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Take a Quiet Break in the 1971 Ford

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SKYLINES/ISSUE FOUR/PUBLIC TRANSIT

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Martin Worth



The Architects

of the Kansas City Chapter of The American Institute of Architects consider the opportunities and responsibilities for professional service in Kansas City a privilege and a challenge. We pledge our continuing efforts and professional resources in working with the community and its leadership as we plan together for a city which is not only dynamic but which also satisfies the spirit of man.



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VOLUME 20, NUMBER 4

THIS ISSUE: PUBLIC TRANSIT

EDITOR: E. Crichton Singleton



Light can be a warm experience.

It's a scientific fact up to 80% of the energy supplied to an electric light fixture doesn't come out as light at all, but as heat.

For a long time nobody paid much attention to this fact.

But today engineers have found a way to conserve the excess heat from light and to use it to supplement or even replace a building's conventional heating supply.

As a matter of fact, if you have an adequate lighting system it may produce enough heat to keep a building comfortable on all but the coldest days.

And as an added bonus, a modern heatof-light system will expel the excess heat during the summer and make the air conditioning system work a lot easier (and a lot more economically).

Heat from light is a fascinating new subject. It might also save you a lot of money in the operation of a new or renovated building. If you'd like to know more, get in touch with one of our lighting consultants. Call 471-0060.

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YOU PAY YOUR MONEY AND YOU TAKE YOUR CHOICE

Like the price tag for your new car, the price tag for public transit is up. Whether you see it from the rider's viewpoint or as chairman of the board, it is clear that we are in a squeeze between making public transit solvent and operating it in a way which will truly serve the public. We have left the days when private enterprise invested in public transit, when riders were many, maintenance low and construction costs readily amortized. We have entered the era when we will decide as a society whether we will have a public mode of transportation. It is a choice which will have a significant impact on the face of the City.

Public Transit in Kansas City has come to that point. All the machinations of the past five years have merely prolonged the death rattle which began in the early Fifties. The fare at 50c is highest in the nation. The equipment, though being replaced through Federal financing is outmoded and unable to provide service that offers a real attraction to potential passengers. If the Kansas City Area Transportation Authority does not develop a source of support in addition to the fare box, it will early next year be forced to declare bankruptcy. But how is this support going to be extracted from the citizen who is already groaning under the high cost of schools, sewers, roads, police, fire protection and the variety of other municipal services which eat up his tax dollar?

The automobile has not proved the panacea. What a great future it must have foretold at the turn of the century! Man liberated and extended by his own personal conveyance. But the ability to drive anywhere at will has created an urban sprawl beyond our control; the internal combustion engine (all 80,000,000 of them) is by far the greatest source of pollution to our urban atmosphere; the cores of our cities are choked with an automobile storage problem which begins to make additional freeways a menace rather than an aid; lastly there remains a segment of our affluent society whose standard of living forces them to rely on what is left of public transit, and they are stranded! In spite of these facts, the general public is content to pay gasoline taxes amounting to nearly half the price of each gallon, for the support and extention of our highways. We have spent nearly as much of our own money on the Interstate Highway system as we did on the Second World War! Railroad passenger service has already succumbed to this phenomenon. It looks as though urban public transit is the next victim.

Secretary of Transportation, John Volpe, spoke in Kansas City early this year, pinpointing the problem: "If our cities across the country are to survive the growth which is occurring everywhere, we in this nation must provide fast and efficient public transportation in addition to our network of streets, highways and freeways."

In 1968 the Kansas City Area Transportation Authority began planning a reserved right-of-way bus system to connect downtown Kansas City with Kansas City International Airport. In December of 1969 the bond issue which was to have financed the local portion (to receive Federal matching funds) of the construction money was defeated by the voters. Twenty-three other issues were defeated simultaneously, leading to the observation that this was less a rejection of the specific issue than of any public spending at all. Assuming that this attitude can change with an improved economic situation and with encouragement and funds from the recently passed Mass Transit Appropriation, a significant effort must again be made to convince the voters of the urgency of this undertaking.

