Comprehensive Planning for the Chicago Crosstown Expressway

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•IN THE SPAN of 20 years, beginning in 1946, more than 112 miles of limited-access motor expressways have been planned, designed and constructed through densely populated areas of Chicago and the suburbs immediately adjacent. In addition to the network of freeways, more than 100 miles of tollways were placed in service during the same period. The total cost of these improvements stands at approximately $1.25 billion (1).

This accomplishment is not the subject of my paper. Other major metropolitan areas of the world have exceeded our program in both mileage constructed and moneys spent during the same period of time. But, mileages and moneys, or, for that matter, traffic demands, geometrics, or any other isolated considerations, are not necessarily the most significant yardsticks in evaluating either the scale of the accomplishment or the worth to the community of an expressway construction program, particularly in a densely populated area.

There are many factors which must be weighed in order to evaluate an expressway system—sociological as well as engineering considerations. The time for such evaluations is in the planning stages and this is the subject of my remarks: to relate an approach to planning which has evolved in Chicago out of the experience of the last 20 years—an approach that was employed from the beginning in preliminary studies leading to our current recommendation for construction of a circumferential, or crosstown, expressway in Chicago at a cost of approximately $500 million. I am told that our method is unique in that we are the first public works planning body in the United States to systematically mobilize and coordinate the various disciplines of sociology and engineering to arrive at our recommendation.

Chicago is situated on the western shore near the lower end of Lake Michigan, southernmost of the Great Lakes. The French Jesuits, Marquette and Joliet, were the first Europeans to visit the area in 1673 and they were quick to grasp the strategic importance of the area. In their journal they made note of the "Chicago Portage," a low divide between the waters of Lake Michigan and those of the Des Plaines River, used by the Indians as a canoe route between the two waterways.

This confluence of two great waterway systems is precisely why the City of Chicago is where it is. It also is the underlying reason for the growth of the city as a principal communications center.

Today, Chicago is the center of a great and growing metropolitan region. It is still a major communications center; a hub of air, rail, truck, marine and electronic traffic.

But now there is a difference; Chicago has outgrown her early role of "shipping clerk" to the nation—a convenient transfer point between major markets—and has become the heart of a viable complex of broadly diversified industrial, financial, agricultural, commercial, natural and human resources—increasingly important as both producer and user of an even larger share of the nation's goods and services.

In short, we now have a growing megalopolis extending across political boundaries of city, county and state, but still centered on the central city and taking shape from the historic radial routes of communication flanked by industrial development dividing the area into wedge-shaped and segmented residential neighborhoods of varying ethnic and economic composition, and characterized by high concentration of low-income population in old and deteriorating neighborhoods near the hub.

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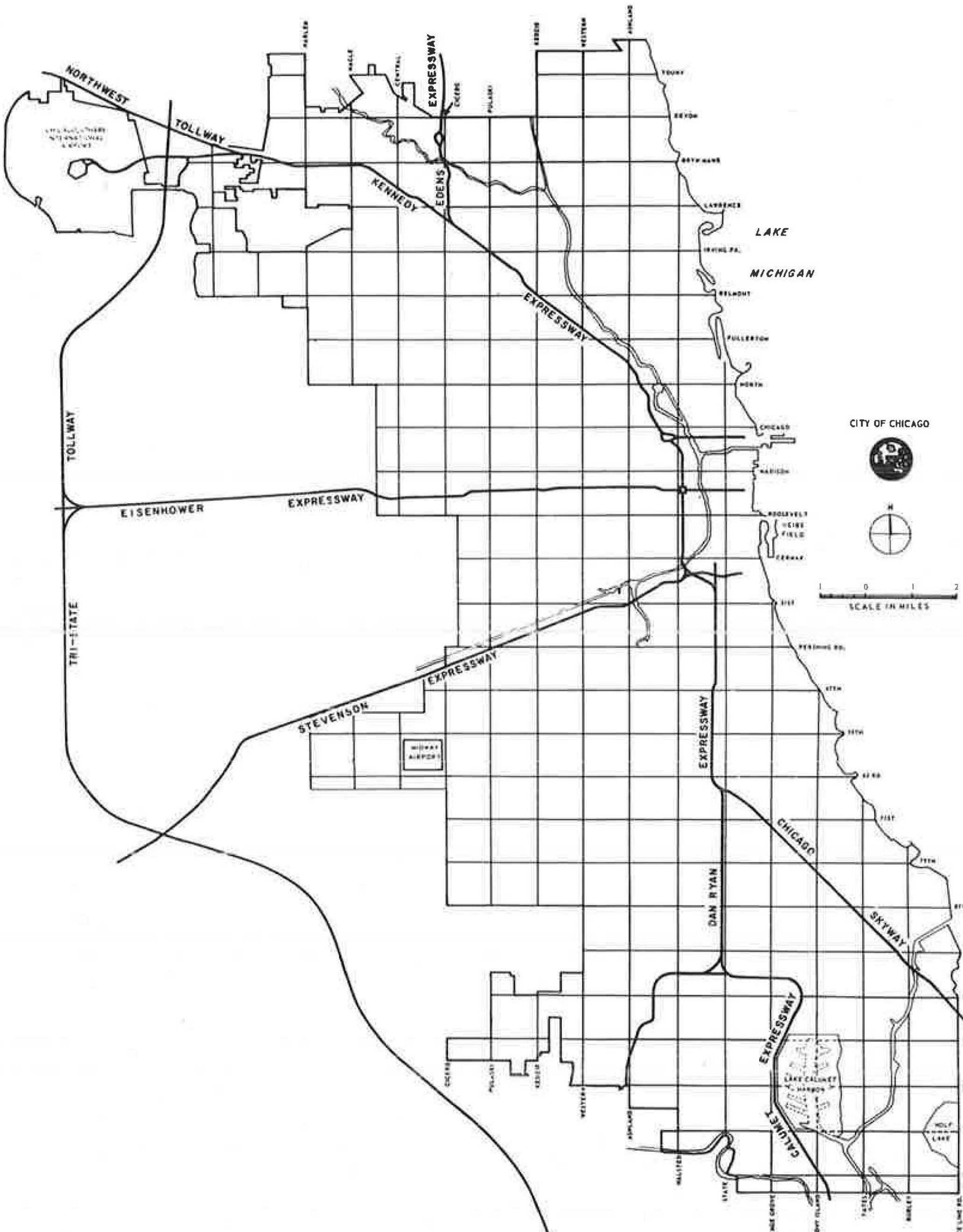

Figure 1. Federal Interstate System in the Chicago area.

This essentially radial pattern (Fig. 1) has been retraced once more by construction of the expressways since the war. This is the scene for the planning of a crosstown expressway, the subject of this paper.

