

1974 - Paul B. + John Schroeder

CITIZENS LEAGUE REPORT

**TRANSIT:
REDIRECT PRIORITIES
TOWARD A
SMALL-VEHICLE
SYSTEM
AND SHORTER TRIPS**

A positive proposal for the Twin Cities area to bring service, now, to almost everyone, at minimum cost, and, in the future, to build short-distance transit which, by helping implement the major diversified centers concept, will reduce the need for travel.

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A positive proposal for the Twin Cities area to bring service, now, to almost everyone, at minimum cost, and, in the future, to build short - distance transit which, by helping implement the major diversified center concept, will reduce the need for travel.

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INTRODUCTION

The Twin Cities metropolitan area is face to face with a very difficult public question affecting its future: what to do about transit. The dollars involved dwarf any previous single proposition. But it is more than just dollars. It involves basic directions on the future growth of the region and on the ability of citizens of this metropolitan area to get from their homes to their destinations and back again.

Not suprisingly, the issue is enormously controversial.

The MTC plan has been submitted. It represents years of effort, and considerable expense. It is the only thing resembling a finished plan. The Legislature asked the MTC to prepare a plan. The plan is being vigorously advocated. There is strong appeal to the idea of a system that can go underground. To the extent that transit can help shape development of the region, there is an impression that a fixed - guideway system will do more than a non-fixed system.

It seems clear that within the 494 - 694 beltline, at least, construction of more freeways beyond those currently "committed" is unacceptable as a solution to the transportation problem.

However, there is a feeling that projected ridership figures for the MTC plan -- about 6 - 10% of all trips -- are low, considering the billion - dollar price tag attached to the MTC plan. Consequently, systems which promise patronage figures more like 50% have some appeal. PRT is one of these. Yet, there is a feeling the fine - grained system has not been developed, and, if developed, could not be installed.

So there is a tendency to look toward existing technology. But even there difficulties emerge. The experience in San Francisco thus far casts some doubt on the automation of the fixed - guideway. The bus -- perhaps on its own reserved right - of - way -- is advanced as an alternative. But there is a feeling that this is too unappealing, that it is not "real transit". Busways seem too much like freeways. And the operational costs -- for all those drivers -- may be unacceptably high.

Meanwhile, new ideas for what might be called "non - automated" PRT are forthcoming: ideas for working more heavily with the existing network of small, privately - owned and operated vehicles, although such ideas frequently have also been characterized as not "real" transit.

It was into this debate that our committee entered late in August 1973. We had the assignment for the Citizens League Board of Directors to review the MTC plan and report back with recommendations to the 1974 Legislature. We reached general committee consensus on the MTC plan early in January. But committee members, in reviewing a preliminary draft incorporating our conclusions were clearly disturbed with the negative posture in which these conclusions seemed to leave us. Our assignment was limited to conducting a review of the MTC plan. To propose an alternative would be to go beyond our original charge. Nevertheless, we concluded that it would be a disservice to the community -- which is undertaking such an intelligent look at its transportation problems -- to issue a report which said a little more than "no". During our review of the MTC plans we reviewed the various alternatives and we came up with entirely new perceptions of the transit problem and how it should be solved -- with proposals which we believe will offer more service, help reduce demand for travel and cost less.

MAJOR IDEAS . . .

I. Build service now by working heavily with improvements in the small, privately owned vehicle fleet plus the public bus system.

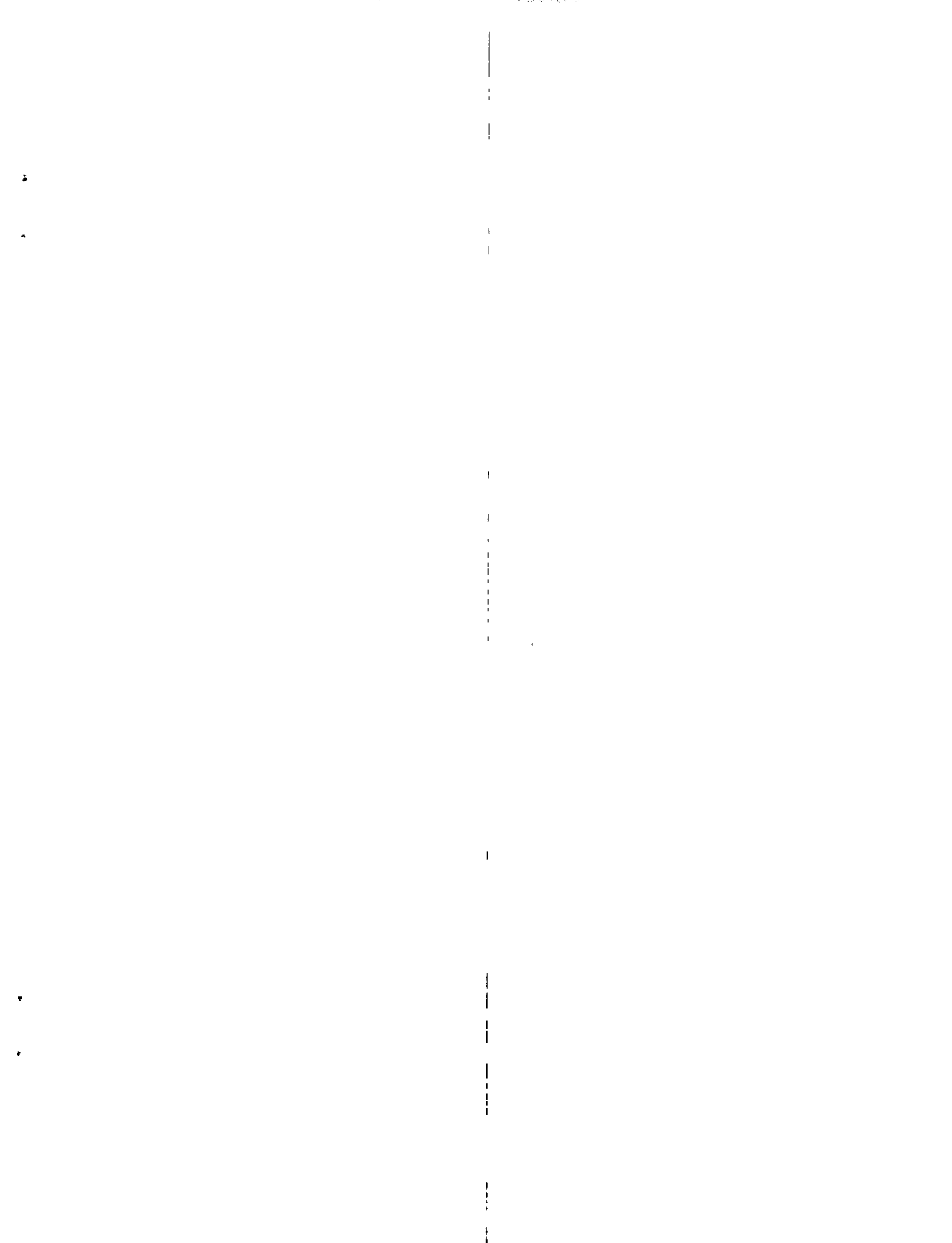
- * Transit must relate to the residence. It must pick a person up at home or close by and get him back there. It must do this, for many years at least, within the Twin Cities area's pattern of dispersed, single - family residences.
 - * There is no reason why a resident of the metropolitan area, today, who needs a ride to work or other essential transportation service should be denied the opportunity. It is important to provide good service throughout the area.
 - * A much more ambitious program of getting people "out from behind the wheel" is needed than can be accomplished by relying exclusively upon buses for transit. The problems of energy limitations and rising cost of driving require prompt actions, throughout the metropolitan area.
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- * The bus system serve best where it is now operating, connecting the two largest concentrations of shopping and employment, the downtowns of Minneapolis and St. Paul, with their surrounding higher - density, residential areas.
 - * Expansion of the bus transit system should focus chiefly on improving service along present bus routes. This offers the best potential for improved transit via the large - vehicle system. The large - vehicle system is not well - suited for other destinations or origins, which make up the largest portion of trips.
 - * Automation of present bus routes or substituting subways for some routes is not needed, given the relatively low corridor volumes.
 - * Throughout the region small vehicles carry far and away more passengers than do the large public vehicles.
 - * Small vehicles, cars, vans, taxis, have the most capacity available, now. Seats are available (more than 1.5 million vacant seats in the rush hour, for example). Licensed, part - time drivers are available. Right - of - way is available.
 - * Small vehicles provide practically the only potential for the vast majority of trips:
 - for the central city resident whose destination does not happen to be the central business district.
 - for the suburbanite whose destination is the CBD but who does not live in an area well served by a bus line.
 - for all other trips which originate and terminate in a variety of locations throughout the region.
 - * The Twin Cities area transportation problem can best be solved by making the small vehicle network more readily available to people who need rides.

. . . IN OUR REPORT

II. Emphasize transit facilities which favor short trips over long trips to reduce travel demand in the future.

In this committee -- and only here within the Twin Cities area to the best of our knowledge -- an entirely new dimension of the transportation problem has unfolded. It is of absolutely central importance. Let us try to state it succinctly:

- * Always up to now the transportation problem has been set essentially as a problem of *supplying facilities* for a travel demand that was assumed to be growing and to be beyond the range of public policy to affect.
- * But the transportation problems about which we are fundamentally concerned - congestion, the neighborhood disruption of additional construction, energy consumption, pollution -- occur as a result of an imbalance in the supply of facilities related to the demand for travel.
- * Since this is basically an equation, it is possible to work on the problem by dealing also with the demand side: to affect the volume of trips, the timing of trips.
- * All the "answers" proposed for the transportation problem, so far, have in common that they are efforts on the supply side. Different as are the regional network proposals of the MTC, of the Metropolitan Council and of the advocates of PRT, these all represent proposals for facilities to make it possible for people to travel farther, faster, with less inconvenience. They differ simply in the technology they propose. In this sense, the regional fixed - guideway, the exclusive busway or the regional PRT network, work much as an interstate highway: Each assumes a continued separation of residential, retail, office, industrial, and recreational land uses around the area and attempts to connect them with higher - capacity transportation facilities.
- * We propose that a new dimension be a part of the answer to the transportation problem: that we try now to reduce the demand for travel. Some long vehicle trips should become short vehicle trips. And some trips formerly requiring an auto should be eliminated altogether. This can take place if, increasingly, new, higher density dwelling units are located close to employment, shopping and other destinations. In plain words, this means that higher - density residential development should be concentrated in and near the downtowns and the other major diversified centers, such as Southdale - 494 - 100.
- * Transit can help support housing in such areas by offering -- for the first time -- superior ability to make trips *within* such centers. The automobile is at clear disadvantage here. This means walkways, bikeways, mini - buses -- or some form of automated fixed guideway which operates only within the vicinity of the center. This can be a powerful magnet to reduce the demand for travel.
- * Therefore, there can and should be some automated fixed - guideway. But it must be confined within a major diversified center rather than running from one center to another.



