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"Just as soon as I understand what they're talking about."

Joel Warren Barna

At the end of September, the Metropolitan Transit Authority of Houston and Harris County proposed a visionary project to upgrade bus service and serve Houston for the next century, involving construction of a giant web of bus transit ways, park-and-ride facilities and rail connections, with either a subway or elevated trainway running through the central business district. Perhaps the most remarkable thing about public reaction to this proposal is that only one component of the plan's first phase—the downtown portion—has excited controversy.

In Houston, land exists for driving over. Automobiles have defined Houston more than any other American city. Yankees give up their personal autonomy to ride trains, but not us. Where, then, are the outraged howls that greeted much more modest transit schemes in the 1960's and early 1970's? Choked, one gathers, on West Loop exhaust fumes. It had been estimated that to continue growing at present rates, the Post Oak area will soon need an additional 12 lanes of freeway access, downtown would need another 55 lanes of freeway. "But there's no more land for that, and you could double deck everything in sight and we still wouldn't come anywhere near what's needed," says one transit engineer.

The MTA proposal was unveiled by General Manager Alan Kiepper, who came to Houston this year after 10 years as head of the highly successful transit authority in Atlanta. It calls for expenditures of more than $11 billion for service improvements and capital expenditures for the whole system to be spent by the year 2000. At the heart of the plan outlined by Kiepper is a 40-mile rail network to be completed in stages between now and the mid-1990's. The first phase is an 18.2 mile elbow-shaped, trainway, mostly elevated, serving what MTA calls "the spine corridor," running from West Belt along existing rail alignment on Westpark Street and the Southwest Freeway, northward through downtown, and another existing rail alignment along the Hardy Street corridor to Crosstimbers. This area is projected to have more than 50 percent of the region's population and more than 60 percent of its jobs before the turn of the century. The railway along the spine corridor is calculated to cost approximately $1.83 billion, including the inflation factor for the period of construction.

"This system will do what rapid transit does best, which is to connect residential neighborhoods with major employment centers," says Metro's Chief System Planner, John Breeding.

The train will be on two guideways, elevated over some 70 percent of its path except at its western end. In the downtown area it either will go underground down Main Street or will jump the Pierce Elevated Freeway and proceed north on top of Main Street in what MTA officials prefer to call an "aerial" configuration. This is to avoid confusion with "elevated" trains built in the 1890's, that blighted Chicago, Manhattan and other cities. Today's trains, they point out, are much quieter than any of the old models, with electric motors, running on continuously welded steel track insulated with sound-damping resilient pads, and supported on concrete pylons rather than a steel superstructure. Kiepper says that trains like this, now operating in Atlanta, are so quiet that people waiting for them don't hear them coming and have to be warned not to stand too close to the tracks.

Downtown, the MTA proposes that trains be run on elevated concrete guideways about 15 to 20 feet above Main Street. The pylons holding up the guideways will be erected every 80 to 120 feet according to the latest estimates of MTA officials. Earlier the figure was 40 feet. The pylons will block the street to all north-south traffic except pedestrians and emergency vehicles. East-west traffic would still cross Main

The design calls for three downtown stations, each some two blocks long, to be covered by a striking glass canopy rising up to seven stories above street level—about 75 feet. MTA officials have estimated that the stations could come as close as 17 feet to the buildings on either side, but MTA General Manager Kiepper revised this estimate in a recent appearance before the Houston City Council. The structures could be as little as 12 feet from buildings on either side, he said—in some cases even less than that. The stations, designed by local architect Eugene Aubry of the firm Morris-Aubry, are deliberately flamboyant—they're intended to be "exciting people places," Aubry says, on the order of Houston's Galleria shopping center, or the great nineteenth-century train sheds of Europe

Previous MTA plans called for a subway downtown, connected to a rail line from Southwest Houston. In June of 1981, MTA System Planner John Breeding says, "the authority was forced to do some soul searching," when the Reagan administration announced that it was deferring grants for new rail projects indefinitely, reversing the trend set by previous administrations. Several MTA sponsored studies indicated that bus service was more cost effective for the corridors under consideration, but final study completed in August of 1982 concluded that rapid rail transit, using heavy rail technology, would be more cost effective than a bus system for the "spine corridor" which now included the section north of downtown. Part of the work for that study involved preliminary engineering work on an aerial train down Main Street which was done in the summer of 1981, Breeding states.

