. As parking facilities off-the-street have been established, however, a little light has appeared in downtown sections, a new "openness" here and there suggesting possibilities, but so far lending very little encouragement that there will come about any real and lasting reduction in congestion from this source.

**URBAN RESEARCH ADVANCING.** The complexities of the modern city have been recognized in recent years. From small beginnings urban research has grown to large dimensions. Highway, housing, urban, and regional planning research today are contributing to better adjustment of the city's physical plant to its social and economic purposes.

Highway planning surveys begun a number of years ago, the origin and destination technique, are the research foundations that have given us the superior traffic instrument of the express highway, to provide major relief from urban traffic congestion, and radical improvement in inter-city highway travel.

Housing research, applied to operations in recent years, has had an effect upon the pattern of residential sections. Land planning studies, housing cost and housing market research are sharpening up the approach to lower cost and technically improved housing. Mistakes have been made but there unquestionably has been some real progress.

The recently published *Community Builders' Handbook* of the Urban Land Institute; FHA's earlier *Handbook on Urban Redevelopment*; FPHA's publication *Public Housing Design* should be mentioned as evidences of

housing research.

Urban research has included studies of highways, housing, population, finance, health, welfare, and taxation. City halls, state capitals, private governmental research bureaus, and Federal agencies have participated in this important and useful activity. Cities have been dissected as never before. Holding up the mirror to themselves has already had its constructive effects.

**NEW FORM OF THE CITY NOW FORESEEABLE.** The chaotic mass-city is yielding to new design and engineering principles. There is a visible expression in cities of these principles in the new physical structures of many kinds.

The negative aspects of decentralization have been over-emphasized, opportunities and positive benefits overlooked, as Commissioner MacDonald of Public Roads Administration has pointed out. He has used the term "de-densify" to describe some of the urban changes taking place, and has pointed to the need for more space in the centers of cities. Public open space is needed for the increased public business of expanding and still growing cities. Structural changes to accommodate traffic pressing upon the restricted street channels, to provide the commercial enterprises located in central areas with work space and circulation necessary for greater business efficiency are urgently needed.

The hit-and-miss business center that "just grew" like Topsy, is where up-to-date planning and engineering techniques have so far been found least effective. The business district is a major traffic target of the vast majority of motorists and motorized cargo.

The city built by our grandparents and their forebears, for their day and way of life, is changing. Most of what we see was built in two or

three generations, mostly by hand. It can be replaced, the obsolescence we mistakenly call "urban blight" removed, the job done this time mostly by machines. Much of the new city is already outlined, some of it built. Every obsolete section, block, and structure is an engineer's, architect's, and builder's potential commission.

What is this outline of the new city now foreseeable? "Seeds" of new urban growth already planted, and "sprouting," today include the modern health facilities. These range all the way from complete medical centers to neighborhood clinics.

Education facilities begin with the great university of several colleges, covering a span today that includes the pre-school or nursery school.

Shopping facilities should be included. These are taking on the character of a neighborhood trade center, with grouped stores and built-in parking. These shopping centers are all-of-a-piece in their design.

Housing projects, privately financed, for sale or rent, public housing low-income projects; the large-scale subdivision or residential communities are examples of the trend. Parks, playgrounds, parkways; air, rail, streetcar, bus, truck, and off-street parking terminals - these are some of the pieces of the mosaic or urban picture puzzle of today.

What role is played in the changing urban pattern by highways? The new urban expressways are leading the transformation. Radials centering on the city's hub will increasingly take on an expressway character; circumferential inner ring, intermediate, and outlying rings will do likewise.

What kind of development, as building or rebuilding takes place, will fill the spaces between express highways?

Chicago, Detroit, and other cities are among those having overall city plans well along. The design principles for their residential sections are conforming to a cellular neighborhood concept, adjusted to the land and other controlling factors. Serving these neighborhood communities, Detroit proposes to place branch offices of local government in these "neighborhood units." In future Detroit, you may pay your taxes, bawl out your neighborhood "mayor" and clerks presumably, in these "next door" offices.

*IS URBAN TRAFFIC CONGESTION CORRECTIBLE?* It is difficult and even painful to imagine metropolitan cities today minus their express highways; New York without the Pulaski Skyway, the tunnels, the Westside Highway; Chicago lacking the Outer Drive.