FINDINGS

We make essentially four findings, which will form the basis of our conclusions and recommendations:

- I. The Twin Cities area is a relatively low-density metropolitan area, with land uses widely dispersed. This means many origins and many destinations: travel patterns which resemble a ball of yarn rather than spokes on a wheel. There is extensive reliance on small, private vehicles.
- II. The MTC long-range plan features an expanded bus system and a 57 - mile fixed - guideway over which automated vehicles would travel. Service now and in the future would be oriented chiefly to a few major destinations, utilizing a network of permanent, public routes and schedules.
- III. The regional fixed - guideway portion of the MTC plan would help the MTC increase its number of passengers. But, in the aggregate, the increase in patronage would not represent any substantial shift, proportionately, in the region's extensive reliance up on small, private vehicles.
- IV. The regional fixed - guideway would likely have some impact on the location of future residential growth, but the fixed - guideway would not necessarily encourage such growth within diversified centers. The fixed - guideway would not help reduce the demand for travel in coming years.

Our findings in more detail follow:

I. The Twin Cities area is a relatively low - density metropolitan area, with land uses widely dispersed. This means many origins and many destinations: travel patterns which resemble a ball of yarn rather than spokes on a wheel. There is extensive reliance on small, private vehicles.

- A. Residential density is low -- According to the 1970 Census the Twin Cities urbanized area ranked 19th among the 20 largest urbanized areas in the nation in population density. Among central cities only, Minneapolis and St. Paul combined ranked 14th among the 20.
- B. Pattern will not change fast -- Despite a growing trend for multiple dwellings in new residential construction, the basic layout is not likely to change significantly at an early date. While people themselves move frequently, about once every five years on the average, the two-thirds of a million dwellings units already built will not be moved. About 10,000 - 20,000 units may be added every year, some of which undoubtedly will be built along the single-family pattern so prevalent in the past. Of the multiple dwellings, continuing the pattern of recent years, only a fraction are likely to be of the high - density, hi - rise variety. And some of the hi - rise apartments are likely to follow the dispersed urban pattern and be located in suburbs as well as in the higher - density parts of Minneapolis and St. Paul.

- C. Land uses are separate -- Public policy has deliberately encouraged separation of different kinds of land uses from each other. Residential, retail, employment, medical, cultural, educational, and recreational areas are located in different, widely - separated locations. There is extensive travel in vehicles. Only 6.7% of workers in the metropolitan area walked to work in 1970, according to the U. S. Census.
- D. Result is many travel destinations -- The consequence of this pattern of development is not few origins with few destinations, or even many origins with few destinations. Instead there are many origins going to many destinations. For example, the 1970 Travel Behavior Inventory of travel in the metropolitan area revealed that during the 6 - 9 a.m. rush hour, no single sub - portion of the region attracted more than 8% of the destinations (downtown Minneapolis). For downtown St. Paul the percentage was 5%. While many of us may have an image of everyone in the metropolitan area going to work in the same general location, nothing could be further from the truth. Nor should the relatively low percentages for the downtowns be misunderstood. The downtowns remain the largest concentrations of destinations during the rush hour by a large margin.
- E. Region relies heavily on small vehicles -- More than 90% of the travel takes place in small, privately - owned and operated vehicles (cars). About 40% of the households have at least 2 cars. The system of large, publicly - owned and operated vehicles (buses) serves a small, but significant, portion of the total, mainly the higher density corridors leading to the downtowns of Minneapolis and St. Paul. According to the 1970 Travel Behaviour Inventory, about 59% of all trips were taken by auto drivers, 31% by auto passengers, and about 3.2% by public bus passengers. Thus it can be seen that the small - vehicle system carries about 10 times as many passengers (31%) as the public bus system (3.2%). Even during rush hour the small - vehicle system carries about 3 times as many passengers as the public bus system.
- F. Continuing support for small vehicles evident -- Additional development are under way to further support the small - vehicle network, including the ongoing program of upgrading some 11,000 miles of roads and local streets in the metropolitan area. Certain proposed freeways have been dropped from consideration in the metropolitan area in recent years, such as the Southwest Diagonal, 28th St. Crosstown, Cedar Ave., and W. Broadway freeways. Nevertheless, a considerable amount of freeway construction still is planned for many parts of the area, such as I-394, I-94 north of downtown Minneapolis, and Hiawatha Avenue. Newly - adopted federal law provides a way for a metropolitan area to have an interstate highway removed from consideration with an equivalent amount of dollars made available for transit. But we have no evidence that such an eventuality is contemplated for any of the remaining segments of the interstate system in the metropolitan area.

Additional parking facilities, including publicly - supported ramps in downtown Minneapolis, continue to be added to a supply of parking which, throughout the region, probably totals in excess of 2 million spaces. While the energy crisis points up concern about how the small - vehicle system is used, it is likely that this system will continue, with the vehicles probably designed and used differently.

G. Small - vehicle system generally has worked well -- Residents of the Twin Cities metropolitan area experience considerable freedom of mobility, with travel times relatively short. Congestion, while irritating in some areas, is not as generally a serious problem as it is in some metropolitan areas. The Travel Behavior Inventory revealed that median trip time declined from 26 minutes to 22 minutes between 1958 and 1970, despite the fact that during this time the average length of trip approximately doubled, to about 5 miles. An average bus trip took 33 minutes in 1970, compared to 18 minutes for a freeway auto trip and 11 minutes for a non-freeway auto trip.

H. Poor not adequately served by system -- The proportion of no-car households in the Twin Cities area (13%) is lower than 11 other large metropolitan areas included in a table on auto ownership in the 1972 National Transportation Report. Nevertheless, for the auto - less the region's private, small-vehicle system presents a hardship because of lack of adequate access to the system. Perhaps illustrative of the need which lower - income persons have for small - vehicle transportation, and the price they must pay, is the extent to which they use taxi service. Taxi companies report that most of their business comes from residents of lower - income areas. A Minneapolis taxi dispatcher has estimated that about 60% of his calls come from people who make less than \$6,000 a year.

I. System vulnerable to energy crisis -- Because of the way in which the small, privately-owned and operated vehicle network has been used, the region today is particularly vulnerable to the constraints being imposed to the energy crisis. With 4 or 5 empty seats, on the average, in every private vehicle, the small - vehicle network has been particularly wasteful of energy, road space and transportation dollars. On a 24 - hour basis there are only 15 occupants in every 10 cars. During rush hours the situation is worse, with only 13 occupants in every 10 cars. A recent Urban Institute study ranked the Twin Cities metropolitan area 7th highest among 18 metropolitan areas in transportation cost, while ranking the area first in overall quality of life.

J. Continued mobility is critical - For the housing which is already built and the employment, retail, and other land uses, continued ability for residents to get between their homes and destinations is critical for the economic and social well-being of the region.

K. Just preserving mobility isn't the answer -- Travel problems are likely to become increasingly severe in coming years if the rising demand for trips continues unabated. So long as new dwelling - unit construction occurs mainly in locations far from employment, shopping and other destinations, more and more travel will be required. The result is likely to be rising levels of congestion and longer travel times. Metropolitan Council projections reveal that the number of trips per day in the region could reach 12 million a day by the end of the century, up from 5 million a day in 1970.

II. The MTC long - range plan features an expanded bus system and a 57 - mile fixed - guideway over which automated vehicles would travel. Service now and in the future would be oriented chiefly to a few major destinations, utilizing a network of permanent, public routes and schedules.

- A. Regional "fixed - guideway" at heart of plan -- The MTC proposal features publicly - owned and operated vehicles running on publicly - designed, permanent routes and time schedules. Capital cost would be approximately \$1 billion in 1972 dollars, escalated to \$2 billion by the time of construction. The biggest capital investment in the MTC system would be a 57 - mile regional fixed - guideway over which about 850 automated vehicles would travel. In addition the MTC would have, by 1990, about 1,350 buses, up from its current fleet of about 700 buses.
- B. Bus improvements now receiving high priority -- Late in 1973 the MTC added another dimension to its transit plan. While continuing to press for legislative authorization to continue work on the regional fixed - guideway, the MTC presented a new package of bus - improvement proposals to the Legislature which had not been in the MTC's legislative proposals earlier in the year. This package has three major features:
- Financing a rapidly - increasing subsidy of the current bus system, brought about by higher diesel fuel prices and a higher labor costs. The subsidy will reach an estimated \$8 million in fiscal 1974, up from only \$250,000 in fiscal 1971. Since the MTC took over the formerly - privately - owned bus company in 1970, it has substantially expanded its service. The result has been an increase in ridership, reversing a downward trend which had been going on since 1946.
 - Permitting an immediate 40% expansion in bus fleet and drivers to provide more service because of the energy crisis. During peak hour most MTC seats are on the road and most are filled. There is little capacity in reserve. Capacity must be expanded by adding buses. The MTC originally had planned to replace 236 old buses in the spring of 1974 with new buses. Now it proposes to keep those old buses in service after the new ones arrive, and not replace them for another two years or so, at which time more new buses would be purchased.
 - Constructing park - and - ride sites, bus loading areas, and bus shelters and stations at a cost of about \$84 million.