According to Breeding, the release of the Chamber of Commerce sponsored Regional Mobility Plan, with its warnings of impending "mobility crisis," and the arrival of dynamic administrator Kiepper in June of 1982 galvanized the MTA. The Board instructed the staff to come up with the fastest, cheapest plan. The staff complied, reviving the aerial option. The concept was taken to architects, who were instructed to come up with a "fresh, exciting approach" to their design of stations.

The drawings and models were delivered and MTA started working on gauging the public reaction—arranging a series of private showings for the movers and shakers of the downtown establishment. Then word leaked out, and MTA was caught pushing for a system still partially unformed. MTA officials, after years of careful preparation, have been forced to scramble for information needed to prop up their case for the elevated. It soon became obvious that a lot of the information was not there.

MTA officials say that they *haven't* decided on the elevated, but that there is no time to waste in getting started on the whole system. "Houston is in a mobility crisis," Kiepper says.

Getting down to steel tracks, MTA officials say that building an "aerial" train would save around $340 million compared to building a subway. The actual difference in construction costs, they say, amounts to about $120 million, which would inflate to $200 million, plus an additional $140 million in inflation to the costs of the rest of the system accruing during the extra one-and-a-half to two years construction time a subway would require. Capital cost and speed of construction are not the only factors favoring aerial, MTA officials say: the aerial would be safer and it would cost around $3.5 million less per year to operate.

Supporting arguments advanced for the elevated have ranged from the specious (such as the assertion that "Main Street has historically had shade" comparable to what it would have with the elevated in place) to the reasonable-sounding-but-unproven (Alan Kiepper's contention that the space under the stations can be developed as retail sales areas) to the undeniably correct (Breeding's statement that an elevated train would be measurably cheaper to build and operate than a subway).

"Taking this purely as a solution to the transit problem, you can't really fault MTA. Their mission was to come up with a system that could be built quickly and for the lowest cost," says Houston architect John M. McGinty, a former president of the national American Institute of Architects. "But that's a very limited and linear mission, and downtown Houston is a very complexly organized system. It's the same as letting Houston Lighting and Power Company design downtown on the basis of the cheapest way to distribute electric power. Using a rail system as a catalyst is a mistake prior to making the decisions on what we want downtown to be."

Like McGinty, critics of the proposed elevated train on Main Street almost uniformly welcome the MTA plan for the spine corridor and the rest of the transit system. But they speak for the different interests—commercial, architectural, historical—that they say would be swept away as unforeseen consequences of the MTA elevated train. Some of them propose that MTA build a subway under Main Street. Others suggest that an elevated through downtown could be located on another street. But underlying the dispute, like a layer of the Gulf Coast's black gumbo clay, is an aesthetic question: should Main Street be conserved, or should it be changed?

The most concerted opposition to MTA has come from a group calling itself "Friends of Main Street," which was organized by Frank Glass and W. V. Ballew, Jr. Glass is the Chairman and Chief Executive officer of Spaw-Glass Inc., a major local construction firm, and he is also a general partner in a group which owns several historic buildings at the northern end of downtown (including, ironically, the Hogg Building, which houses MTA's office). Ballew is a member of the law firm of Baker and Botts.

Friends of Main say that MTA's reasons for choosing elevated over subway are faulty, and that the train will transform the symbolic heart of Houston into a dangerous, littered cavern.

Where are the outraged howls that greeted much more modest transit schemes in the 1960's and early 1970's? Choked, one gathers, on West Loop exhaust fumes. To continue growing at present rates, downtown would need another 55 lanes of freeway.

"We've tried to get the message out about the negative impact this thing would have on the present architecture, and on the other buildings planned for Main Street," says Frank Glass. "Houston needs this train, but it should be underground. I don't care how you doll it up, under bridges is not where people in high-heeled slippers like to go—even if it's as quiet as they say, which I'm not convinced about. The rails may be quiet, but these things have breaks, and eventually they make noise."

Houston Post columnist Lynn Ashby, who has been MTA's loyal opposition since before the agency was founded, wrote a description of his vision of the future Main Street under the train—hellishly noisy, perpetually dark, a haven for violent criminals.