Greatly increased construction of expressways doubtless will, in a visible and measurable degree, reduce urban traffic congestion. Probably it will eliminate it over the principal extent, over the bulk of all urban and urbanizing territory, except for driver or mechanical failure which causes congestion not attributable to the design factor.

There seem to be some grounds for reasonable doubt that express highways will solve central business district traffic congestion without fundamental surgery, perhaps radical redesign applied to that part of the present-day city's anatomy, and control of building of a type nowhere yet attempted in our cities. Ignoring a time when traffic converging on business centers will double or triple, will maximum feasible use of expressways, assuming engineering and finance questions settled, provide uncongested street channels throughout central business districts, as these are now laid out and built?

Expressways may be expected to

deliver and take away efficiently the tremendous load of traffic they are so well equipped to handle. Once the traffic unit, car, bus, or truck, is off the expressway and enters the old gridiron street system, it is in traffic trouble, or so it seems to some of us. The problem first is how to store present (to say nothing of future) quantities of vehicles of all descriptions, seeking to come to rest in reasonably convenient business district locations; second, how will vehicles in this area get in from the expressway, and back to an expressway, at a pace somewhat faster than a man walking, over existing restricted street space, across street and alley intersections, past the innumerable pedestrian, loading, taxi, bus, street car, and other frictional movements and interruptions which now exist there. We would have a better answer if we knew how much expressways will reduce central business district traffic.

Every private lot and block, including the private parking lot, is potentially buildable, if not already built, to the lot lines and to the cornice line, x-hundred feet aloft. While the gridiron street plan remains, while central business district zoning is so liberal as to constitute no real regulation of land use and occupancy, no specific limits of buildable area of the site, bulk, or intensity of building, the central business district does not seem to be a candidate for genuine traffic relief.

**RELATING PLANNING THEORY TO PRACTICE IN CITIES.** The generalized fields have been with us a long time in civil and military affairs and administration. The military has long had its "generals." The city manager, the mayor, are "generals" in this sense; "administrative generals."

There is a type of generalist,

relatively new in public administration, the generalist in the physical planning sense. The city planner, regional or state planner, is primarily a generalist in relating physical parts of urban communities or regions or states. In reconciling these often competing and conflicting physical elements of cities in space, as in the case of public and private land or building sites, he must work with and lean heavily upon specialists: the experts in highway and transportation planning, for example. Express highways serving the whole community, not just the householders on a single local street, obviously must be planned with community development and community requirements as a whole in mind.

Measured by actual results, the achievements to date of the physical planning "generalists" — city planners, state planners, regional planners — are not particularly impressive. But the record here, as elsewhere, is improving.

Chicago, Philadelphia, Detroit, and Los Angeles, are a few of the leaders in general planning of urban areas. These cities have city planning staffs very large by standards of only a few years ago. Speaking generally, the overall planning work that is being conducted by the municipal governments of these cities is in conformity with the planning theory somewhat sketchily outlined in these comments. These city plans depend in basic ways upon the express highway.

The prospect for really fundamental changes of the type needed to afford real traffic relief, speaking frankly, does not seem very bright. While there is recognition that obsolete and blighted blocks and whole areas of these central sections offer opportunities for rebuilding, for providing better arranged space, for private functions and for public ones, the specifics of these changes are so

far lacking. We do not yet know, for example, what areas, expressed in acres or square miles, are needed to serve central business and administrative uses, either to serve the present size and population of the city or some estimate of future size.

The basic changes in layout, in engineering structures and architectural design, appropriate zoning of building area-height-and-bulk to reduce traffic congestion, as obsolete buildings are removed and as new construction proceeds, require a stronger and broader research base. This may be the place -the central business district research need and opportunity -where highway planners, city planners, and other officials and private groups, can join their efforts and work more closely together.

Decentralization and urban blight have focused attention upon this problem of the central area. Municipal authorities have become interested. This is where public costs remain high while tax-paying business, industry, numbers of house-holders, owners, or occupants of residential property, take flight to the suburbs. Institutional and private owners of properties which have lost their market see themselves threatened with financial loss or ruin as their holdings are jeopardized by blight. These private and official groups have joined hands. Public housers interested in slum clearance are also on the urban redevelopment bandwagon.

Twenty-four states have enacted urban redevelopment laws. These new statutes permit, for the first time, large scale condemnation of blighted and slum areas. They permit broad area, unified building plans to go ahead. They offer hope that something can be done about central sections.