The Legislature is being asked to finance the program in the following manner: First the MTC's property tax millage for operating expenses would be increased from 1.45 mills to 2.1 mills, which would raise approximately \$3.8 million more annually. These funds would finance the rising subsidy at the current level of bus service and preliminary engineering, plan refinement and environment impact study for the MTC's regional fixed guideway. Second the Legislature would make available immediately, from fund sources unspecified, \$4.5 million, which would finance the immediate 40% expansion of the bus fleet and drivers for a period of 18 months. Third, the Legislature would be asked to permit use of state highway funds for about \$11 million of the cost for park - and - ride sites, bus loading areas, and bus shelters and stations. The MTC capital levy would provide another \$6.6 million, with the balance, about \$66.4 million, anticipated from federal sources.

- C. Large - vehicle system serves the downtowns best -- Not surprisingly, the chief focus of the MTC system has been and continues to be the downtowns of Minneapolis and St. Paul. Because of the employment and retail base which exists in the two downtowns and because the relatively higher - density areas are located in the central cities, buses on regular, public, permanent routes have been able to get enough riders to justify such service. The newly - adopted fare - zone plan of the MTC continues to provide this downtown focus.

Large vehicles have not been well suited for other destinations. Because of their size buses cannot travel, legally, on most residential streets. Also, the diverse pattern of destinations for employment, shopping and other purposes in other parts of the region has not been amenable to the concept of operating large buses on permanent routes.

- D. Internal - circulation systems also mentioned -- The MTC's development program also calls for improved transit service within major diversified centers. The MTC's current legislative program contains no specific recommendations with respect to such systems. However, the MTC has provided assistance in preparation of internal circulation plans for downtown Minneapolis, downtown St. Paul, the Southdale 494 - 100 areas and the University of Minnesota - Cedar - Riverside area.

III. The regional fixed - guideway portion of the MTC plan would help the MTC increase its number of passengers. But, in the aggregate, the increase in patronage would not represent any substantial shift, proportionately, in the region's extensive reliance on small, private vehicles.

- A. Ridership a small proportion of total trips -- The entire MTC plan, covering both the regional fixed - guideway and the bus network, would not materially change the region's use of small, privately - owned vehicles. In figures presented to the Legislature, the MTC projects that the proportion of total trips taken by public transit would increase from 3.2% in 1970 to 6.0% in 1990. Also, because of the growth in trips between 1970 and 1990 (projected by the Metropolitan Council to increase from about 5 million in 1970 to about 9 million in 1990), the growth in trips, in absolute numbers, taken in small, privately - owned vehicles, will vastly exceed the growth in number of trips on the MTC system.

Because of the orientation of the MTC service to the two downtowns, the proportion of trips on transit to those locations would be much higher than the regional average. Under its plan the MTC projects that about 50% of the commuters working in the downtowns will be using transit. In 1970 the proportion of persons using transit into the downtowns during the rush hour was 24.1% in Minneapolis and 19.2% in St. Paul.

- B. Regional fixed - guideway doesn't service residential locations well -- The proposed routes of the regional fixed - guideway would connect major centers of employment. The routes would extend from a point near the 3M Center east of St. Paul through downtown St. Paul, west to downtown Minneapolis, then forming a Y with one leg going southwest to Highways 494 - 100 and the other going northwest to Highways 52 - 100. Other legs would extend from Hopkins to downtown Minneapolis, from Columbia Heights to downtown Minneapolis from Rosedale in Roseville.

to the Midway area of St. Paul and from South St. Paul to downtown St. Paul.

According to the 1970 Census, approximately 28% of all employed persons in the 5 - county SMSA lived in census tracts which are located adjacent to the tentative route locations. Of course, a much smaller proportion of persons would live near the 40 stations which would be spaced more than a mile apart, which means only a fraction of the 28% will live near a station. More importantly, the fixed - guideway route is not likely to coincide with the work - trip destinations of thousands of workers along the route anyway. For example, of the workers who lived in the above - mentioned census tracts in 1970, only 10% worked in downtown Minneapolis and 4.2% in downtown St. Paul.

- C. Beginning of regional fixed - guideway service would be many years away -- Construction of the regional fixed - guideway would do nothing in terms of providing service for a minimum of eight years, since it is not expected to open until 1982, and then only 37 miles would be open, if such a schedule could be met. Not until 1990, at the very earliest, would the entire system be complete. Again, that is assuming strict adherence to the recommended schedule of the MTC. It would not be unlikely that the actual completion dates would be far beyond those anticipated -- if other public works projects can be taken as a barometer.

This means, of course, that the regional fixed - guideway is not going to be able to help the problems of fuel scarcity until well after the start of the next decade and even then, based on patronage projections, it would not significantly reduce the region's reliance on gasoline. The fuel scarcity problem will have to be solved by other means.

- D. Uncertainty of federal funding adds to the problem -- The federal government would be expected to provide the vast majority of funds for capital costs. Under present law, up to 80% of capital costs could be eligible for federal assistance. The likelihood that 80% federal funding of the fixed - guideway would be received in the amounts and at the time requested is uncertain at best. According to the National Transportation Report of the Department of Transportation, as of 1972 transit requests to the year 1990 totaled more than \$60 billion, in 1969 dollars. This does not include certain systems that have been proposed since then. Congressional appropriations for transit so far have been one - tenth of that level, and even if the amounts authorized are appropriated, the dollars would only be one - fifth of the needs. Hard decisions will have to be made in coming years by the federal government in apportioning funds among metropolitan areas. Currently, in fact, federal policy is to place higher priority on improvements in bus systems, because of the energy crisis, as against funding new regional fixed - guideway.

A metropolitan area that expects to receive 80% of whatever it asks for, may find its expectations thwarted. This had been said publicly by officials of the Department of Transportation. To the extent the federal portion is not forthcoming, the balance will fall on the local taxpayers or a system will be only partially built, which means, of course, its service will be even more limited.

- E. "Fixed" nature of the regional system affects its service potential -- The regional fixed - guideway places high priority on channelizing travel into selected corridors, requiring extensive transferring from other vehicles. It assumes passengers will go to the system, rather than the system coming to the people. It is dependent for its success, therefore, on a substantial number of persons modifying their means of travel. The key question is not whether the regional fixed - guideway can *carry* passengers. The question is whether it will be able to *attract* passengers. High value is attached by the MTC to the automated operation of the regional fixed - guideway, even though -- as the vehicles become captive to the guideway -- the system loses its ability to move capacity elsewhere for other kinds of travel during off - peak hours.

The regional fixed - guideway's potential for service to lower - income residents in the central cities would depend upon the attractiveness of reverse - commuting, which would work only if the resident has easy access to the regional fixed - guideway route and if the resident's employment destination is located along the fixed - guideway route.

IV. The regional fixed - guideway would likely have some impact on the location of future residential growth, but the fixed - guideway would not necessarily encourage such growth within major diversified centers. The fixed - guideway would not help reduce the demand for travel in coming years.

- A. Regional fixed - guideway not likely to cluster residences near jobs or shopping areas -- The MTC sees its regional fixed - guideway as an essential element in implementing the major diversified centers concept. The MTC's policy statements make it clear that major diversified centers are to include clusters of employment, shopping, housing, and cultural facilities in a limited number of regional locations, thereby reducing the demand for many scattered trips. This is fully consistent with the Metropolitan Council's policy on major diversified centers. The major significance of the *residential* component of a major diversified center frequently is overlooked. By co - locating new residential development with employment, shopping, medical, cultural, and other destinations, the need for long trips will be reduced in coming years which, of course, reduces such transportation - related problems as congestion, pollution, and high cost of getting from one place to another. The 1970 Travel Behavior Inventory found that 4 out of 5 trips taken by Twin Cities area residents either begin or end at home. Therefore, the further residences are located from destinations the greater the need to travel long distances.

The regional fixed - guideway would not appear to encourage clustering of residential development near jobs and shopping areas. In fact, the exact opposite seems more likely. In effect, the regional fixed - guideway would make it easier for residential locations to be located at remote distances from jobs and shopping areas. A person could live in a 4th or 5th tier suburb, drive a few minutes to a publicly - financed park - and - ride lot, get on the fixed guideway and travel to work. Or, there would be no particular advantages to locating new high - rise apartments within a major center. It would be just as advantageous to locate the apartments out along some station at considerable distance from the center. The result in both cases would not reduce need for travel, because new residential growth

would continue to be located long distances from destinations, inevitably leading to higher transportation cost, more congestion and more environmental problems.

Meanwhile, the desirability of certain close - in neighborhoods such as Kenwood in Minneapolis or Summit Hill in St. Paul, which have retained so far their attraction for middle and upper income persons, at least partially because of superior access to the downtowns, would be diminished. A regional fixed - guideway would do nothing to enhance the desirability of close - in living and actually could reduce what advantage such neighborhoods enjoy today.

- B. Bulk of new residential growth needed before regional fixed - guideway would be operational -- A large bulge in demand for new dwelling unit construction because of new family formations is occurring now and, if new units are built as demand occurs, will largely be completed by 1990. Demand for new dwelling units in the metropolitan area during the 1970s and 1980s will be at a much higher level than ever before, according to the Metropolitan Council. By the time the regional fixed - guideway is finished -- under the most optimistic of timetables -- the big bulge in housing may already have been accommodated. Of course, if the station locations for a regional fixed - guideway were determined early, this could have an impact on locations of some of the new higher - density housing, provided other obstacles to location of such housing there -- such as neighborhood opposition, or the difficulty in providing certain public developmental powers -- were overcome.
- C. Land development control powers missing -- Officials of the MTC have cited the experience of Toronto, Canada, where high - rise apartments and offices have clustered along rapid rail stations as illustrative of what could and, what it believes, should, happen in the Twin Cities area. But for such development to be fully successful, the MTC says, the Metropolitan Council would need to be given land use control powers in the vicinity of station locations.

We are not at all sure that all areas around the recommended 40 stations of the 57 - mile fixed - guideway network should be redeveloped with high-density dwellings and offices. Many of these stations would be located in relatively low - density, built - up residential neighborhoods. Other community development policies should determine what should be located where. Also, it should be kept in mind that the Metropolitan Council now is in the process of arriving at a decision on a development framework for the metropolitan area. It is important to maintain flexibility on developmental plans for the area until the Council's development framework plan is adopted.