"See the office buildings?" Ashby wrote. "As the executive sits at his desk, 17 feet away the train rumbles by. 'I say, J. P.,' says an irritated voice over the phone, 'Could you speak up? Where is your office, in a volcano?' "

" 'No, J. R. It's on Main Street. But only until the lease runs out.' "

The MTA proposal, Ashby concluded, "is a ridiculous plan for instant slums," that "will cost us vast sums both in lost taxes and lost business" instead of saving money.

One of MTA's proposed aerial stations would be located in front of the Kiam Building which was once the tallest building in Houston. The building would be completely obscured by the station's 75-foot tall glass canopy—a fact which disturbs Frank Glass, a member of the partnership that owns the building and which just paid for the renovation of the structure and the cleaning of its remarkable brick and tile facade. Having the station that close would make it almost impossible to rent the building for offices, Glass charges.

City Council members report that they have been deluged with mail opposing the elevated. Veteran Councilmember Frank Mancuso calls the MTA proposal the most controversial subject he can recall in his 20 years in office—this in a city entertained by 100-year floods every couple of years, HL&P and the Houston Police Department, from Herman Short to Lee Brown.

It has been suggested by Robert Reinhold in the *New York Times* that the proposal for the elevated is merely a "trial balloon" sent up by wily MTA officials to circumvent the natural cussedness of the public—that Houston voters, confronted by a plan involving a subway, would have automatically demanded a cheaper, faster alternative, but that by offering the aerial configuration, the MTA officials are allowing the public to discover the subway alternative for themselves.

If that's the case, MTA officials are creating performances of a subtlety unmatched on any of the Bayou City's stages. Several factors indicate that the MTA people aren't attempting to trick the public into throwing them into the figurative briar patch of subway construction

First, MTA went to the trouble of hiring the architectural firm of Morris*Aubry, whose founding partner, S. I Morris is a long-time proponent of a downtown pedestrial mall). Perhaps more important, Morris brought with him extensive connections to a number of influential community groups—The Bayou Transformation Corporation, The South Main Center Association, and the Houston Chamber of Commerce. Eugene Aubry is ecstatic on the subject of the design; and Morris's silence speaks volumes.

Then there is the enthusiasm with which MTA officials have pressed their case in the face of objections and questions about cost and financing. "This is Houston's opportunity to take a leadership position. We can have the system of the future," maintains Alan Kiepper.

Although they had two models of an elevated railway constructed, there is none of a fresh exciting approach to a subway. When not praising the elevated, MTA spokespeople are emphasizing the costs, dangers and uncertainties to be expected with underground construction and operation.

"Building a subway would require terrible disruption of the downtown. We'd have to cut three 600-foot long stations on Main—the equivalent of three Allied Bank Towers lying on their sides," says MTA's Board Chairman, Dan Arnold. "A lot of businesses could fold during the time that downtown would be disrupted."

What gradually becomes plain is that MTA's leadership has made a value judgement about the state of Main Street that compliments their engineering and financial reasons, if it doesn't in fact determine them. It is difficult not to note a coincidence: both General Manager Kiepper and Assistant General Manager Bill Alexander, who will oversee the construction of the rail system, arrived from Atlanta less than six months ago. They see in Main Street nothing that needs to be conserved, and they feel that the thoroughfare would benefit greatly from some high-tech resculpturing.

Bill Alexander wondered in a recent television interview what all the fuss was about. He took his first walk down Main Street soon after arriving in town, he said, and saw only "...how cracked up it is, the settlement, the number of manholes, the number of valve caps," and other deformities.

"We could afford to do it either way." Alexander said, but building a subway along Main Street would actually do more harm to the area than the aerial system.

Architectural historian Stephen Fox asked Alexander from the audience what he thought about the railway's impact on Main Street's historic buildings: "Main Street has more historic buildings on the National Register of Historic Places than any other street in a Texas city. Some of them would be obscured by the proposed stations," Fox said.

Replied Alexander: "In my experience, very few people look at the tops of buildings." MTA's feeling is that even disregarding the time and money savings involved, Alexander added: "we will make Main Street a better place than it is with this elevated system."

John Breeding of MTA says that the public pedestrian mall created beneath the aerial guideways would "get into interplay with the private space with the new buildings being planned along Main Street, creating an exciting people space devoid of cars—something Houston has never had before. It's the equivalent of the Pennzoil building, innovative, exciting, a signature for Houston. A subway line would be basically a hole in the ground and that's it."