Clearance and underlying structural changes, as in street patterns, as in new and better grouping of buildings on a single block or com-

ination of blocks, will be possible, in theory at least, under urban redevelopment. With the removal of the legal frustrations which have prevented private groups and public authorities from cooperating in planning and building on the scale which conditions today suggest, and modern building techniques and organization make possible, that part of traffic congestion which now appears insoluble to such pessimists as the writer, when urban redevelopment really gets under way, may take on a more cheerful color.

Recognition of the mistakes made and present inadequacies of the city's layout is found in these laws. Redevelopment schemes under most of this legislation must fit into a general guiding plan or city plan. It remains to be seen how well prepared cities will be, how much determination they have and they direct toward putting central sections in better shape. This is the most complex and costly of undertakings. The laws so far emphasize housing, which is difficult enough.

There is a serious problem ahead in financing urban redevelopment. The cities have not yet found ways to get more revenue than the real property tax brings in. That is not sufficient now to permit them to become partners in redevelopment with private enterprise. While the facilities of city centers serve whole metropolitan populations, whole metropolitan populations do not yet support them. Big money is needed for urban redevelopment. So far federal aid is not available. A few cities, also a few states, are putting up funds which are only token funds considering the magnitude of the operation. The easiest jobs in a number of places are being undertaken as starters.

Express highways are of the utmost importance in urban redevelopment. They are, as has been said, natural boundaries, logical separators and insulators. They divide

the urban area into manageable physical divisions. Highway planners, housing planners, urban redevelopers, and city planners must pool their research data on city functions and requirements. Their technical and administrative resources combined offer more than the sum of their separate parts. Urban redevelopment is a team proposition. Local, state, and federal officials and private groups, it seems reasonable to claim, are going to be associated as never before. There should be substantial benefits to the local communities and to the country as a result.

**CONCLUSION.** In this discussion, the functional aspects of cities have been stressed. Highway planning and all the other major components of the planning of the city need to be seen clearly, relationships of general and specific kinds of planning, engineering, and other types of special skills must be more effectively associated for community benefits.

In this functional sense emphasized, the core of the traffic difficulty seems to be the central business district. While the view expressed here sees no early solution, if highway planners, housing planners, community facilities, and public building planners can get together, for example around the urban redevelopment table, there would seem to be good reason for believing that agreement on research, technical and administrative approach, understanding of what each of them has to contribute, would advance the planning and building of better cities considerably, and relief of traffic congestion would be a part of that picture.

The business district either will have to occupy more land area or make better use of its present area, probably both, if metropolitan cities are adequately to maintain

the purposes and uses of these districts now and in the future, with or without metropolitan area population and urban area expansion. At the least, existing space must be gradually reorganized, buildings and the traffic they generate better distributed. That calls for de-densifying the load on some land and spreading it to other land that can receive it. A functional approach such as this, I realize, runs head on into the financial and political hurdles to rather drastic change. But should we not at least face the functional inadequacies which have become so familiar? The obsolete street grid and the land use control that is lacking are the root of the difficulty.

The number of intersections, the absurdly narrow dimensions of the old gridiron street system, unchanged from the days when even metropolitan cities were little rural trading centers for an agricultural Nation, are clamped like a vise around the necks of our cities.

The most we have been able to do about central area traffic in most localities so far is to install an elaborate system of traffic "valves" at the intersections. These open and close at short intervals, permitting a small segment of the traffic stream to clear the intersection, first in one direction, then in the other.

While the present gridiron pattern of the business center presents an almost unsurmountable obstacle to change, it is a fact that cities are changing at a fairly substantial rate. Maps which show territorial changes, by time periods, and data giving building types and volumes by building permit years, do not leave one with a sense of complete frustration. I have heard it said that Chicago's Loop, in terms of building volumes, was built three times over in about three-quarters of a century. Buildings do become obsolete; they even wear out. It

seems they also are taken down and other buildings put in their places.

Perhaps a beginning, a kind of pilot study, can be made in the next few years under urban redevelopment powers. Cities of rather moderate size probably should be selected where advanced stages of urban ossification, such as found in the largest metropolitan cities, will not be present, at least not to the same extent. To illustrate: in such cities an attempt might be made to design business district super-blocks, combining existing blocks, with at least two long sides created by closing streets with dead end or loop streets for interior local traffic. This would be an adaptation of the principle of the residential super-block to commercial sections in instances where it might be found both structurally feasible and economically possible.