- D. Many factors affect development -- Private developers, both city and suburban, informed us of a wide variety of factors which determine land use in a given part of the Twin Cities area, of which transit could be counted only as one among many, and, certainly, not the most significant.
- E. Improved accessibility to land is minimal -- A consultant report to the MTC in 1969 has stressed that transit can be particularly influential in shaping land use when the system significantly improves the access to that land. But high auto ownership and usage plus the extensive highway system already provides very high accessibility throughout the region. A regional fixed - guideway would not significantly improve access to the land adjacent to its stations and right - of - way. This would minimize its impact on land development.

CONCLUSIONS

Our conclusions in brief:

I. The bus - improvement parts of the MTC plan are urgently needed and should be supported.

II. Much higher service goals need to be set for this region -- service which is designed for all urban residents. Such service goals can be attained by working mainly with the network of smaller, flexible, usually privately - owned vehicles which have the capability of operating on all public streets and highways, rather than by working mainly with the public bus system.

III. More emphasis must be placed upon avoiding or reducing the length of trips. This means stimulating the location of new, higher - density housing to be located within and immediately adjacent to major diversified centers. Transit -- even short - distance, fixed - guideway transit -- which offers superior mobility within major centers may do more to encourage location of such housing than long - distance, fixed - guideway transit which connects centers with remote housing locations.

IV. The regional fixed - guideway portion of the MTC plan cannot be supported because other improvements can provide better service to more metropolitan area residents at lower cost and because the regional fixed - guideway would provide further encouragement to support long - distance travel rather than shorter trips.

Our conclusions in more detail:

I. The bus - improvement parts of the MTC plan are urgently needed and should be supported.

A. Increased subsidy is needed--Recent increases in diesel fuel prices and cost of labor are largely out of the MTC's hands. If funds are not found, service cutbacks would have to be made.

Despite the relatively small part which the public bus system plays in the metropolitan area's transportation system, it is a valuable public utility, deserving of public support.

While we might prefer the use of part-time drivers and better utilization of full-time drivers during the off-peak hours, we do not delude ourselves that such changes are easy to come by, nor would they do the job of eliminating the need for public subsidy.

We would not advocate an increase in the basic 30-cent fare, recognizing that it probably would adversely affect ridership.

B. Immediate bus-expansion is justified--The MTC's 800-mile network of bus routes provides valuable service to residents who live near these routes and whose destinations coincide with those of the routes. Very little excess capacity is available during the morning and evening peak hours. Almost all available equipment is in use at those times, with standing-room-only a common sight.

More frequent service along present routes, along with extensions where demand is well identified, is urgently needed at this time. Persons who because of the energy crisis look to the MTC for a ride ought to be provided one. This means expansion of the present fleet. The MTC has had on order for some time 296 new buses which are scheduled to arrive beginning April 1, 1974. Some 236 of these new buses had been scheduled to replace old buses. Now the MTC proposes, because of the energy crisis, to keep the old buses in service, and add approximately 350 drivers and about 50 mechanics to handle the expansion. If the MTC did not have the new buses on order, it is likely it would not have the opportunity to respond, now. During fiscal years 1975 and 1976 the old buses would be replaced and the fleet further increased to a total of 1,100 buses.

The program is urgent and needs support.

- C. Further bus-related capital improvements need elaboration--The recommended \$84-million capital program of the MTC involving park-and-ride sites, bus loading areas and bus stations had not yet been spelled out in detail in terms of location, size, design and cost of various facilities at the time we completed our work. Such steps need to be taken along with subjecting the proposal to the standard review of areawide capital projects through the Metropolitan Council.

II. Much higher service goals needs to be set for this region -- service which is designed for all urban residents. Such service goals can be attained by working mainly with the network of smaller, flexible, usually - privately - owned vehicles which have the capability of operating on all public streets and highways, rather than by working mainly with the public bus system.

(Our service concept applies to any vehicle which provides someone with the opportunity to ride, rather than drive, including private cars. This concept is spelled out in greater detail in an earlier League report: Building Incentives for Drivers to Ride).

- A. Small vehicles needed to adequately serve residences--Four out of every five trips (80% of them) on a typical day in the metropolitan area either begin or end at home. This fact is of enormous importance for transit. Transit, if it is to serve, must find a way--within the Twin Cities area's pattern of dispersed, single-family residences--to pick up persons at home and get them back there. The problem is not to connect work-places with work-places, that is, one cluster of shopping, office, and industrial locations with another. While this may appear, on the surface, to have some logic, no significant number of trips occur between and among these locations. The problem is to connect residences with work-places and other destinations, wherever they happen to be.
- B. Give first priority to the work trip--Of all trips taken by people in the metropolitan area today the work trip is the one which is most regular from day to day in terms of route and timing as well as concentration of persons at a common destination. Moreover, the work trip is most critical for meeting the needs of low-income individuals whose job opportunities are limited to the areas they can get to without driving. In terms of combating over-reliance upon the automobile, concentration on the work trip is likely to do more for reducing the number of two-car families because in many cases the extra car is needed for the work trip. If the work trip can be a non-driving trip it is much more likely that other trips during the day also will be.

The 1970 Travel Behavior revealed that for the work trip, 75.7% of the trips were taken by auto drivers; 14.3% by auto passengers; 5.4%, public bus, and 4.6% by all other means. On a 24-hour basis 31.1% of trips are taken by auto passengers. How much the region could be helped if that 14.3% were increased merely up to the 24-hour average of 31.1%? It would mean 139,000 fewer persons driving to work, or 139,000 fewer cars on the road or filling up employers' parking lots.

Any look at the travel patterns of the region, whether for work or other purposes, will point up clearly the need for transportation which is tailored to meet the particular travel needs of the individual. With respect to work trips, destinations are widely spread around: the downtowns of Minneapolis and St. Paul, of course, but other locations in the central cities as well, northeast Minneapolis, the Midway in St. Paul. Or, in the suburbs, the industrial area along Excelsior Boulevard, or in Golden Valley, or New Hope, or Fridley, or Roseville, or Maplewood, or South St. Paul. Or the Airport. The different work destinations of an individual and the neighbors on his block is illustrative of the situation throughout the region. Many opportunities exist for serving this pattern of trips. There is no need to assume that the only alternative to driving is riding in a 50-passenger vehicle with a full-time professional driver operating on a permanent, scheduled route. For example, the 3M Company is using 41 employee-driven vans to help some 460 employees get to work. CENEX and General Mills have also begun van programs.

- C. Higher transit goals needed---We cannot accept a transportation goal which offers so little as 6% ridership. Not that an increase in ridership on the large-vehicle, public bus system is unimportant. For that portion of the population which is served, the increase is very much needed. But such low overall percentages reveal that reliance upon large, publicly owned and operated vehicles which run on fixed routes and time schedules cannot provide an adequate level of service for the vast majority of trip requirements. The real potential for increasing ridership, in large numbers, exists in the small, private vehicle fleet. It should not be out of the question, even as early as 1980, to talk in terms of something like 50% of all trips taken as passengers rather than drivers.
- D. Everyone here, today, is entitled to maximum feasible service -- Residents of the Twin Cities area, wherever they happen to live within the contiguous urban area, ought to be entitled to maximum feasible service, should they need it. Transit -- expressed in its most essential sense as offering an individual at least a ride to and from work -- ought not be limited to some persons and not others. Again, this service concept requires use of small vehicles.
- E. Better service can help "shape"---The Metropolitan Council is trying to encourage development on skipped-over land versus far-out land. At present, transit makes one no more attractive than the other: both depend on the auto. The one different advantage for the close-in land could be the presence of transit service--if defined as the availability of a ride to work, which will require the use, of course, of small vehicles.

III. More emphasis must be placed upon avoiding or reducing the length of trips. This means stimulating the location of new, higher - density housing to be located within and immediately adjacent to major diversified centers. Transit -- even short - distance, fixed - guideway transit -- which offers superior mobility within major centers may do more to encourage location of such housing than long - distance, fixed - guideway transit which connects centers with remote housing locations.

So far this metropolitan area has worked essentially on one side of the travel "equation", namely the supply side. The other side, demand, has been considered to be mainly an independent variable. In plain words it has been thought that travel demand must be accommodated, whatever its nature. Particularly, in this metropolitan area, we have continued to re-enforce the tendency for ever - increasing length of trips.

But if this metropolitan area does nothing to encourage living environments in which the need to take long trips is diminished, our transportation problems cannot be solved. A respected national authority on transportation who has studied transportation problems around the world has concluded, after many years of study, that there is no "solution" to the problem of meeting travel demand. The only way, in this person's opinion, to solve the transportation problem, is to reduce the need for transportation.

New, at this point in time, the metropolitan area is approaching a decision - point on the future direction of longer - range transit planning. So far the focus has been chiefly on transit improvements that would continue to re - enforce longer distance travel. The 57 - mile regional fixed - guideway proposal, for example, would make it easy for residents who live far from their destinations to make trips. It would, thereby, support, in coming years, location of housing at remote distances from destinations. Because four out of five trips begin or end at home, this means, inevitably, a continuation of long - distance travel. In effect, more transportation and more transportation problems.

Transit improvements which would encourage shorter trips have been talked about but have not received the priority which they deserve. For example, the MTC plan includes support for internal circulation systems which would serve concentrations of housing, employment, shopping, and land uses in the same general location (the major diversified centers throughout the region.) In effect, such internal circulation systems would be designed to provide superior mobility within a fairly small area, meaning that short trips would be aided because it would become particularly easy to take short trips. Internal circulation systems can take many forms. Their important characteristic would be that they would make it easy to take short trips, say, up to a mile or two. Such systems could be non - vehicular or vehicular. That is, an enclosed walkway is an internal circulator. The vehicles could be bicycles, mini - buses or other vehicles which are not fixed to the guideway. Or the vehicles could be automated and fixed to a guideway, operating as an internal circulator.