Clearly, the aerial trainway MTA is proposing to build is not the Chicago El, and much of the criticism so far has been misplaced or overblown. One transit engineer who has studied modern rail systems in operation estimated that replacing Main Street's traffic with electric trains would decrease ambient sound noise from around 95 decibels to around 75 decibels, not silent, as some MTA officials have hinted, but quieter

Breeding's assertion, however, bears further examination. Main Street will not be a pedestrian mall. There will be no north-south traffic under the proposed elevated, but there will still be traffic running east-west, slicing the mall into an incoherent series of 20 or more mini-malls, creating air pollution and at least some noise to bounce off the underside of the elevated concrete guideways. The decrease in cars will not help with north-south pedestrian mobility, and the space created will not

be significantly more "exciting" than it is already.

MTA spokespeople have dominated the debate so far, and concentrated on those questions related to technical measures, where they have the decided advantage. People who fear that downtown will be damaged by a noisy elevated train can be mollified: thus MTA chartered a jet for a day-long jaunt to Atlanta and Miami, so that city officials and press could hear for themselves. The trip (estimated price $22,000) reportedly demonstrated the quietness of the new rail technology, but changed nobody's mind about the advisability of building the elevated on Main Street.

The sharp questioning from several members of the Houston City Council at a November 2 hearing shows why the issue of noise is not the only one to be settled before the council and populace can give their blessings. Other questions focus on the downtown elevated, but they also spill over to almost all aspects of the system, from the type of technology involved, to the system's cost, financing, alignment, interface with other transportation systems, and broad effects on the urban fabric of Houston.

Many observers have wondered why, after five years of study, MTA is in such a hurry to get the railway project going—why, in fact, Kiepper said in September that he wanted the go-ahead from the MTA Board within 30 days.

"What's the rush when we're talking about a system that's going to be in place for 100 years?" asks Councilmember Jim Westmoreland.

Kiepper says MTA has to hurry: the Chamber of Commerce-sponsored Regional Mobility Plan, released last spring, shows that the mobility crisis threatening Houston has already arrived. Businesses are already choosing not to locate here because the traffic is so bad, he says, and that portends economic stagnation for a city that must continue to grow in order to survive.

System Planner John Breeding says MTA's hurry is motivated by the best motive: an interest in saving taxpayers' money.

"The biggest single cost factor in this whole project is inflation," says Breeding. "It's something we can do something about by not dragging our feet, and by choosing the configuration that takes the least time to build.

There is another possible factor. A report commissioned by Kiepper from Atlanta management consultants McKinsey and Company, released in August, drew a depressing portrait of MTA as a wasteful agency hamstrung by poor management and inertia. The report points out that at the time of the study, MTA's operating costs were almost twice the average of other agencies used for comparison, with too many employees and not enough control, even over the high-level multi-million dollar contracts the agency had with Houston Transit Consultants. HTC, the report said, charges 35 percent more for its services than the general consultant firm working for MARTA in Atlanta.

Armed with those findings, Kiepper has begun cleaning house—on-time bus performance has increased dramatically, and a contract has been signed with bus operators that for the first time ties pay increases to job performance. Other contracts have been revised also: Kiepper assigned Bill Alexander, in his first weeks on the job in Houston, to renegotiate HTC's contract for a lower fee.

These are low-profile moves, however, and MTA desperately needed something visible, a way to shake its bad reputation—a convincing sign that the people in charge are not the same ones who bought buses designed with one radiator to cool their engines, transmissions and air conditioning systems, then resorted to popping out a couple of windows on each bus when the air conditioning broke down.

That goes a long way to explain the attraction of a crystal palace railway bazaar combining flash, class and a low price tag.

At first there was little questioning of MTA's decision to rely on heavy rail transit: heavy rail had been shown more efficient than buses in a 1982 study and in turn had been shown more cost effective than light rail "people mover" technology in a 1981 study.

At the first of November, however, while MTA was meeting with representatives of a number of international rail car construction firms, starting the process of taking bids on 130 heavy rail cars a Houston firm, Advanced Monorail Systems, announced that it was approaching MTA to propose a $2 million feasibility study of advanced monorail technology. Metro officials said that monorail didn't fit the bill for the spine corridor: they were looking for technology that was already proven in high density urban situations. Advanced Monorail's officers said they could build their system for approximately one-fourth the cost of a heavy rail system, and that they would build the system within a year and guarantee a fixed price. MTA's Kiepper said the system might be worth considering for a light rail line contemplated to connect the proposed South Rice terminal with the Galleria and Post Oak areas.