Planning must be comprehensive, but no comprehensive plan can be final. Thus, at the end of World War II, when manpower and materials became available, and Chicago at last set out to cope with the rising flood of motor traffic, all of the superhighway planning done before the war had been rendered largely obsolescent. Old plans were exhaustively reviewed, and extensive new studies were carried out, leading to completion in 1946 of a new comprehensive plan for an expressway system as part of the General Plan for the City of Chicago prepared by the Chicago Plan Commission. This plan called for the system of radial express routes which has since been constructed.

A Crosstown Expressway on the west side of Chicago to connect the various arms of the radial system was a part of this Comprehensive Expressway Plan of 1946. The route was also recommended in the final report of the Chicago Area Transportation Study (CATS) released in 1962 (2), and endorsed in 1963 as part of the Interstate System (3) to serve as a bypass of the central business district. Finally, the proposed route was incorporated into the Basic Policies for the Comprehensive Plan for Chicago published in 1964 (4).

Despite these repeated studies and reaffirmations of the need for a crosstown route, there was no foregone conclusion, at the start of the final studies in November 1963, to determine whether a crosstown route should be constructed, and if so, to recommend an alignment to best serve the interests of the whole community. The objective was to achieve a harmonious balance between transportation goals and other community impacts and goals. A Transportation Advisory Group was formed to conduct the study and make the recommendation.

The scope of the group's planning approach was pretty well defined in an instructional memorandum on the subject of Urban Transportation Planning from the U. S. Department of Commerce (5) which said in part:

> It is declared to be in the national interest to encourage and promote the development of transportation systems embracing various modes of transport in a manner that will serve the States and local communities efficiently and effectively. To accomplish this objective the Secretary [of Commerce] shall cooperate with the States ... in the development of long-range highway plans and programs which are properly coordinated with plans for improvements in other affected forms of transportation and which are formulated with due consideration to their probable effect on the future development of urban areas ....

The memorandum concluded with a warning that, after July 1, 1965, no project in any urban area of more than 50,000 population would be approved for Federal participation funds under the Interstate Highway Aid program unless the project was "... based on a continuing comprehensive transportation planning process .... "

But, we must not allow our broadened definition of the planning responsibility to lead us into aimless and prolonged excursions into the almost infinite avenues of inquiry open to us. Time was of the essence. The existing Federal Aid Interstate Highway Act (6) requires that any state requesting approval to construct an individual segment of the Interstate System must demonstrate the ability to complete the segment by October 1, 1972, in order to be eligible for 90 percent Federal participation. Without Federal aid, the Crosstown Expressway would not be built. I should mention that two bills are now pending, either of which, if enacted, would extend the completion date.

Obviously, it was necessary to carefully define our objectives and methods in advance. But first, it was necessary to re-examine the basic proposition: Was a Crosstown route needed at all?

Chicago has made much progress in improving its transportation system, but, because of the city's ever-increasing activity, a continuous effort is required. More than 100,000 persons are added to the Chicago region each year (7, p. 1). Annually, some 20 square miles of vacant land are converted to a more intensive use. The pressure on transportation facilities is further increased by additional travel requirements in the daily life of the people.

Economic forecasts indicate that ownership and use of automobiles will rise at a faster rate than population growth. In fact, vehicle registration will increase about twice as fast as population during the next 15 years. By 1980, the Chicago

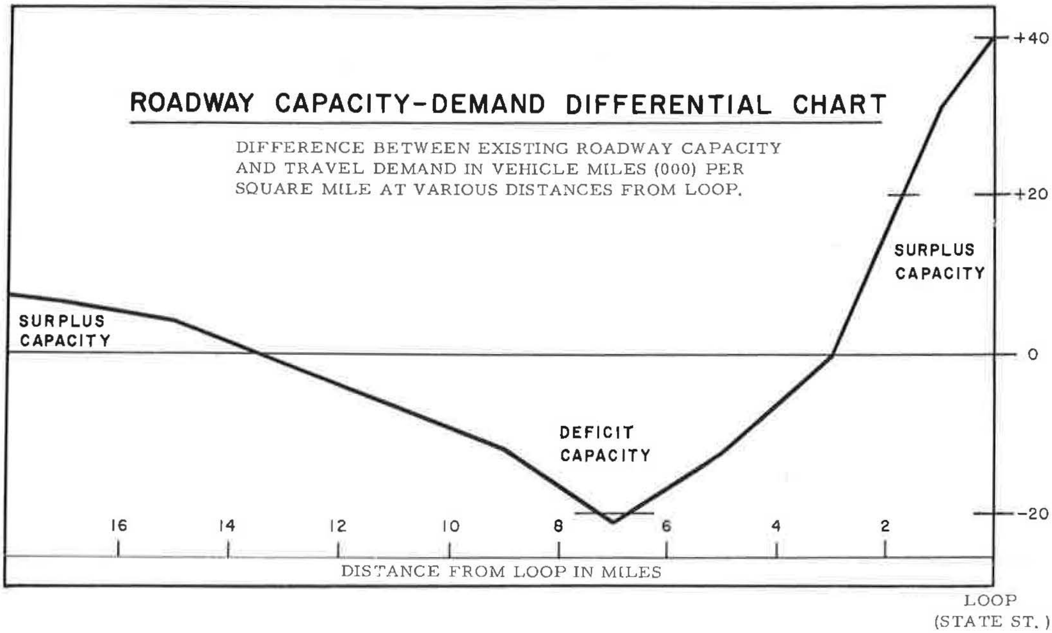

Figure 2. Results of roadway capacity survey.