The creation of internal circulator systems which provide much better mobility within major diversified centers will support the already - evident tendencies for more residential development in and near such centers. Again, if more housing locates here, this will mean more shorter trips, rather than longer trips.

There are many advantages to transit planning which stresses improvement of internal circulation systems:

- A. Competes with auto at point of greatest vulnerability -- Within a major diversified center the auto is the most undesirable form of movement. Yet today, in such emerging centers as Southdale - 494 - 100, it is the only option available.
- B. Creates a "skeleton" where there is none now -- The street and highway network forms the skeleton for development, on a macro - basis, around the region. No such "skeleton" has been devised for circulation within major diversified centers. An analogy with the world of biology may be appropriate here: only animals with skeletons really can become large.
- C. Capable of relatively early operation -- Consultant reports indicate that an automated internal circulator can be built by 1977. Even if overly optimistic, the projections indicate that fixed - guideway operating only as an internal circulator can be operational many years before the regional fixed - guideway -- in time, for example to have an impact on the location of the large number of new dwelling units needed in the coming decade or so.
- D. Each internal circulator is fully self - sufficient - Unlike the need to complete a 37 - mile or 57 - mile segment to reach its full potential as would be the case with the regional fixed - guideway, a fixed - guideway internal circulator would be "complete" with many fewer miles of construction, in a given center, perhaps as few as 3 or 4 miles.
- E. Risk of error minimized - If, for whatever reason, a commitment to a sub - regional fixed - guideway in a major diversified center turns out to be a mistake, the consequences of such an error would be far less than, for example, if a commitment to a regional fixed guideway turned out to be a mistake.
- F. Not as expensive - Cost estimates indicate an automated internal circulator could cost about \$80 million. Even if six or seven of these were built, the cost would be far less than that of the regional fixed - guideway, there by increasing the prospects of the federal government's providing up to 80% of the capital cost. It is probably true that federal officials have thought primarily in terms of funding regional fixed - guideway networks designed to help long - distance commuting as against sub - regional fixed - guideways designed to reduce the need for long - distance trips. This could mean that federal officials might attach lower priority to such sub - regional systems. However, increasingly, decisions on local transportation improvements, whether as between highways and transit or between capital and operating expense or between regional and sub-regional systems are likely to be made below the federal level, within a general allocation of funds for transportation.

IV. The regional fixed - guideway portion of the MTC plan cannot be supported because other improvements can provide better service to more metropolitan area residents at lower cost and because the regional fixed - guideway would provide further encouragement to support long - distance travel rather than shorter trips.

We do not dispute the claim that the regional fixed - guideway system would attract more riders, once it is built, than just the bus system. Nor do we doubt that the regional fixed - guideway would have some impact on the location of new development.

Our findings and other conclusions, however, convinced us that goals of the regional fixed - guideway can be met better, quicker and at lower cost by other means. Therefore, the regional fixed - guideway is not needed.

If cost were no consideration, the metropolitan area probably could be blanketed with regional fixed - guideways that would enable any resident to get wherever he wants to go. The question is whether a billion - dollar expenditure can be justified for a fixed - guideway network that would serve only a very small proportion of trips in the region and then only 10 to 20 years from now. We think not. Much more can be done by other means.

While the regional fixed - guideway would have some impact on new development, we believe that its impact would be to continue to support a pattern of development which requires long - distance trips rather than short - distance trips.

Construction of the regional fixed - guideway might occupy a disproportionate amount of MTC time and energy over the next two decades. The MTC's development plan indicates that the regional fixed - guideway is at the center of its plan, with all other parts relating to it. The MTC might find it difficult to give adequate attention to other service aspects of transit when so fully occupied with the regional fixed - guideway.

Moreover, if the go - ahead were to be given by the Legislature to construction of the regional fixed - guideway, it could convey the incorrect impression that the region's transit problem had been "solved" thereby. Consequently, other needed improvements affecting more trips and more people might not receive adequate attention.

Perhaps sometime in the future an automated regional fixed - guideway could be justified, if at that time it could be demonstrated as needed as part of an overall transit service concept in the region. But such a justification is clearly absent today.

RECOMMENDATIONS

I. Immediate bus service improvements

- A. We recommend that the 1974 Legislature approve the MTC request for additional financing to cover increasing subsidies required to support its present level of service.
- B. We recommend that the 1974 Legislature approve the MTC request for up to 40% expansion of its bus fleet and drivers and that the Legislature provide the necessary funds for this expansion.
- C. We recommend that the MTC prepare a specific plan, including cost estimates, location, and size of recommended park - and - ride sites, bus loading areas and bus shelters and stations, and obtain review of the plan by the Metropolitan Council, consistent with other capital plans, before seeking legislature authority for its proposed \$84 million construction program for these purposes.

II. The MTC long - range plan

We recommend that the 1974 Legislature deny the MTC request for \$1.5 million for preliminary engineering, plan refinement and environmental impact study of its proposed 57 - mile regional fixed - guideway.

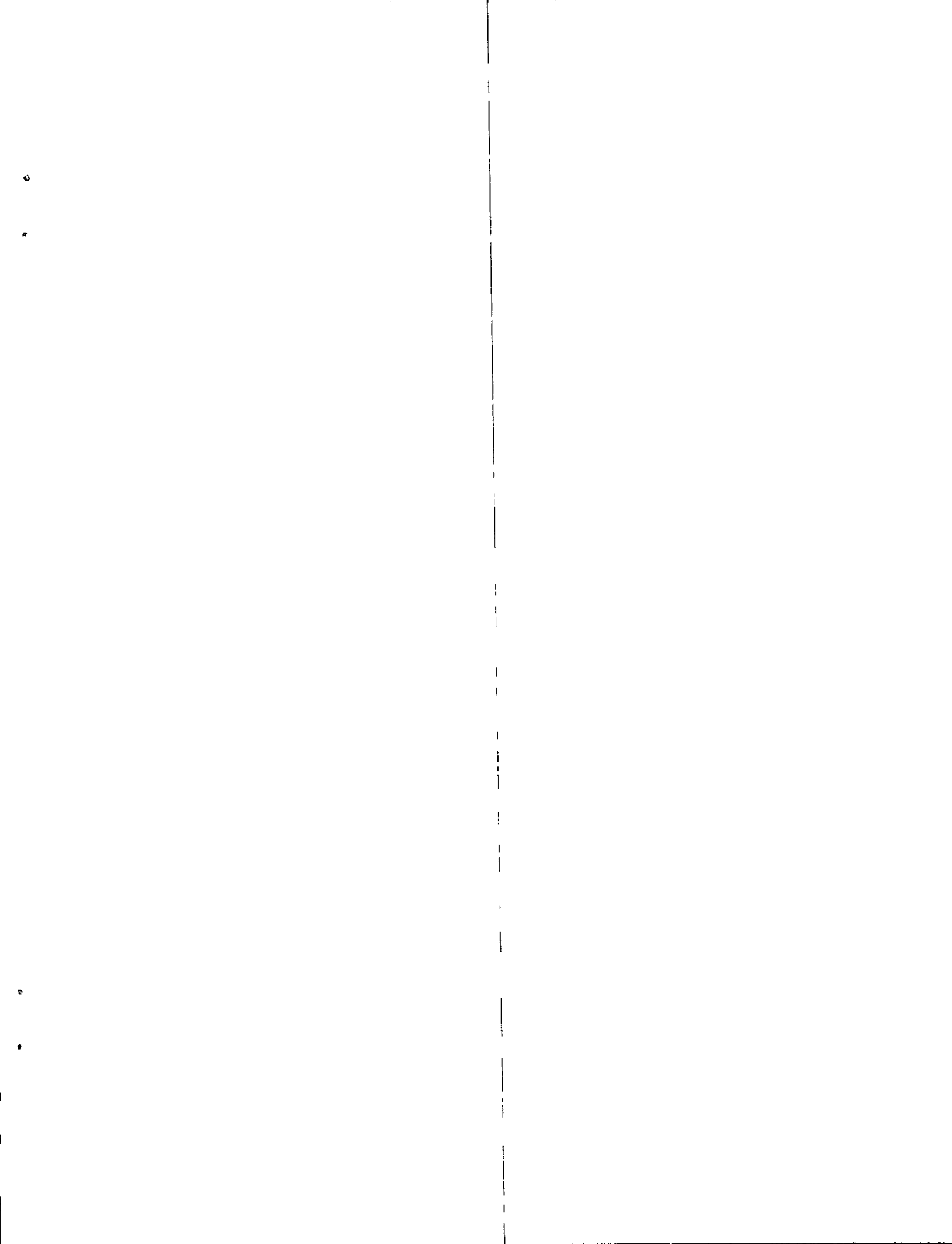
III. Reduction of travel

- A. We recommend a re - orientation of long - range transit planning in the metropolitan area to focus on reducing the amount of travel, by encouraging short trips rather than long trips. This means, particularly, the improvement of circulation systems within major diversified centers, so as to give a definite advantage to mobility in short trips as against long trips. Plans should be completed early enough so that the 1975 Legislature can take action. Plans should cover major diversified centers as may be identified throughout the metropolitan area. They should include, as needed, a variety of kinds of internal circulation systems, including enclosed walkways, bike - ways, mini - buses, and in some cases, sub - regional fixed - guideways for areas within and immediately adjacent to major diversified centers.
- B. We recommend immediate experiments in demand - responsive service in neighborhoods around the metropolitan area, utilizing taxis or other vehicles as desirable.

IV. Small - vehicle service

We recommend major expansion of efforts to promote transit service in small, usually privately - owned vehicles, including:

- Establishment of a goal of reducing the number of drivers, and increasing the number of passengers, in the metropolitan area to about 50% by 1980. Annual progress towards this goal should be monitored and reported.
- Preparation of a plan, with a recommended legislation, early enough for action by the 1975 Legislature, on ways to improve the use of the private vehicle fleet. Such a plan should include, specifically, reference to any needed incentives -- positive or negative -- to encourage more ridership.



DISCUSSION OF RECOMMENDATIONS

Readers undoubtedly will have many questions about the recommendations. This section of the report is intended to anticipate some of the questions and try to provide answers.