MTA officials have repeatedly said that within the realm of proven heavy rail technology the aerial design they have proposed for the system is the most cost effective. In the absence of detailed engineering analyses, however, several observers have found it difficult to accept MTA's claim.

"The figures MTA is using for the difference in cost between a subway and the elevated are based on oversimplifications," says Frank Glass, head of Friends of Main Street. Drawing on his own experience with a firm that has been responsible for the construction of over a thousand projects, Glass says, that cost figures of this type are not reliable until after the engineering work is finished.

Spaw-Glass has been for the past four years a division of SAE, a giant French construction firm. Another division of SAE specializes in tunneling for metro construction.

"MTA says the next cheapest alternative to an elevated is cut and cover construction, where they simply cut out a trench, lay in the subway tunnels and stations and then fill in the top," Glass says. "But we went to our own files and those of Borie, the other division of SAE, and our experience is that it would be not only feasible but cheaper to tunnel the whole thing out from below the surface, including the stations." Glass says that tunneled subway lines in Lille and Lyons demonstrate the cost and appropriateness of the technology he proposes.

How does Glass respond to charges that he is trying to drum up business for Spaw-Glass and Borie-SAE by opposing the elevated and pushing for a tunneled subway?

"That's silly. MTA will have to go out for bids on any work they do, and that takes care of any advantage for us. Of course we'll bid for a subway job, just as we will on the elevated if that's what they decide on. But we want a subway because it's the best thing for Main Street."

Architect William O. Neuhaus wonders whether MTA's figures on the difference between elevated and subway don't conceal an apples-to-oranges comparison. "On the one hand, the MTA people talk about a 2.3 mile elevated line from Buffalo Bayou to the Southwest Freeway. And to hear them talk at first, it sounds like that would be the length of the subway. But Bill Alexander says that the subway would emerge from the ground at about McGowen, which makes the actual subway line measured from the bayou just a little over a mile long."

Adds Neuhaus, "If they drop the idea of the elevated on the built up stretch of Main inside the Pierce Elevated, they could come back with a hybrid elevated-subway system for the 2.3 mile section that's worse than the first proposal."

Also questioning Metro's cost and financial analyses is Harris County Judge Jon Lindsay.

"I don't want to sound like I'm too critical of this plan. MTA is going to need all the help it can get, and I plan to help all I can—just as soon as I understand what they're talking about," says Lindsay. "The numbers on this don't add up. I've talked to some pretty knowledgeable people, and they think that the cost differences MTA is projecting between the subway and the elevated are out of line. And those inflation figures they keep quoting boggle the mind."

Concludes Lindsay, "They're going to need to explain more before they get the kind of backing they'll need."

Lindsay had originally clashed with MTA officials over a proposed extension of the spine corridor rail line to Intercontinental Airport which could be in place by the early 1990's, competing with the proposed Hardy Street Toll Road, which Lindsay favors. More recently, however, Lindsay said he doesn't expect any conflict between the two transit schemes.

"MTA needs to finish the spine corridor, then their next priority is to add lines that will add new ridership to the system, and extending the line along Hardy to the airport is pretty much serving the same people, not adding new ones," Lindsay said. "I predict they'll take longer than they plan on the spine corridor, then they'll try and get a cross town line, so it will be 15 years or more before they get to extending the line to the airport."

Veteran transit engineering consultant, J.K. "Dixie" Howell, who has some 16 years experience in the evaluation of rapid rail transit systems, directly contradicts MTA's claim to have chosen the least expensive alternative for the downtown portion of the railway. MTA is planning to use trains that are too big and expensive, Howell asserts, with stations that are much larger than necessary, and a configuration that adds almost 50 percent to the cost of the downtown 2.3 stretch of aerial trainway.