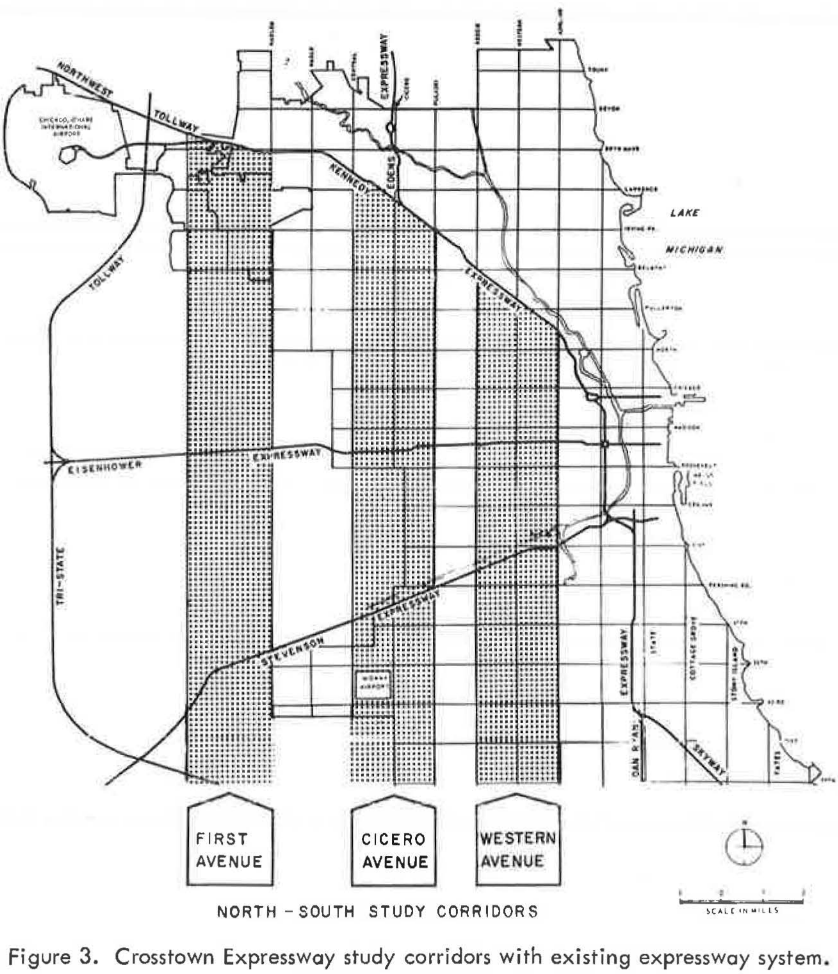

Figure 3. Crosstown Expressway study corridors with existing expressway system.

Metropolitan Area will have a population of about 8 million people who will own more than 3 million motor vehicles (8, p. 13).

Traffic congestion in certain areas has been relieved by construction of new expressways. Studies show that an expressway removed about half of the daily vehicle travel miles from the surrounding arterial street system (9).

Chicago's existing radial system of expressways is oriented to the central business district, but the portion of daily trips in the metropolitan area directed to the Loop is steadily diminishing. Since 1939, the traffic-attracting power of the CBD has remained stable while that of the metropolitan region has steadily grown. The trips to the CBD now constitute less than 10 percent of the total, and this is expected to dwindle to about 5 percent by 1980 (8, p. 45). Chicago's traffic problems are moving outward from the CBD at a faster rate than ever before.

A survey of existing facilities determined that the deficiency in roadway capacity related to present travel demands, as shown in Figure 2, was not at the CBD but was located in a wide belt starting about 3 miles from the Loop and extending outward over densely built-up parts of the region to a distance of about 10 to 13 miles from the Loop, with the greatest deficiency at about 7 miles (7, p. 84).

Having thus located the area of street capacity deficiency, the fundamentals of Creighton's Theory for Optimum Spacing of Expressways (10) were applied to establish three main north-south traffic corridors (Fig. 3) and one east-west corridor for more intensive study.

By superimposing the roadway deficiency chart (Fig. 4) we saw that roadway capacity was relatively not critical within the Western Avenue corridor. Moreover, this corridor would intersect the Kennedy and other radial expressway routes in the areas of their greatest traffic demands and would aggravate congestion without prior improvements to the west.

The First Avenue corridor, at approximately the 11-mile mark, was well out on the western slope of the deficit area. Also, the proximity to the Illinois Tollway, opened to traffic in December 1958, would ineffectuate the full potential usage of an expressway along this corridor until future traffic demands are realized.

The Cicero corridor clearly was in the area of greatest street deficiency. Included in the corridor were Central, Laramie, Cicero and Kostner Avenues and Pulaski Road; all were heavily traveled arterials with capacity inadequate to meet present demands. The Cicero corridor was equidistant between the hub of the radial expressway routes and the Illinois Tollway bypass route in the western environs of the city. Because of its location, an expressway in this corridor could connect directly to the Edens Expressway in the vicinity of the existing Edens-Kennedy junction. It also would provide a direct connection between O'Hare and Midway, the city's two principal airports.

Of the three north-south corridors, the Cicero corridor clearly emerged as the area for first priority investigation. Because of the location of the Stevenson Expressway, only one critical corridor in the east-west direction, centered along 71st Street, warranted detailed study at this time.

Alternatives to an expressway were also reviewed: improvement of existing arterial streets, removal of parking, signaling changes, and one-way street systems, to name several. It was concluded that only the proposed expressway could provide the needed capacity to reduce traffic on local and arterial streets, relieve congestion on the existing radial expressway routes, cut excessive travel time and costs, reduce accidents and produce economic benefits for the communities involved and the entire city which would be in harmony with the comprehensive plans for the future development of the region.

We were then ready to select the best alignment in the study area. To isolate the factors involved in determining the alignment for the Crosstown Expressway, three different viewpoints were identified: (a) engineering aspects, (b) impact upon the existing communities, and (c) potential land use improvements.

The engineering aspects category include criteria for considering all technical and economic requirements of the expressway facility itself in its primary purpose of moving people and goods more safely, rapidly and efficiently, and evaluating alternative alignments to other transportation facilities.