1. How will the various participants and interest groups in the transportation problem react to the proposals?

We don't know, now, how they will react. We can say, now, how we would hope they would respond, reasonably.

- The MTC. It will be disappointed that we do not support the regional fixed - guideway, which has been at the center of MTC planning. But the recommendations support a major expansion of MTC bus operations. Moreover, the MTC has the opportunity to develop and operate internal circulator transit systems, which may be the most advanced transit concept in the nation, because they can offer -- for the first time, -- an opportunity to reduce the need for long trips.
- Advocates of PRT. The internal circulator gives them the opportunity to try the new technology they urge, or something close to it -- although not on a areawide basis as they would prefer. However, the areawide service concept recommended in the report -- which stresses extensive use of existing small, demand - responsive, personal vehicles, providing origin - to destination service, with off - line stations -- is quite similar to the PRT service concept. There is one significant difference: the present system requires drivers. Under the PRT service concept vehicles are automated.
- Central Cities -- They are much better off than under the MTC plan. Our proposals will reduce congestion and auto travel more. They provide incentives for high - rise buildings to locate in major centers, like the downtown not in low - density, built - up residential neighborhoods. This greatly enhances the vitality of the St. Paul and Minneapolis downtowns, and eliminates the prospect of difficult conflict with the residents over the construction of apartments and parking lots near the fixed - guideway stations in residential areas.
- Suburbs. They need service, and they get it. In many cases, suburban residents have no hope of walking, as an alternative. Big buses won't work. Suburbs must have a vehicle system. A small - vehicle system is the only system that can hope to bring service to all residential streets.
- Inner - City residents. Job opportunities for persons without ready access to their own private autos, which includes many low - income persons, will be broadened because they no longer will be limited to jobs located along conventional transit routes which serve their neighborhoods. They will have access to the flexible, small - vehicles system. Moreover, door - to - door service using small vehicles which pick up workers at home can help stimulate regular job attendance on the part of persons who may have had problems in maintaining a regular work schedule in the past. Inner - city residents will benefit, too, because they will experience no disruption, by construction, of any regional system, and high - density apartments won't intrude into their neighborhoods.
- Metropolitan Council. The Council will be disappointed in our failure to support its busway concept. But our system conforms to low - risk, incremental strategy, which was the essence of their policy. Also our proposals have maximum impact on implementing the diversified centers concept and on restricting urban sprawl.

2. *What is our position on the currently - active proposals for internal circulators?*

We are not supporting any specific proposal at this time.

Proposals for automated fixed - guideway internal circulators are most active for the Cedar - Riverside - University of Minnesota area and for downtown Minneapolis. Other proposals are under consideration for downtown St. Paul and the Southdale - 494 - 100 area.

It is essential that our support for the concept of internal circulators not be misunderstood as endorsement of any specific plan now under consideration. We have not reviewed any of these plans in detail.

The motivation behind these plans varies from case to case. It appears as if some plans were advanced chiefly to meet a specific need to move people from one location to another in an area defined as a major diversified center. They were not necessarily advanced to provide for ease of movement throughout the residential - employment - shopping - medical - entertainment complex which makes up a major diversified center.

We are aware, too, that the proposed alignments of different plans may have some conflicts. For example, an internal circulator proposal which has been proposed for downtown Minneapolis indicates that it is possible to extend the system to the Cedar - Riverside area in the future. Meanwhile, an internal circulator proposal now under consideration for the Cedar - Riverside - University area contemplates the possibility of an extension as far as General Hospital in downtown Minneapolis.

The variety of internal circulator proposals now being advanced indicates to us the degree of interest which prevails for this concept. But we are in no position to present a plan for such internal circulators. In effect, we are urging that transportation planners and decision - makers re - focus their attention on providing new transit facilities to help people get around *within* major diversified centers, where real problems of movement now exist, where real opportunities for stimulating new higher - density housing to locate are present, and where preference can be given to short trips.

3. *Why do we place such a high degree of emphasis on the concept of using transit for internal circulation?*

We have identified an entirely new dimension on the role of transit in a metropolitan area such as ours. It is a dimension which could turn around all conventional thinking about transit's role.

It would not seem unfair to state that until now at virtually every level of transit and transportation planning from the federal government on down, transit facilities have been designed and built for *long trips*. "Helping the commuter to get to work." Or "easing the congestion on our freeways." Not that it isn't important to help the commuter get to work or to ease the congestion on our freeways. But in our metropolitan area, at least, we have found better ways to handle those problems without building a fixed regional transit system. The new dimension which our report adds is that transit facilities, here, ought to be built for *short trips*. At first blush this may appear to be turning all of transportation planning inside out. And

probably it is.

Why, therefore, are we placing such emphasis on transit which makes it easier to take short trips, and, more explicitly, short trips within a major diversified center?

- * The concept of short trips goes to the heart of any long - term solution to the transportation problem. So long as facilities are provided to enable people to travel farther and faster, that is what they will try to do. It simply means more cost, more congestion and more demand for more long - distance facilities to ease congestion.
- * If, on the other hand, facilities are made available which make it particularly advantageous to take short trips, this may stimulate new residential development to be located in close proximity because of the superior movement which will be made possible thereby. Short trips represent a way to reduce the demand for transportation.
- * Transit facilities would be built with the strategy in mind not simply of accommodating the demand for travel, but seeking to influence that demand.
- * Internal circulation systems are likely to do more than any other transportation improvement to make major diversified centers really succeed. To the extent that such systems encourage new residential growth *within* centers they serve to add new vitality and strength to the centers.
- * Conventional means of transportation -- mainly the auto -- are very difficult to use as a means to get around *within* a center. Thus new transit facilities can be built to serve a market where every other means of travel is inferior. This is not usually the case with transit facilities which serve long - distance travel.
- * From a strictly practical standpoint, it is much easier to provide more frequent (therefore, more superior) transit service at reasonable cost, when the service area is not too long - distance. Transit vehicles can make more round trips.

4. *What is a major diversified center?*

A major diversified center is a cluster of residential, employment, shopping, cultural, education, medical, and recreational land uses all located within the same general area.

It is *not* a group of department stores and shops built around an enclosed mall. Shopping facilities of the Brookdale, Rosedale, Ridgedale, Southdale variety are definitely a part of a major diversified center. But by themselves they are not the major diversified center we are talking about, nor, for that matter, is that a major diversified center from the standpoint of the MTC and the Metropolitan Council.

The MTC's policy statements make it clear that major diversified centers are to include clusters of employment, shopping, housing and cultural

facilities in a limited number of regional locations, thereby reducing the demand for many scattered trips. This is fully consistent with the Metropolitan Council's policy on major diversified centers, which states: "develop major diversified centers by clustering regional shopping, service, cultural, entertainment, governmental and high - density residential facilities."

From our standpoint the *residential* component is absolutely critical to the success of the major diversified center.

The amount of higher - density construction which will be built in the Twin Cities area is not unlimited, although it is clear that in coming years a significant portion of new residential construction will be higher density. A 1973 law was designed to further stimulate high - rise construction by providing for a lower taxable valuation for high - rise as against garden - type apartments. But there is still only so much of this kind of development to go around. For example, a recent study at the University of Minnesota of different land uses in the metropolitan area under a variety of assumptions indicated that the overall proportion of dwelling units built as high - rise would likely remain fairly constant, about 8% of all new dwelling units. This percentage remained constant even under an assumption that two-thirds of all new dwelling units would be multiple family.

Because only so much new high - rise construction will be built, the question of its *location* becomes very important. We are saying such high - density development should be located mainly within those locations identified by the Metropolitan Council as major diversified centers.

Already, there is evidence of strong interest in more high - density residential development in and immediately adjacent to the downtowns of St. Paul and Minneapolis. Internal circulator systems will be needed there to serve the transportation needs of the thousands of anticipated residents.

The Metropolitan Council in February 1971 identified six major diversified centers already in various stages of development: downtown Minneapolis, downtown St. Paul, the Southdale - 494 - 100 area, the Snelling - Hwy. 36 area in Roseville, the Brookdale area in Brooklyn Center, the Midway district in St. Paul.

The Council also identified the general location of 10 other future major centers: Coon Rapids - eastern Blaine, White Bear Lake, Lake Elmo - Woodbury, Jonathan, Inver Grove Heights - Eagan, Burnsville - Apple Valley - Lakeville, Eden Prairie, Eastern Minnetonka - western St. Louis Park, Northern Plymouth - Maple Grove - Western Brooklyn Park, and Eastern Cottage Grove.

5. *Is it essential that internal circulators for all diversified centers be planned together to avoid the risk of being unable, at some time in the future, to link them up?*

Not necessarily.

It is important to realize -- as far as this report is concerned -- that we are not recommending internal circulators as the start of an area - wide transit system that would carry people all over the region. Some persons who advocate such a system -- known generally as fine - grained personal rapid transit -- hope the internal circulators will be the beginning

of such a system. Therefore, they attach high value to making sure that the same technology is used in every center.

From the standpoint of this report, however, we are viewing each internal circulator as being fully self - sufficient in its own right, whether automated or non - automated, vehicular or non - vehicular. It does not need a connection with another system. Remember, we are urging the internal circulators to make it easier to take short trips within centers. They are not being proposed to assist in movement between the centers. Some persons would argue, moreover, that a major diversified center's attractiveness as a location for new development would be diminished by connecting it with a regional network because the center's particular advantage would be lost.

6. If vans and other small vehicles serve many work trips well, what kind of service will be provided between peak hours, for the other - than - work trips?

For such purposes, we see demand - responsive "dial - a - ride" service as best suited.

We stress very heavily the importance of utilizing smaller, private vehicles for work trips that do not coincide well with the MTC bus route system. And we concluded that, from the standpoint of the public interest, the work trip deserves first priority consideration.

Nevertheless, many other kinds of trip requirements exist during the day: shopping trips, medical trips, music lesson trips, and so forth.

For many of these other trips, in those areas not served by the MTC bus routes, the private car is and should remain an important part of the system. A trip to the supermarket to pick up several bags of groceries may well be handled best by the private car.