"For my money, the best alternative is definitely elevated, not subway," Howell says. "But the most cost-

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On October 28 the Rice Design Alliance wrote the Mayor and City Council expressing its opinion that "neither the City Council nor the public have enough information to make an informed and binding decision on the proposed heavy rail transit system along Main Street." That letter further stated that "until such time as other alternatives are presented and studied by the Council and public, it would not be prudent to commit to any plan that will so radically affect the future of Houston." Since that time very little new information has been released by the Metropolitan Transit Authority (MTA). Therefore, on November 9 the Board of the Rice Design Alliance adopted the following motion:

> **The Board of the Rice Design Alliance is opposed to the construction of the 2.3-mile downtown Main Street elevated rail system proposed by MTA. It is the opinion of the Board that future proposals by MTA must address the broader issues related to a transit system of this type.**

MTA has by its own description proposed the most economical and expedient method for constructing the first phase of a rapid rail system to ameliorate our transportation problems. The system responds to transportation needs, but there are other basic urban and social issues this development must also address.

effective structure would be double guideways on a single pylon, not on double pylons like they have downtown. Instead of having the guideways over 20 feet apart, have them three or four feet apart, and have side entry stations built over the intersections. That would take up no more than the center lane of right of way and you wouldn't get that close to the buildings, plus it would save money, by a factor of 50 percent."

Howell says that MTA is buying cars that are too large for the job, and designing stations that are too large. "The passenger capacity they are designing for is about 48,000 people per hour, which is almost twice their projections for the peak-of-hour ridership in 2019," Howell says.

"What you want is the vehicle system that results in the lowest car-ton-miles traveled per year brought back to present worth as if it were dollars," Howell explains. "You take the weight of the cars and multiply it by the number of miles per year it operates and figure the capital and operating costs in present dollars. The reason for this is that in terms of capital costs, the weight of the car you decide on influences the cost of the total system design—the heavier the car, the greater the cost to the total system. If you buy smaller, lighter cars, your fleet costs more, and maintenance costs are a bit higher. But the structures for handling the bigger cars all cost a lot more, and that overshadows the costs for the fleet and maintenance."

Perhaps the most interesting point made by Howell, one yet to be addressed by MTA officials, is the assertion that the most cost effective configuration downtown would use the same single pylon design employed throughout the rest of the aerial system. The double pylon configuration is too wide to fit on any downtown street but Main. A single pylon design could fit several streets narrower than Main Street, MTA officials admit.

Frank Smith, an electrical engineer and consultant, who served on the Rice Design Alliance committee to study options for the MTA rail proposal, says, "I looked at the drawbacks to the elevated line on Main Street, and I looked at the drawbacks of a subway down Main Street, and I thought the thing to do is not to decide which has fewer drawbacks, but to find an alternate solution."

Smith's idea is to run an aerial line down Austin Street, four blocks east of Main. "It would be an asset on Austin, not a liability," Smith says. "The line would make a wider swing into town from the southwest but would be directly in line with the Hardy corridor. We could interface much better with Union Station, which MTA is considering using for commuter rail service from northwest Harris County. And the big thing is that there are only five or six buildings over two stories tall anywhere on the part of the street that would be affected, whereas Main Street has close to 100."

Smith's plan calls for three stations along Austin, in approximately the same north-south relationship as the MTA-planned stations on Main, and he calls for a station on the proposed island to be created in Buffalo Bayou north of downtown by the Buffalo Bayou Transformation Corporation, tying the transit stop to hopes for creating something like the San Antonio Riverwalk in Houston.

"This alignment would also be a much better link with the $350 million convention center we just decided to build," Smith says. Although his suggestion was ignored initially, press accounts following the MTA trip to Atlanta indicate that several City Councilmembers have become interested in it—indicating that there may be a new entrant in the horse race.

But MTA officials advance two reasons for not siting the rail line anywhere but Main. The first is technical, drawing on well-founded studies of transit ridership. The second, advanced with equal force in a recent interview, is again based on the presumption that Main Street needs radical transformation.

"We know that if you try to have your rail stops more than 1500 feet from major employment centers, you lose ridership," says John Breeding. "As it is now, the center line for employment centers is west of Main Street, and our projections indicate that even after the development planned for the area east of Main Street gets going, the center will still be around Main Street. So putting the line east of there would cut ridership."

Frank Smith disagrees. "Downtown is 15 blocks wide, so no matter where you put the transitway, there will have to be a crosstown people mover of some kind from the three or four main stations. The growth on the west side of downtown is largely the result of the Southwest Freeway feeder streets funneling into it. Putting the transitway on the east side of Main will balance that and cause the east side to develop correspondingly."

The second reason to stay on Main, Breeding says, is that Austin Street is too narrow for the double pylon configuration.

But couldn't a single pylon configuration be used? "We need the double pylons to give more light under the stations on Main," Breeding says. Does this mean that MTA is proposing the double pylon configuration specifically as a means of changing Main Street? "Yes, it does. We think that what we are proposing is a very positive change, a chance to revitalize Main Street."