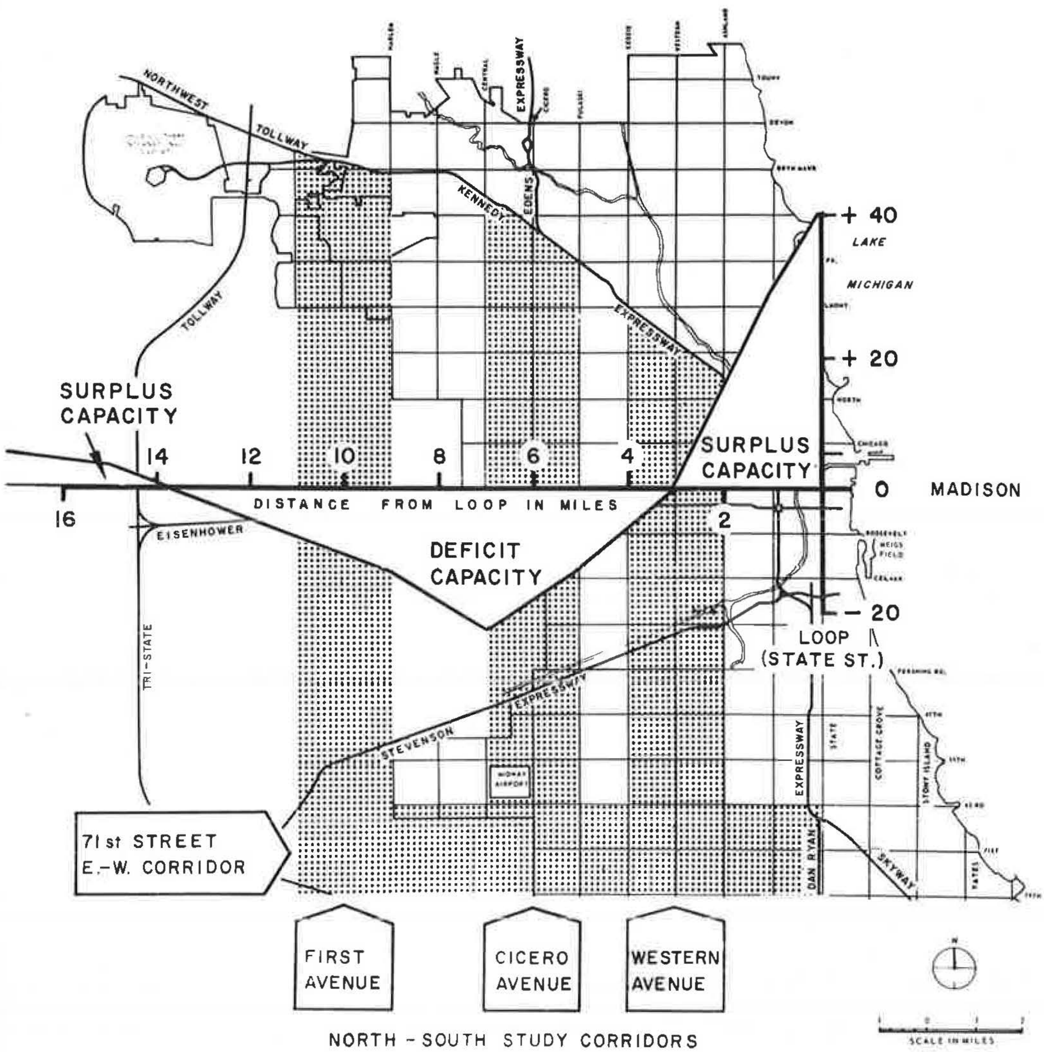

Figure 4. Crosstown Expressway study corridors with roadway capacity-demand differential chart superimposed.

The impact upon existing communities category analyzed community groups on ethnic, religious and political bases and considered the number of people and business establishments that would be directly dislocated by the alternative alignments. This study element considered such factors as the displacement of schools, churches, and parks and the splitting of school, fire, police and other special districts. The distinction between the highly neighborhood-oriented grocery or drug store and the used-car lot, or the small specialty plant employing neighborhood people also was of great concern.

The third category, potential land use improvements, explored opportunities presented by the alternative alignments as a possible catalyst for achieving desirable objectives—a means of linking the community as it is to an image of what it might ideally be. Chicago's basic policy requires that "Transportation facilities should be used as positive factors in improving Chicago's communities and in establishing the future form of the City."

TABLE 1

ANALYSIS PROCESS

Analysis Level	Engineering Aspects	Impact on Communities	Land Use Improvements
General—Broadest context evaluation	Independent Study	Independent Study	Independent Study
Separate evaluations compared at conclusion and least promising alignments eliminated			
Intermediate—Narrowed field of analysis	Independent Study	Independent Study	Independent Study
Ends with second comparison of evaluations of basic routes and variations, further eliminations			
Detailed—Final study to conclusion	Final comparison of separate evaluations to determine alignment best satisfying all three viewpoints		

These three categories, or viewpoints, constituted the framework of our study. Each of the three had its own set of objectives and criteria, and each was to be treated separately in analysis because, while often complementary or overlapping, they would sometimes conflict.

Having established this framework for the study, the technical committee then related it to a process of analysis. Because the study group was to consider "all possibilities," the method of analysis would function as a deductive process of elimination. To accomplish this process, three levels of analysis were established—general, intermediate and detailed (Table 1).

At the general level of analysis, all proposed alignments in the crosstown study corridor were to be considered in the broadest context with respect to the city as a whole and the communities involved. The purpose of the general level analysis was to consider all possible alignments in the study corridor with respect to the three points of view, in order to determine which alignments were to be given more detailed study.

The intermediate level of analysis might be compared with the second power of magnification in a microscope. The field was narrowed to encompass only those alignments surviving the first screening, but these now were to be brought into sharper focus for more detailed analysis.

At the level of detailed analysis, maximum magnification was to be applied to the alignment or alignments still under consideration Modifications would be considered involving analysis by parcel and structure for sections of the route, if not the entire alignment, until, hopefully, one alignment would emerge which best satisfied all requirements in all categories of analysis. In that case, the accumulated data would then be assembled into a recommendation.

While relative values or weights were given to the individual criteria in each of the three categories with respect to one another, alignments were to be rated with respect to each category separately. Thus, if one alignment emerged as the best in all three categories, it obviously would be the best solution. If, however, there were a great disparity, which could not be resolved by any reasonable modification of any of the alignments under consideration, then the decision would become a matter of policy, beyond the province of the technical committee, but influenced by the evaluations of the participating professional disciplines.

Following this approach, it remained only to list the specific factors to be considered in each of the three categories of basic consideration. Because each category was to be strictly self-sufficient and separate from the others, there was no effort to standardize language, study disciplines, or relative weight of the factors, except within each category.

The engineering aspects category established 16 primary factors or criteria for consideration and assigned a relative weight or value to each (Table 2).

TABLE 2

TRAFFIC AND ENGINEERING ASPECTS

Criteria	Levels of Analysis		
	General	Intermediate	Detailed
BPR requirements	X		
Aesthetics	X		
Benefit-cost ratio			X
Control points	X	X	X
Construction costs			X
Maintenance costs			X
Preliminary costs	X	X	
Right-of-way costs			X
Directness of route	X		
Future expressway plans	X		
Geometrics and operational	X	X	X
Highway and railroad structures		X	X
Other modes of transportation	X	X	X
Right-of-way negotiation		X	
Traffic	X	X	X
Utilities		X	X
Totals	9	8	10

Similarly, criteria were established for the impact on existing communities category (Table 3). The criteria, of course, were carefully defined and methods of scoring and assigning relative weights were explained. Twenty basic criteria were set for this category. It must be noted that within these basic criteria, many "public acceptability" standards were considered.

TABLE 3

IMPACT ON EXISTING COMMUNITIES

Criteria	Levels of Analysis		
	General	Intermediate	Detailed
Inventory of buildings and condition			
Residential	X	X	X
Number of units	X	X	X
Industrial	X	X	X
Commercial	X	X	X
Retail			X
Non-retail			X
Vacancies			X
Mixed-use structures			X
Community facilities inventory	X		X
Property values and taxes		X	X
Community areas	X	X	
School district boundaries	X	X	
Parish boundaries	X	X	
Housing characteristics		X	
Population characteristics		X	
Number of industrial employees		X	X
Number of major employers		X	X
Number of commercial employees		X	
Potential areas for urban renewal	X	X	X
Totals	9	14	13

TABLE 4

POTENTIAL LAND USE IMPROVEMENTS

Criteria	Levels of Analysis		
	General	Intermediate	Detailed
With respect to announced land use objectives, evaluate the positive or negative values of the alignment as an influence for:			
Effecting desired land use changes	X		
Separating non-compatible land uses	X		
Improving service to major traffic generators	X		
Minimizing through traffic on residential streets	X		
Contributing aesthetically to area	X		
Facilitating other public improvements	X		
Achieving specific land use objectives:			
Residential		X	
Industrial		X	
Commercial		X	
Complementing other transportation	X		
Complementing other development programs		X	
Affecting environmental factors (noise, vibration, light, aesthetics, pollution):			
As elevated highway			X
As depressed hightay			X
Requiring related adjustments			X
Totals	7	4	3

The 16 basic criteria for the potential land use improvement category were related to "announced" land use objectives (Table 4). The reference for this was the "Basic Policies for the Comprehensive Plan of Chicago" (4).