This issue of SKYLINES is dedicated to the conviction that Public Transit is an essential element of the urban situation. The proposal outlined on page 14 is intended as a device to attract greater public and governmental interest in the ATA KCI Rapid Transitway. If this interest can be generated Public Transit may enter a strong era in Kansas City; if not, the automobile will continue to increase its disintegrating influence on the growth of the metropolitan area.





Transportation Consultants

DOWNTOWN PARKING

The parking problem in the Central Business District has reached cancerous proportions. Garages are too expensive to be constructed on a large scale, and with pressure for more spaces increasing daily, developers have found one of the most lucrative, low investment improvements to be the demolition of sub-standard buildings for slabs of asphalt. Some even boast their own franchise restaurants right on the premises! Last year one of Kansas City's finest 19th century buildings was sacrificed to this disease. The Johnson, Brickell, Mulcahy report of May 1970, counts in excess of 30,000 parking spaces within the CBD, and although the percentage of land area consumed is large, the lack of parking facilities is a major complaint of downtown merchants, and accounts for much of the office tenant exodus to uptown and suburban locations. (Off-street Parking Facilities map courtesy of Land Clearance for Redevelopment Authority.) 8 / SKYLINES

FREEWAY SYSTEM K.C.

Kansas City has developed a fine freeway system. Its focus on the Central Business District renders that downtown "loop" a bit frightening to drive today due to early (1950's) design criteria which did not account for today's traffic loads. Like most urban freeway systems, it is a snarl at rush hours, and in rain or snow travel time seems to increase geometrically. With the completion of the I-435 circumferential route, Kansas City will have spent nearly \$200,000,000 on the freeways which serve the immediate metropolitan area. The controversial South Midtown Freeway will make the CBD "loop" more accessible from Southeast Kansas City and will further increase the pressure on this already dangerous focal point.





Transit grade separation, Mulberry Street at 9th Street. Ninth Street Incline, and the old Union Station in the West Bottoms.



TRANSIT HISTORY

The level of investment in public transit in Kansas City had been extremely high up until the automo-bile became economically feasible for the majority of citizens. The topographic relief between the Central Industrial area and the Central Business District engendered engineering feats in the field of public transit which were well known across the country.

(Photos courtesy of Mrs. Sam Ray, Editor, Post-card from old Kansas City, Kansas City Star)

Holmes Street Conductor and Driver.



10 / SKYLINES



TRANSIT TODAY-THE END OF THE LINE

The impact of the automobile, has made public transit a non-paying proposition, even in the most highly concentrated population centers of Tokyo, New York, etc. Unlike highways, which support themselves with gasoline taxes, user-generated revenue does not support the tremendous investments required for establishing the new public transit systems required by today's urban centers. The question which the taxpayers will answer is whether indeed our urban centers are worth the investment it will take to render them not only habitable, but accessible.







PROPOSAL:

The Public Transit Proposal shown on the preceding page is an idea in which SKYLINES believes Kansas Citians will find merit.

The population density along the CBD-Plaza corridor is generally considered high enough to make a viable rapid transit system. The right-of-way acquisition to the South of the Plaza is greatly eased by the existence of the now unused Country Club car line. Intensifying the existing cross-town bus service to a real "feeder" system would extend effectiveness of the single line without significant increase in costs. Using the presently almost non-functional Union Station as a focal point, future connections could be made east to Independence and Raytown, and west to Kansas City, Kansas and the Johnson County suburbs.

The ATA's proposed CBD-KCI Transitway made use of ordinary transit buses on a reserved right-of-way. This is probably the least expensive equipment system. One simple alternative would be the use of electric buses which would at least concentrate the pollution out of the immediate urban area, at the electric power station. The alternative shown on the page facing, Aerotrain, is a system presently being considered by the Area Transit Authority and the City of Kansas City, Missouri. Whereas its equipment and operating costs may prove to be beyond present feasibility its "guideway" probably would not exceed the cost of normal freeway construction, and its appeal is immediately apparent. A system of this scope and vision would not only lend prestige to the proposal, it would also generate the excitement to which taxpayers do respond.