Other questions have been raised about the alignment of the MTA rail system but not about the portion of the system downtown. Transit consultant Dixie Howell thinks MTA is making a mistake running the system down the Southwest Freeway. "The rail line should be a single pylon taking up one lane of the right-of-way, going out Richmond. That way you let people who are already paying taxes walk to work at Greenway Plaza and the Galleria. Why have it so far from there? The MTA is applying the same sort of logic that the city's aviation department did when they decided to locate the airport limo stops across the freeway from Greenway Plaza," Howell contends. "Montrose is going to fight all the way when they try to put a station there, but nobody will fight building one lane down Richmond. The way they've got it set up, it'll be a left-handed operation."

Questions about the financing of the system have largely been resolved: Kiepper first proposed putting together a package of vendor financing, turnkey financing and farebox bonds, mixed in with fair harbor leasing and other arcana from the 1981 tax relief bill—until, confronted by Councilmember Anthony Hall, the former Texas Legislator who carried the legislation setting up MTA in 1977.

Hall questioned Kiepper directly about the financing package. Wouldn't it save money to issue revenue bonds, as the law allows MTA to do? Was the purpose of this convoluted financing not to save money but to avoid having a referendum on the rapid rail plan? Kiepper said that issuing revenue bonds would result in considerable interest savings, and that he had hoped to avoid a bond election since it could cause considerable delay.

The next week Mayor Whitmire was predicting that MTA would hold a bond election, and that the bond issue would pass. This pleases a number of financial analysts around town, among them Austin Coleman of University Savings. "It's hard to say how much MTA will save by issuing revenue bonds," Coleman says. "MTA has to release some detailed information before that evaluation can be made. But, either way, the people are going to be paying off MTA's indebtedness on this thing, so it's only fair that the taxpayers of the county get a chance to vote on it."

Other observers have wondered why Kiepper has not followed up on the examples of Miami and Atlanta, which he often uses for examples of successfully applied aerial technology, and come up with ways to induce private developers to offset some of the costs of the system. Both of those cities have tied part of the transit system in with private development. Houston has a remarkable recent record of cooperation between private interest and the city's Public Works Department: it is estimated that in the last year, several million dollars worth of public improvements have been paid for by developers in the area around Post Oak alone. The economic incentive to developers is plain, and should be explored.

The rail system as proposed by MTA doesn't connect very well with the downtown tunnel system, and it requires that people riding the train into downtown change to another mode of transportation to reach the Galleria, the Post Oak area and the Texas Medical Center. In addition, it could require people riding into downtown on a proposed northwest commuter rail line (using tracks owned by the MKT or Fort Worth and Denver railroads) to walk or ride a bus from the terminus at Union Station to a station on Main six blocks to the west, about 2,260 feet, in order to continue either north or southwest.

"There are a lot of questions about the way this system will interface with other transit systems that haven't been dealt with very thoroughly," says John McGinty.

Councilmember Anthony Hall pointed up the broader question of effects on the future of the city as a whole at the November 2 City Council hearing. Looking at a map Kiepper had brought to Council chambers to illustrate his presentation, Hall said he noticed a "void" to the east of downtown.

"You'll be devoting all this attention to the north and west parts of town, but what about the people over in the part of town I come from? They travel too," Hall said, to the agreement of Councilmembers Ben Reyes and Ernest McGowen. "Isn't it possible that by concentrating all these resources over there that you're in fact making sure that your prophecy will come true—that part of town will grow and prosper, while the east and south sides will be left out?"

Kiepper replied that large portions of eastern Harris County had elected not to join MTA, and that it was not economical to extend a rail line for such a relatively short distance. Nevertheless, he added, the bus lines of MTA, which he called "the backbone" of the sys-