Seven possible north-south alignments and four east-west alignments were considered in the crosstown study area (Fig. 5). When this total of seven basic alternative alignments was investigated certain modifications were introduced. For example, the Belt Railroad alignment C was considered both as a 6-lane expressway with a minimum of interchanges, and as an 8-lane facility.

TABLE 5

ENGINEERING ASPECTS ANALYSIS—SAMPLE RATING CHART

Weight	Criteria	Rating									
		High					Low				
		10	9	8	7	6	5	4	3	2	1
9	BPR requirements	90									
8	Future expressway plans					48					
7	Control points				49						
6	Geometrics and operational features			48							
5	Traffic							20			
4	Other modes of transportation	40									
3	Preliminary cost			24							
2	Directness of route			16							
1	Aesthetics				7						

Rating = 38 (50 is highest possible, 5.0 is lowest possible), computed as follows:
90 + 48 + 49 + 48 + 20 + 40 + 24 + 16 + 7 = 342 ÷ 9 = 38

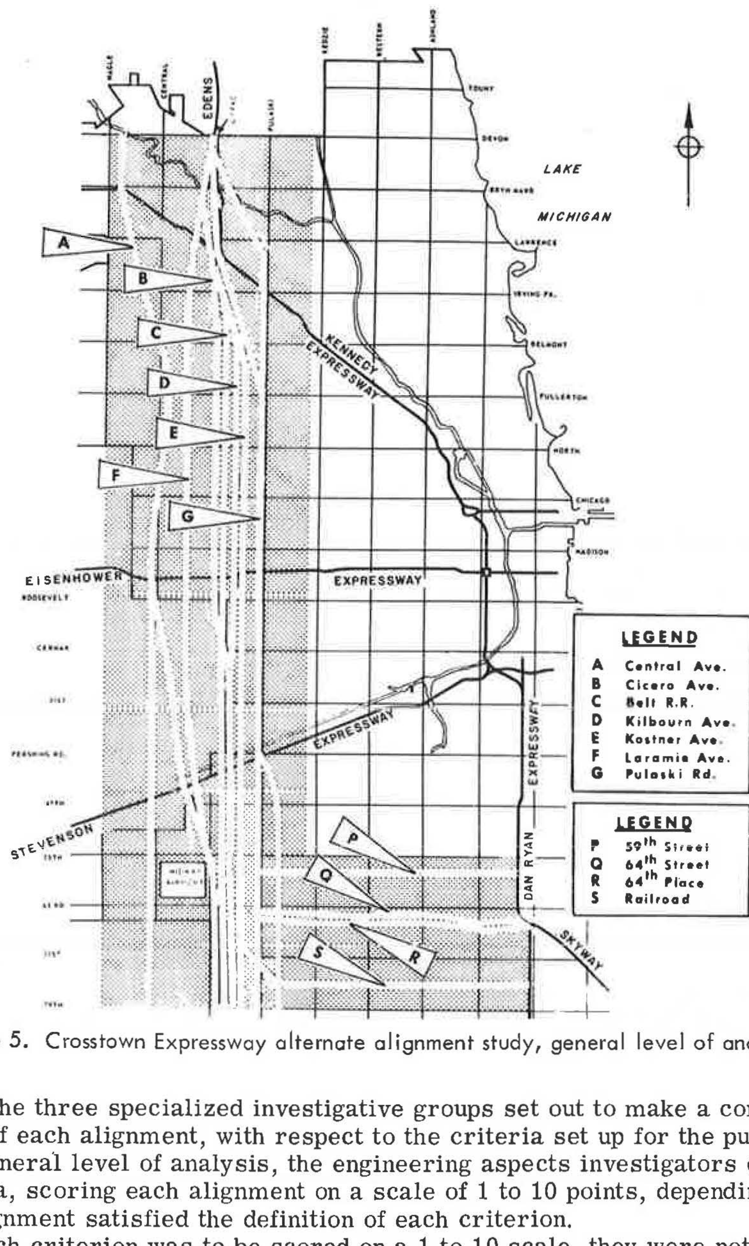

Figure 5. Crosstown Expressway alternate alignment study, general level of analysis.

Each of the three specialized investigative groups set out to make a comparative evaluation of each alignment, with respect to the criteria set up for the purpose.

At the general level of analysis, the engineering aspects investigators considered nine criteria, scoring each alignment on a scale of 1 to 10 points, depending on how well the alignment satisfied the definition of each criterion.

While each criterion was to be scored on a 1 to 10 scale, they were not given equal weight in the evaluation (Table 5). Each criterion was weighted differently and the rating of the alignment then became the sum of the criteria scores multiplied by their assigned weight and reduced to an average. In this example, for instance, the rating was 38.

Thus, each of the alternative alignments was given a rating with respect to the criteria for the engineering aspects category (Table 6). Concurrently, and in a similar manner, but entirely independently, each of the other two specialized professional groups examined the sociological, economic, and city planning factors in their respective categories of impact on existing communities and potential land use improvement.

Finally, the findings of the three groups were brought together and compared. If we were hoping for a decisive consensus in favor of a single alignment at the general level of analysis, we were disappointed (Fig. 6). Several routes received acceptable

TABLE 6

ENGINEERING ASPECTS RATING CHART
General Level of Analysis, North-South Alignment Alternatives

Weight	Criteria	Alignments							
		A	B	C_6	C_8	D	E	F	G
9	BPR requirements	90	90	90	90	90	90	90	90
8	Future expressway plans	40	80	72	72	72	64	64	48
7	Control points	63	56	42	42	35	56	56	49
6	Geometrics and operational features	60	54	36	48	36	48	60	54
5	Traffic	45	50	30	45	35	45	45	45
4	Other modes of transportation	40	32	28	28	24	36	40	32
3	Preliminary cost	6	30	3	3	12	18	18	30
2	Directness of route	2	20	20	20	20	18	18	16
1	Aesthetics	10	9	5	5	6	9	10	10
	Rating	40	47	36	39	37	43	44	42

Legend:
A = Central Ave. C = Belt R. R. E = Kostner Ave. G = Pulaski Rd.
B = Cicero Ave. D = Kilbourn Ave. F = Laramie Ave.

ratings in all three categories. Routes A, F, and G were eliminated from further consideration because of serious shortcomings, particularly in the impact and land use categories. Routes D and E were not considered worthy of further study as separate alternatives, but a composite D-E proposal was deemed worth further attention to