Unfortunately, with today's transportation system, an individual is almost required to use the private car for many other relatively short trips, because no alternative is available, such as running an errand to a neighborhood shopping center. Such trips are taken a different hour of the day and different times of the week. They need to pick up a person close to home and deliver that person back at the doorstep or fairly nearby.

This is where we see the need for demand - responsive "dial - a - ride" service: small vehicles circulating on residential streets taking persons from their homes to their nearby destinations. Such service would involve relatively short distances. A person living in Bloomington who wanted to go to Brookdale on a shopping trip could not expect to be serviced by such demand - responsive service. But such a person could legitimately be provided with a ride to a nearby shopping area within Bloomington.

Demand - responsive service operating within and in the vicinity of a neighborhood is not unlike the idea of providing service in a major diversified center as discussed earlier. That is, heavy emphasis is placed upon frequent service within a relatively small area.

The taxi is the closest form of dial - a - ride in the region today. It is a small vehicle, capable of traveling on all streets. It is ordered

by phone. It provides service from origin to destination. The problem with the taxi is its high fare. With taxis the driver has no incentive to carry more than one passenger. His commission is the same for the ride, one passenger or five. Thus the service tends, inevitably, to be somewhat expensive. This problem should be able to be overcome with some changes in the traditional fashion of delivering taxi service.

We understand that dial - a - ride - type experiments are being explored by the MTC in connection with a series of ridership studies it now has under way. As far as we know, no experiment has yet begun. Clearly, 50 - passenger buses are not appropriate for neighborhood dial - a - ride service. It is not yet clear exactly what role the MTC would play in developing demand - responsive systems in neighborhoods around the region.

And there are other, as - yet - untried, possibilities. One is the so - called "jitney", in which a small vehicle, probably the size of a taxi, would travel along an established route, picking up and discharging passengers on demand. We were informed that a large Middle East city moves some 100 million people annually by means of the jitney.

Another suggestion is that of a part - time taxi. Perhaps some drivers could receive special licenses and equip their private cars with inter - com connections with a central dispatcher. Then from time to time, as they would desire, they could transform their own cars into taxis, perhaps carrying people to the same destinations they are headed.

Perhaps, too, the van concept could be expanded to cover shopping areas or medical clinics, with such facilities providing van service to pick up people at their homes and take them back again.

A previous Citizens League report, Building Incentives for Drivers to Ride, contains a number of suggestions on better utilization of the existing fleet of vehicles - large and small, publicly - owned and privately - owned.

7. How does this report relate to the emerging developments on studies of small - vehicle technology as taking place between the MTC and the State Senate Metropolitan and Urban Affairs Committee?

About three days before our committee completed its work we were made aware of a possible refinement in the MTC's long range plan, designed to accommodate concerns of the Mass Transit Subcommittee of the Metropolitan and Urban Affairs Committee as outlined in a background report issued late in 1973.

The possible refinement is addressed essentially to reviewing the questions of (a) size of automated vehicle to travel on the MTC's regional fixed - guideway (b) possibilities of stations being located off the main line of the regional fixed - guideway so as to facilitate non - stop origin - destination service, and (c) certain other questions relating to transit technology.

As far as we can see these issues are essentially outside of the questions faced in our report. Our feelings about the need for the regional fixed - guideway will not be changed if the size of automated vehicle is larger or smaller or if off - line or on - line stations are proposed. We simply don't see the need for a long - distance regional fixed - guideway for the region's transportation system.

COMMITTEE ASSIGNMENT

The Citizens League has been actively involved in transit and transportation questions in the Twin Cities metropolitan area for the past decade. In 1964 a League committee began meeting which eventually recommended, in the spring of 1965, the establishment of the Metropolitan Transit Commission (MTC). In 1967 the League recommended the establishment of the Metropolitan Council, with, among other responsibilities, policy control over highways and transit in the metropolitan area. In late 1968 another League report explored the transportation decision - making framework in more detail. This was followed, in 1971, by a report which identified transit primarily as a service rather than facilities. That report, too, spelled out League recommendations on transportation decision - making. In early 1973 the League issued a report which broadly redefined transit as riding (regardless of the size or ownership of the vehicle).

Although previous League reports, particularly the 1971 report, had addressed certain aspects of the MTC long - range plan, not until early 1973 was the MTC plan itself submitted to the Legislature. In the summer of 1973 the League Board of Directors authorized the formation of a special League committee with the specific assignment of reviewing the MTC plan and reporting back by January 1974.

The Board asked that the MTC Plan be reviewed from the standpoint of alleviating congestion, the social and physical development of the region, providing for transportation for persons without cars, improving and preserving the environment, and the fiscal resources of the community. The committee was told by the League president at its first meeting that the question of government structure in the transportation field -- having been addressed by other League reports -- was outside the scope of this committee's assignment.

COMMITTEE MEMBERSHIP

A total of 46 persons participated in the work of the committee. Thirteen others signed up but were unable to participate. Co - chairmen were Gerald E. Magnuson of Minneapolis and Paul Magnuson of South St. Paul. They are unrelated. Both are lawyers. Other committee members were:

D. W. Angland
Francis M. Boddy
Allan Boyce
Richard J. Boyle
Charles H. Clay
Eleanor Colborn
Rollin H. Crawford
Hugo Erickson
Waite D. Durfee
Joan Forester
Virginia Greenman
Ronald Hubbs
James A. Johnson
Robbin S. Johnson

Verne C. Johnson
Geri Joseph
Esther Kellogg
Carl Kroening
Larry Laukka
David Lebedoff
William Leeper, Jr.
Greer E. Lockhart
Steve McCormick
Arthur Naftalin
Martha Norton
Byron D. Olsen
Robert D. Owens
Judy Pearce
Elliot Perovich

F. Warren Preeshl
Rosemary Rockenbach
John Rollwagen
Warren Schaber
Steven Shapiro
Robert Sinks
John M. Sullivan
Marcia Townley
Loren Simer
Daniel Upham
Paul Uselmann
Robert VanHoef
Robert C. Voss
James L. Weaver
John W. Windhorst

The committee was assisted by Paul A. Gilje, Citizens League associate director, Jon Schroeder, research assistant, and Paula Werner, clerical staff.

The committee met 20 times -- a schedule of about one meeting a week -- from August 27, 1973, to January 19, 1974. Meetings were held alternately in St. Paul and Minneapolis for convenience of committee members. Most meetings were from 7 to 9 p.m., although the committee held one four - hour session on a Saturday morning.

The committee devoted its first several weeks to intensive orientation. This involved, first, two meetings with officials of the MTC for a briefing on their transit plan. We then followed with an exploration of alternative approaches which had been advanced, including the busways concept of the Metropolitan Council and the personal rapid transit (PRT) concept backed by a group headquartered chiefly at the University of Minnesota. At this time in the committee work it appeared as if the committee's job was to decide among the three approaches: regional fixed guideway, busways or PRT.

The committee soon learned to look at the problem in a different light. This emerged after several meetings in which the basic pattern of trips in the metropolitan area and the land use pattern of the area was reviewed. At the same time the committee learned about certain low - capital "para - transit" efforts, involving essentially privately - owned vehicles.

The question of transit's impact on urban development came to the forefront in meetings on proposed internal circulator systems, the four - hour Saturday morning session, and in a later meeting with Wilfred Owen, senior fellow, the Brookings Institution, Washington, D. C.

Through the assistance of Congressmen Bill Frenzel and Donald Fraser, arrangements were made for John E. Hirten, No. 2 man in the Urban Mass Transportation Administration, Washington, D. C., to make a special trip to the Twin Cities area to meet with the committee on the question of federal funding for transit.

Notices of all meetings were mailed to officials of the MTC, Metropolitan Council, Minnesota Highway Department, PRT advocates, legislators close to transit legislation, and others in the metropolitan area who are following the transit debate. As a result, representatives of the public agencies most affected by the discussion were present at most meetings. This was extremely helpful to committee members. On many occasions the visitors were turned to for comment. Officials of the MTC, particularly Doug Kelm, chairman, and John R. Jamieson, director of transit development, attended meetings most regularly. We are deeply grateful for their cooperation.

The following persons met with the full committee as resource persons for one or more sessions:

Doug Kelm, chairman, Metropolitan Transit Commission

John R. Jamieson, director of transit development, MTC

Michael Ferrari, executive vice president, Simpson & Curtin, Inc., consultant to the MTC

Robert L. Hoffman, chairman, physical development committee, Metropolitan Council

David Graven, member, Metropolitan Council, and former chairman of Council's Development Guide Committee

Oliver Byrum, manager, development framework study, Metropolitan Council

Steve Alderson and Michael Munson, Metropolitan Council staff

R. P. Braun, Barton - Aschman Associates, consultant to the Metropolitan Council

J. Edward Anderson, professor of mechanical engineering, University of Minnesota, head of a University task force which issued a report on PRT to the 1973 Legislature

Lloyd Berggren, manager, transit systems development, Uniflo Systems Company

Ronald Hoffman, chief transit liaison section, Minnesota Highway Department

Leonard Lehman, director, office administration, the 3M Company

Tom Durfee, Minneapolis Downtown Council

Hy Kilborn, the St. Paul Companies, Inc.

Roger Huss, transit coordinator, University of Minnesota

Wilfred Owen, senior fellow, the Brookings Institution, Washington, D. C.

John E. Hirten, deputy administrator, Urban Mass Transportation Administration, Washington, D. C.

John Borchert, director, center for urban and regional affairs, University of Minnesota

Richard Wolsfeld, Bather - Ringrose - Wolsfeld, Inc., consultant on University area internal circulator study

Max Goldberg, manager of transportation, city of Minneapolis, who outlined downtown Minneapolis internal circulator study.