What the realtor or building owner calls a 100 percent location is probably not the place to begin. Some experts on the business district say that solid unbroken business frontages, with no parking lots permitted between buildings, are a necessity. In such high value districts the possibility of using a portion of the block, say the rear third, for off-street parking might be considered, either under municipal leasing and operation, or under private auspices. If possible a long term commitment not to remove the needed parking facility might well be a condition imposed in the public interest.

A principal difficulty in finding a permanent solution of an area's parking problem is the always present possibility that a privately-operated parking lot will be eliminated for a more profitable private use of the land. The critically needed parking then is done away with, the parking problem intensified, the responsibility to handle the old traffic and the new traffic

generated is placed elsewhere.

The parking problem must be faced if the central business district is to survive, and if excessive and illogical decentralization is to be combated. But parking alone is no panacea: there is in fact no panacea as we all know. Parking is a problem that lends itself to solution only by reference to the overall needs of that particular size of business district which the community of a certain magnitude requires, and what that is we do not know. We are not on very scientific ground at this point it will readily be admitted. I believe the principle here put forward, however, is sound. Parking must be planned as a whole. The parking plan should be a corollary of an overall business district plan.

All this points both to the need and to the opportunity for city planning research and traffic planning research. Ideally they should proceed together. It is true that we have not fully employed what existing research already tells us about land use, traffic, and transportation. Sometimes it is not research but simple observation which tells us. We know that first the elevated railroads, then the subways, then limited access ways including tunnels, did not solve the traffic congestion problem of Manhattan Island. All these admirable facilities only served to intensify the problem. It would be the height of folly for anyone to recommend to New York City that it take steps to reduce the number of people seeking to enter the small island which is the Borough of Manhattan, an island 12 miles long by  $2\frac{1}{2}$  miles wide. The fact is that as long as several million people and an enormous number of vehicles still do so, they will have to sacrifice at least some comfort, probably some peace of mind, and some of them will sacrifice their sanity also.

I am not suggesting that the rest of our metropolitan cities have

as virulent a form of trafficitis as New York. There is a germ of truth in this comment I think; if I am not mistaken there is also involved a principle. The principle has to do with the ratios of land and building bulk to traffic and transportation facilities of the various types. The zoning ordinance of New York City permits, in commercial zoning districts, sufficient building volume to accommodate 375 million people. You may lay that one squarely across the door of the city planners. That is where it properly belongs. But the rest of the citizens too share some respon-

sibility for the absurdity.

General or overall planning, and planning of the important fields which I call "specialized" for want of a more descriptive term, have shown some signs of getting together, of recognition that there are both necessity and mutual benefits to be gained from "combined operations" in research and in local, state, and federal programs concerned with urban communities and their development. Let us have more teamwork so that, recalling Ben Franklin's sage remark, by hanging together, we can do our bit in preventing the cities from hanging themselves separately.

## STATE ADMINISTRATION OF THE HIGHWAY RIGHT-OF-WAY FUNCTION

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Within the past decade highway administrators have been forced to change their concepts of design fundamentals in order to meet the needs of present day traffic. The time has arrived, and in many instances passed, when these concepts must include a properly conceived, organized, and efficiently administered right-of-way function.

This function may be organized along the lines of a somewhat independent real estate unit; it may be administered as a legal unit, or it may be an integral part of highway design, and particularly is this true if only easement title legally may be taken upon the basis of a set of plans for a specific highway improvement.

A few of the States have chosen the first method of organization and were probably able to do so by virtue of adequate bond issues, legislative grants, current revenues,

or a combination thereof, but reinforced by laws granting the broad powers of excess condemnation and disposal of surpluses, a right to rent or lease and with few restrictions placed on the widths of rights-of-way which might be acquired. Certain other States not quite so generously endowed with funds but whose legal powers were reasonably adequate, have chosen to administer this function along legal lines, no doubt on the premise that property acquisition is, fundamentally, concerned with law.

A majority of the States, being haunted both by lack of funds and wholly inadequate laws, have been forced to adopt a different concept of the function which might be defined as a specialized unit of highway design, based upon engineering, property economics, and law.

Irrespective of how this function is conceived and operated in the