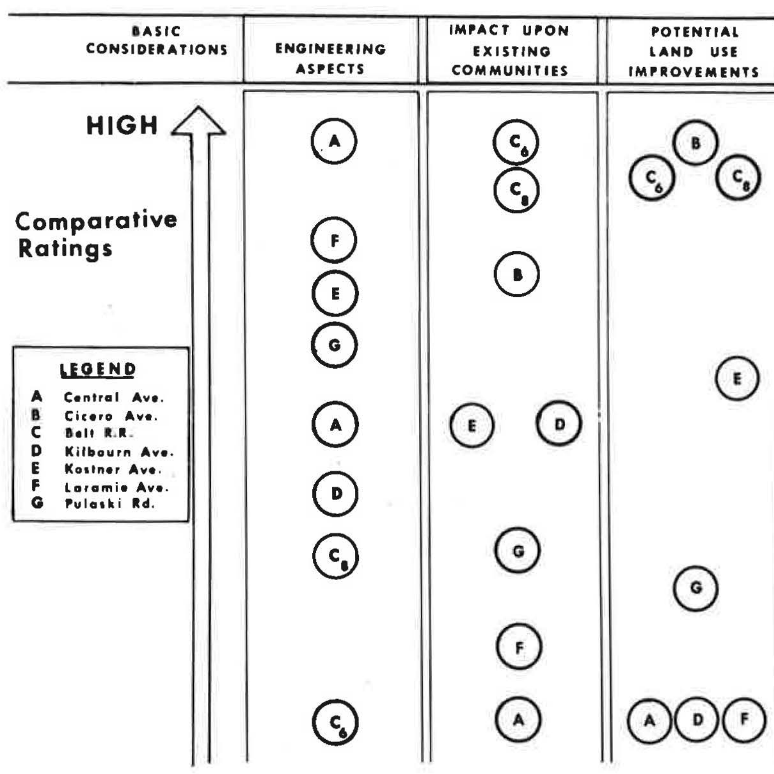

Figure 6. Crosstown Expressway study evaluation chart: General level of analysis, north-south alignment alternatives.

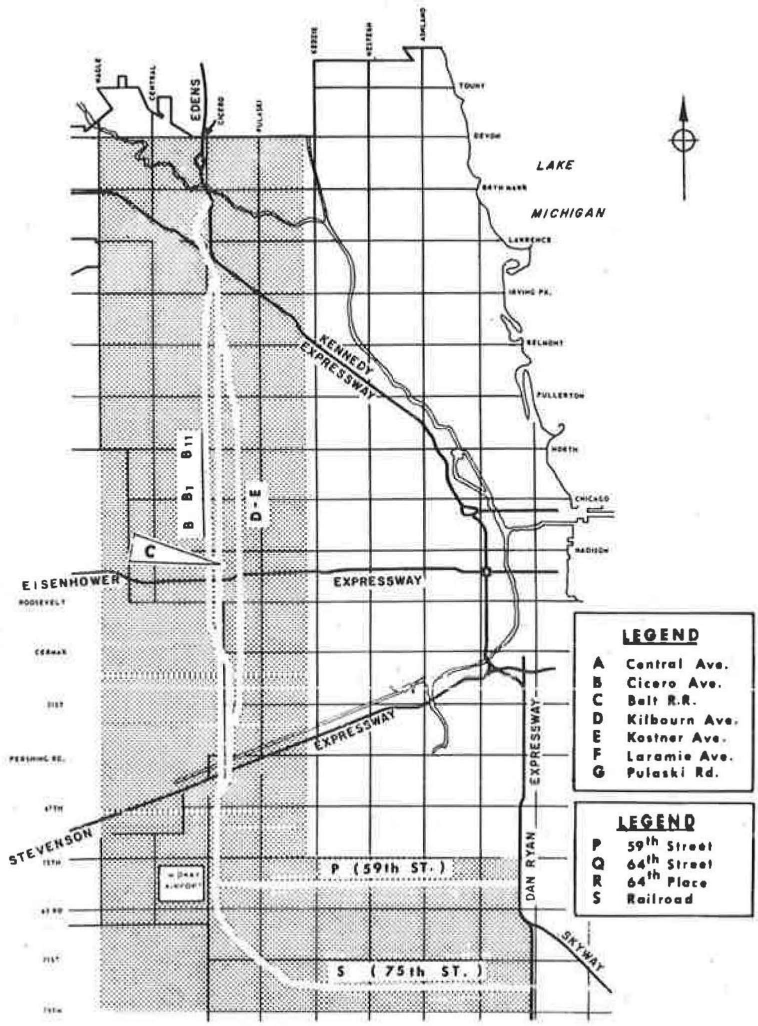

Figure 7. Crosstown Expressway alternate alignment study, intermediate level of analysis.

determine whether unfavorable features of each could be eliminated by combining the best characteristics of both.

In this manner, the study advanced to the second level of analysis with three basic north-south alignments, and variations to be considered for the Cicero Avenue B alignment (Fig. 7). These were designated as alignment B along the west side of Cicero, variation B-II on the east side, and variation B-I centered on the avenue.

At the intermediate level, new criteria were introduced in each area of investigation and some of the criteria examined during the general level of analysis were given more detailed study. Finally, the three independent evaluations again were brought together.

Still, there was no decisive result (Fig. 8); the engineering discipline again rated the B alignment highest, with the D-E and C alignments less desirable but satisfactory. The community impact group widened its preference for the C alignment over the others, and the land use study still rated B and C highly with a slight preference for B.

One result of this level of analysis was that the D-E compromise alignment was eliminated because of its poor rating in the community impact and potential land use categories.

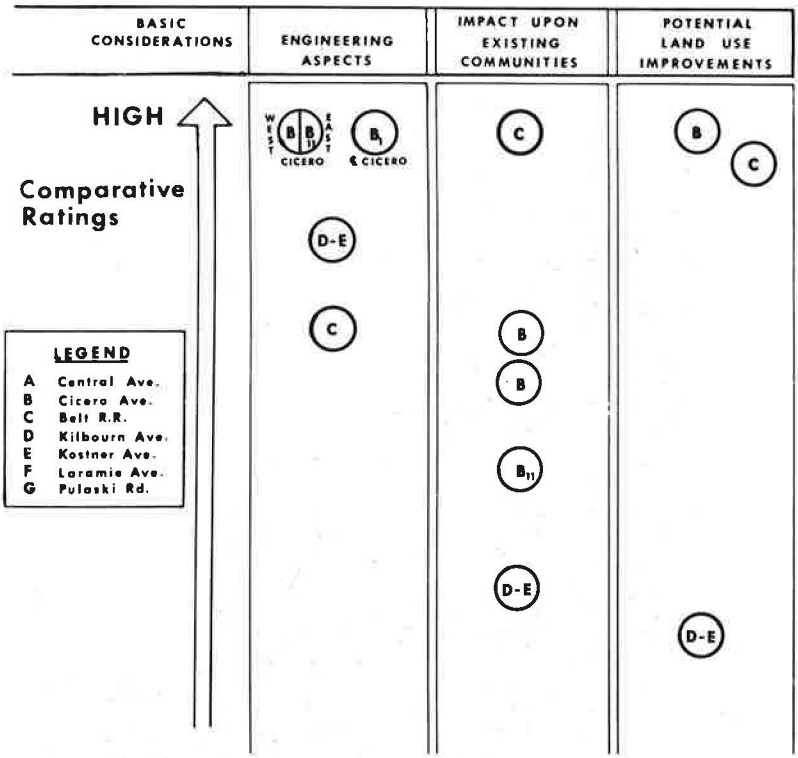

Figure 8. Crosstown Expressway study evaluation chart: Intermediate level of analysis, north-south alignment alternatives.