Russell Langseth, staff, city of Bloomington, who outlined Southdale - 494 - 100 internal circulator study

Ray Harris, private developer, Minneapolis

Bruce Thomson, president, Pem - Tom, Inc., homebuilder

Robert C. Einsweiler, planning consultant, former planning director
Metropolitan Council

Roger Conhaim, housing consultant

Dayton Hudson Corporation

777 Nicollet Mall
Minneapolis, Minnesota 55402



January 21, 1974

Board of Directors
Citizens League
530 Syndicate Building
84 South Sixth Street
Minneapolis, Minnesota 55402

Dear Members of the Board:

I am writing to express my dissatisfaction with the report submitted to you by the Transit Facilities Committee. Although several among you were members of the committee and worked closely with the staff to turn the report in the current direction, I am hopeful that some of the points I raise will become the focus of serious discussion by the Board of Directors.

Before directing your attention to what I believe are specific shortcomings of the report, I think it is only fair to state that on the specific question facing the committee, i.e., the approval of the MTC regional transit proposal, I was in a distinct minority. Further, I want to acknowledge that a large number of the suggestions I have made over the course of the committee's work have been incorporated by the staff in the final draft. I am writing then not as someone who feels he has not had an opportunity to speak his mind, but rather as a member of the Citizens League who believes that there are important questions relevant to the transit decisions we face which are treated inadequately in the report and therefore the report is unworthy of the Citizens League endorsement.

My specific concerns about the report are the following:

1. The specific criticisms of the potential of the MTC proposal outlined on page 18 of the report are inadequate to the conclusion they purport to support. There are essentially three; I will discuss the cost point in number 2. The report asserts construction of the MTC plan might occupy a disproportionate amount of time and energy of the MTC. Do we really want to hang our hat on the point that a formal organization once it reaches a certain size can only do one function at a time? The Department of Defense, General Motors and scores of other organizations are modest examples to the contrary. Secondly, the report states that acceptance of the MTC plan would give the impression the transit problem is solved. The very existence of the Citizens League to say nothing of other forces in the area certainly cause this point to fall of its own weight.

2. Inadequate attention is given in the report to the trade-off of cost, source of revenue, and the service received. No impression of flexibility is communicated if our highly speculative assumptions about federal support are incorrect. If federal money was available for the MTC but not for the internal circulators where would we stand? We say a billion dollar expenditure is not worth what we receive. What is the comparative utility of a billion dollar subway system (assuming 80% funding) costing the area \$200,000,000 and 4 internal circulators costing the area \$140,000,000 with the assumption 50% federal funding. The service of the MTC system would be many times the internal circulator assuming current or planned residential populations in the major diversified centers. Shouldn't some cost alternatives and trade-offs be acknowledged as crucial to the report?
3. The report over-reacts to the regional system planned by the MTC to the extent of assuming an unconstructive posture on the importance of cooperative planning of internal circulator systems and the potential for linking internal circulators into sub-regional systems. The response to question number 5 in the discussion questions (pages 24-25) should be substituted with a positive statement encouraging cooperative planning. A substantial number of committee members shared this concern about the report.
4. The importance of the two downtowns in the continued vitality of the metropolitan area is totally ignored in the report. Approximately fourteen times as many people work in the downtowns as work in any other location. The city councils of both cities have stated their strong support of the MTC fixed guideway plan. Discussion question number one on page 21 indicates that the central cities are much better under the Citizens League plan. Residential construction plans for downtown Minneapolis seem unaffected by the negative response to the proposed internal circulator for downtown Minneapolis. No substantial argument is made for the conclusion drawn on page 21. Transit can be a major force to encourage future commercial and residential development with the consequence of maintaining the tax base and the services of the core cities.
5. The target populations of poor people, senior citizens, no car families, one car families who have a particularly acute need for service are not a substantial part of the Citizens League recommended program. The reference to the problem made on page 7 of the report underlines the concern transit planners should have about this population. No further discussion is forthcoming. Virtually all the new high density housing currently planned for downtown Minneapolis and St. Paul and within the range of the internal circulators is luxury or semi-luxury.

January 21, 1974

6. The embrace of the concept of shortening the length of trips and the importance of the residential component of the major diversified centers seems to have overshadowed finding number 1 in the conclusions and recommendations of the report. The major recommendation of the committee report is that the number one transit idea we think has potential is spending large sums of money for internal circulators in areas where people do not presently live. The City Planning Commission in Minneapolis calculates that there is presently a market for 1,000 apartments per year in downtown Minneapolis. That is probably in excess of the calculated demand in most of the other diversified centers. I support the planning of internal circulators as a part of the total transit picture, but is our focus there really responsive to the transit needs of the metropolitan area.

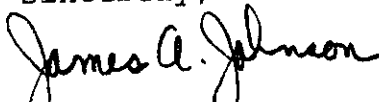
7. The negative impact of focusing adequate numbers of surface buses on the downtown areas to satisfy peak demand on the residential and pedestrian environment we wish to create has not been adequately assessed. Many believe the subterranean feature of the MTC plan is a major point. It is never mentioned in the report. The proposed internal circulator for downtown Minneapolis received a negative response in large part because of the elevated guideway feature.

I believe that an acceptance of the recommended report will substantially diminish the positive impact the Citizens League would have in the transit area. Now is the time to stand above the present battle, focus attention on some of the new ideas which emerged from this committee, and maintain a posture which will allow for constructive participation in the future. A report from which the obvious headline is "Citizens League Attacks MTC Plan" is more likely to be part of the problem than part of the solution, as one member of the committee stated.

The argument will inevitably be raised that the committee met nearly every week for four or five months and that if the Board does not accept the report, the effort will have been for naught. As a person who spent nearly as much time working with the committee as any other member, let me simply say that I think not only several members of the committee but many in the broader metropolitan community would be indebted to the Board for such an action.

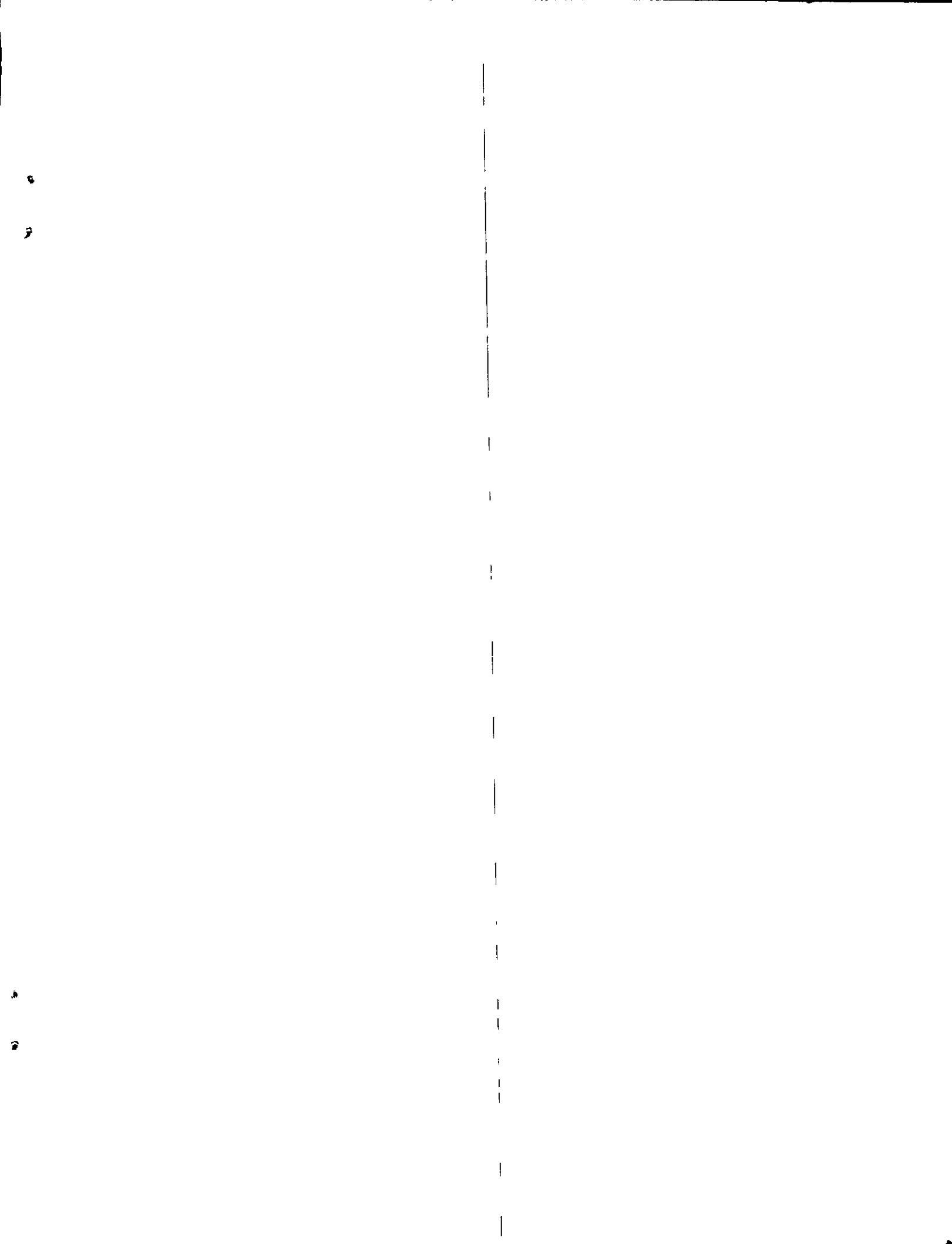
I am grateful to you for your consideration of this letter. I assure you I have great respect for the contribution the Citizens League has made and continues to make to this area.

Sincerely,



James A. Johnson
Director of Public Affairs

Committee members who joined Johnson in his dissent were Waite Durfee, Hugo Erickson, Byron D. Olsen, Loren Simer, and Marcia Townley.



ABOUT THE CITIZENS LEAGUE . . .

The Citizens League, founded in 1952, is an independent, non-partisan educational organization in the Twin Cities area, with some 3,600 members, specializing in questions of government planning, finance and organization.

Citizens League reports, which provide assistance to public officials and others in finding solutions to complex problems of local government, are developed by volunteer research committees, supported by a fulltime professional staff.

Membership is open to the public. The League's annual budget is financed by annual dues of \$15 (\$25 for family memberships) and contributions from more than 500 businesses, foundations, and other organizations.

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