The cost estimate for the KCI Transitway produced a figure of approximately \$30,000,000, or about \$1,600,000 per mile for the 19 miles to the airport. If this figure is doubled to cover a larger percentage of grade separation requirement, and applied to the 9 miles to 85th Street, a total roadway cost of \$58,800,000 is developed exclusive of stations, equipment and construction cost increases since the December 1969 date of the Transitway report. Whereas SKYLINES does not pretend knowledge of the actual scope of work involved, it can be seen that a project of this magnitude will require not only a substantial commitment of funds through the Federal government's Urban Mass Transit Administration, but also an effective promotional campaign aimed at the taxpayer to generate local funds.

Rapid transit has got to be a part of Kansas City's plan for the new airport if the city intends to remain the dominant factor in the metropolitan area. These nineteen miles from CBD to airport if linked with the nine mile stretch to 85th Street would launch Kansas City on an effective, exciting revival of public transit, and could be the first step toward an alternative to the automobile for transportation in this urban area.

(Proposal Map, on preceding page, drawn from a map by Map Corporation of America, furnished by The Real Estate Board of Kansas City, Missouri.)



AEROTRAIN SYSTEM

The following descriptive material courtesy Aerotrain Systems, Inc.

Beneath the Aerotrain vehicle cabin, a quiet air cushion suspension replaces the wheels of rapid transit cars. The air cushions support and guide the vehicle along a guideway and also function as air springs, isolating the passengers from vibrations caused by the irregularities of the guideway and providing a ride as smooth as flying. Each air cushion follows the guideway surface independently. Pressurized air flows to the air cushion from motor driven blowers. These low noise blowers are located below the floor at the front end of the Aerotrain vehicle.

Air cushions avoid the restrictions and limitations of the wheel, especially at high speeds. Frictional resistance between the vehicle and guideway is drastically reduced. Because the Aerotrain vehicle floats on a continuous, low pressure, cushion of air, concentrated suspension loads are not present, thus permitting a low structural weight. Consequently, the lightweight vehicle accelerates rapidly, stops quickly, and climbs unusual grades.

Any of several propulsion devices may be used to propel the Aerotrain vehicle, however, the linear induction motor (LIM) is believed to be the best choice because it produces no air pollution and generates negligible noise.

The LIM operates on the same principle as a three phase A.C. rotary induction electric motor. The primary electrical windings are arranged in a linear array and are mounted on the vehicle. The LIM secondary is an aluminum reaction rail mounted along the center line of the guideway. There is no contact between the LIM primary and secondary. Vertical air cushions on both sides of the reaction rail guide the Aerotrain.

Electrical power for the Aerotrain system is provided by the local electric utility and transmitted to the vehicles at commercial frequency and voltage. The power collection system consists of three rails along the side of the guideway and a pickup flexibly mounted to the vehicle. The pickup has three sets of sliding contacts in contact with the power rails.

Two prototype Aerotrain vehicles are currently running in France. The 80 passenger "Orleans," designed for intercity service, has a cruise speed of 150 mph and a top speed of 186 mph.

The Orleans has been in operation on an 11 mile guideway since August 1969; many American riders have been impressed with its smooth and quiet ride.

A linear induction motor powered Suburban, carrying 44 passengers has been running since January 1970 at its design cruise speed of 113 mph. The 400 KW LIM receives its power from wayside power rails.









"... the internal combustion engine...generates from 50 to 80 per-cent of all the air pollution we breathe every day... the automobile kills 55,000 people every year... in America today we have one linear mile of highway for every square mile of land... the automobile population (is) growing by 10,000 vehicles every 24 hours."

EXCERPTS OF REMARKS BY SECRETARY OF TRANSPORTATION, JOHN VOLPE AT THE ANNUAL MEETING OF DOWNTOWN, INCORPORATED, KANSAS CITY, MO., JAN. 22, 1970.





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