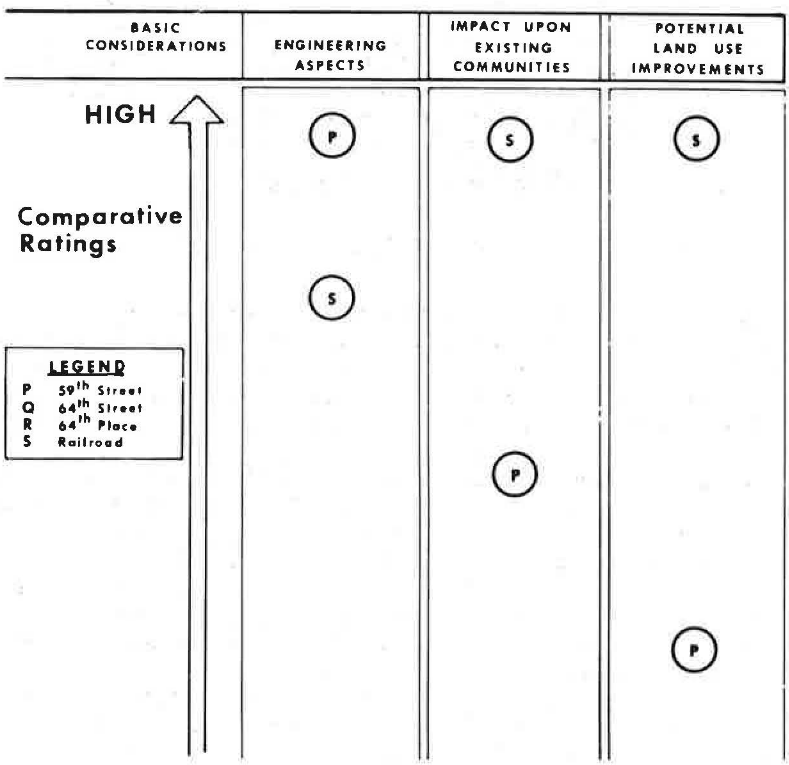

Figure 9. Crosstown Expressway study evaluation chart: Intermediate level of analysis, east-west alignment alternatives.

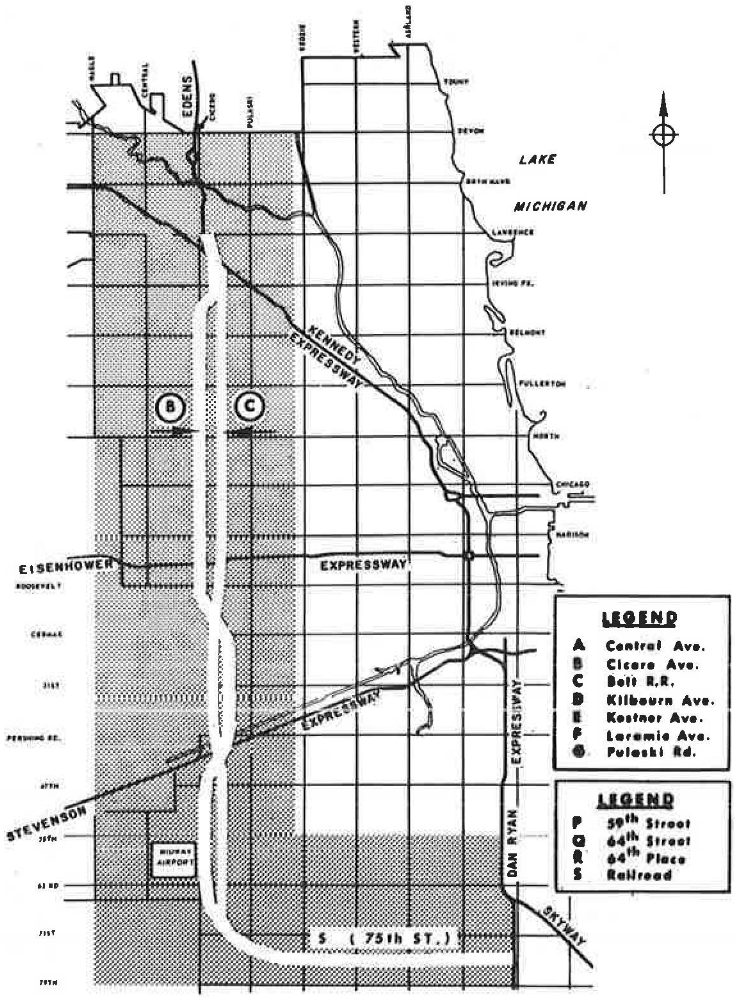

Figure 10. Crosstown Expressway alternate alignment study, detailed level of analysis.

A similar result was reflected for the east-west alternatives (Fig. 9). Engineering studies rated the 59th Street alignment as best, but also rated the S alignment as being acceptable. In the other two categories, however, the 75th Street S alignment emerged as the decisive choice, and the P alignment was rated as being unacceptable. At this point, the decision was made for the 75th Street S alignment, subject only to detailed studies and variations to be made in the design stage.

Going into the detailed level of analysis, two alternatives for the north-south alignment still remained under consideration (Fig. 10). They were the B alignment on Cicero Avenue and the C alignment along the Belt Line Railroad—both 8-lane facilities. The Cicero alignment was proposed principally as an 8-lane depressed highway, while the C alignment would be constructed as an 8-lane facility elevated on structure for much of its length on air rights to be obtained from the railroad.

It is important to note, however, that in the southern sector much of both alignments had similar engineering and impact characteristics.

At the conclusion of the detailed analysis, the evaluation chart closely resembled the one at the previous level of analysis, but with one significant change (Fig. 11). The B alignment remained the more desirable route from the traffic and engineering viewpoint, but the C alignment was established as adequate to satisfy the engineering

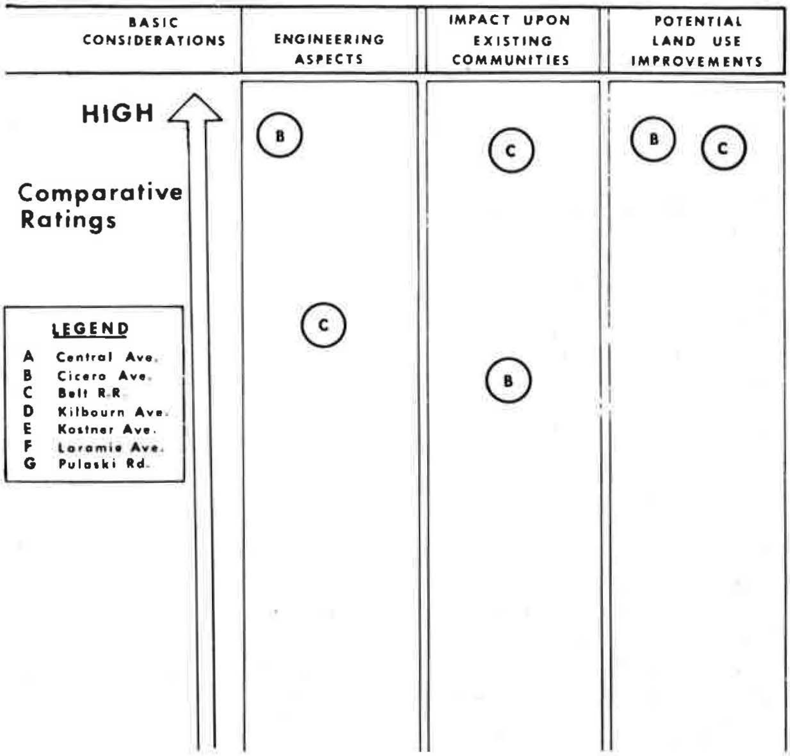

Figure 11. Crosstown Expressway study evaluation chart: Detailed level of analysis, north-south alignment alternatives.

requirements. Moreover, both alignments were shown to have user benefit-cost ratios greater than 1.0. In the potential land use category, the C alignment had climbed to a position of virtual equality with B at the top of the scale. And, decisively, in the community impact study, C emerged as the clear preference, while B dropped out of the acceptable range.

Thus, a decision was reached. The Belt Railroad alignment C became the preferred choice of the Crosstown Expressway task force, and the formal recommendation was made.

The complete documentation of the study fills volumes. Table 7 is a brief digest of only a few of the factors on which selection of the Belt Railroad alignment C was made, and provides comparative data only on the two alignments which remained in contention through the detailed level of analysis. The Cicero B alignment is equal or superior to the selected alignment in several respects. However, a cursory study of the data shown here will reveal the basis for choice of the Belt Railroad alignment.

It is noted that the two were rated virtually on a par with respect to accommodation of traffic demands, travel time economies, safety, service to adjoining communities, potential land use development, future transportation plans, reduction of traffic on parallel streets, effect on other modes of transportation, BPR requirements, and compliance with basic plan of Chicago.

In the cost factors at the top of the table, the Cicero alignment shows a lower estimated construction cost—\$276 million vs \$467 million—and a lower annual maintenance cost than the Belt Railroad alignment. Both of these advantages for the Cicero route stem principally from the fact, as shown farther down in the tabulation, that it would be on structure for a distance of only approximately 4 miles, compared with the 13 miles of elevated highway in the Belt Railroad alignment. Significantly, these factors are more than offset by the obvious advantages of the Belt Railroad alignment with respect to right-of-way cost, annual tax loss and effect on utilities.

TABLE 7

COMPARISON OF CICERO AND BELT RAILROAD ALIGNMENTS

Factors	Cicero	Belt Railroad
Estimated right-of-way cost	$121,643,000	$ 58,201,000
Estimated construction cost	276,371,000	467,611,000
Estimated annual maintenance cost	1,595,000	3,374,000
Estimated annual tax loss	2,973,000	1,491,000
Effect on utilities	49,000,000	23,000,000
Residential structures affected	2165	670
Dwelling units affected	4220	840
Industrial structures affected	200	140
Commercial structures affected	588	110
Employees affected	5670	7180
Miscellaneous structures affected	250	11
Community facilities affected	20	1
Communities disrupted	20	0
Mileage on structure	4	13
Mileage on embankment	4	3
Mileage depressed	12	6
Aesthetics	Better for landscaping	Less residential proximity preferred
Access between communities, continuity of streets		

The alignments were rated as equal with respect to:

Accommodation of traffic demands, travel time economies, safety, service to adjoining communities, potential land use development, future transportation plans, reduction of traffic on parallel streets, effect on other modes of transportation, BPR requirements, and compliance with basic policies plan for Chicago

The next block of factors in the table reveals the areas of investigation which clearly compelled selection of the Belt Railroad alignment: only 670 residential structures affected vs 2,165; 840 dwelling units vs 4,220 on the Cicero alignment; 140 industrial structures vs 200; 110 commercial structures vs 588 for the Cicero route; only 1 community facility displaced vs 20 on the other alignment. Finally, and most significantly, the Cicero alignment would seriously disrupt 20 well-defined communities; the Belt Railroad route would not disrupt any.

These are but a few of the factors which made selection of the Belt Railroad alignment inevitable. This, I believe, reveals the real value of the planning approach we have discussed. If engineering considerations, alone, had prevailed in making the decision, the Cicero alignment would have been selected. The fact that it was not selected does not represent a denial of the validity of the engineering evaluations; rather, it represents a comprehensive and objective evaluation of all factors bearing on the problem. And, don't overlook the fact that the Belt Railroad alignment does satisfy all requirements in the traffic and engineering category.

We who share the direct responsibility for the decision-making processes are bound, in good conscience, to strive for a proper balance in achieving transportation goals which are in harmony with other community objectives. We are concerned about losses to small businesses, disruption of neighborhoods, the relocation of people, and the removal of property from the tax rolls. We are equally conscious of the opportunities a new highway affords to attract new industries, stimulate commercial activity, remove blight and upgrade neighborhoods—advantages beyond the obvious ones of increased safety, comfort and relief of traffic congestion.

This is the contribution of the Chicago planning approach. If it is a unique contribution, it is because it introduces a systematic and objective method of analyzing and evaluating the many diverse factors of social, economic, psychological, fiscal and political considerations—each area of study conducted independently of the others, and each according to its own professional disciplines. It is a methodology which documents the thoroughness and objectivity of every step in reaching its conclusions.

Significant policy changes are emerging from the U. S. Bureau of Public Roads. Recognition of the need for a coordinated solution of the urban highway problem is now being advocated. It is the author's hope that the Chicago Crosstown Expressway study stimulated discussion within the Bureau of Public Roads and that this paper will similarly stimulate other evaluations which will add to our knowledge in relating the complex and variable factors involved in urban transportation planning in a sensible, systematic way.

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