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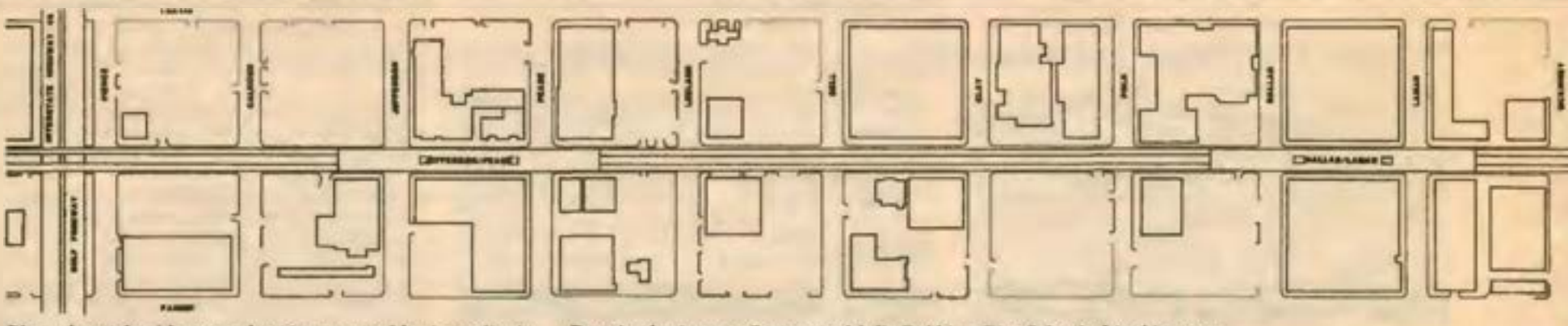
Criteria for evaluating the feasibility of any proposed system must, at a minimum, demonstrate its impact upon existing and anticipated:

1. **pedestrian circulation—sidewalks, tunnel systems**
2. **vehicular circulation—automobiles and trucking**
3. **public transit interfaces—routes and connections**
4. **offices, stores, homes and public institutions along the proposed routes**
5. **growth and development patterns in Houston.**

In presenting the physical, financial and aesthetic ramifications of their transit system proposals, MTA should clearly explain the alternatives they have considered, demonstrate their comparative advantages and disadvantages and justify their recommendations.

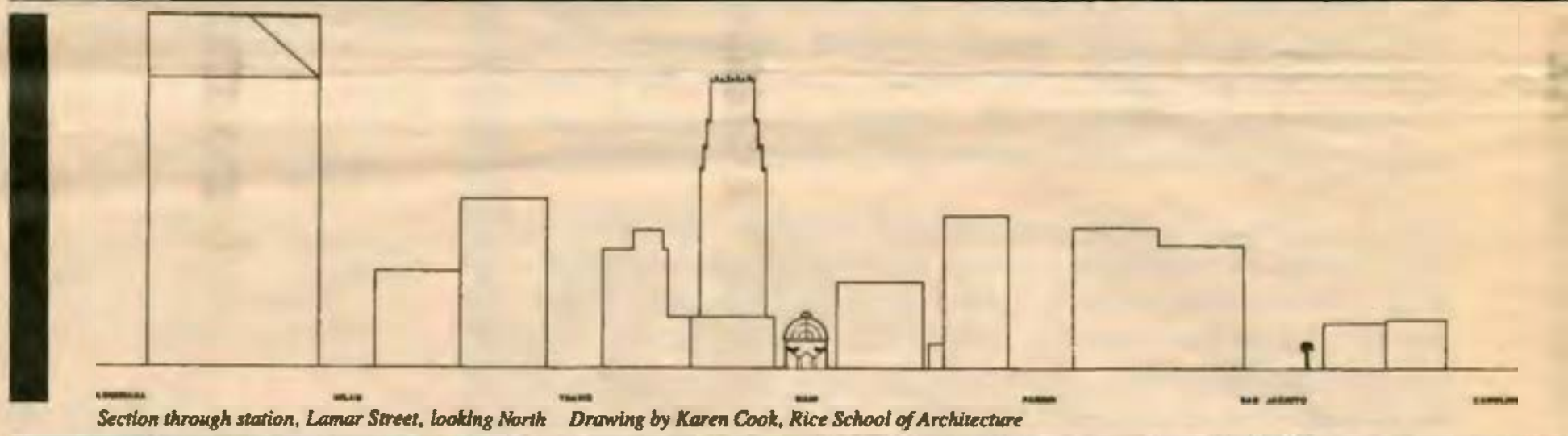
Our freeway system, considered capable of meeting Houston's anticipated growth and development needs when it was proposed in 1951, has become the transportation noose around Houston's neck. Given this compelling example, it is not the time for poverty of thinking. The cheapest transit system that can be built today may not be the most economical system for its anticipated 100 year life span. The most expedient construction schedule today may not serve the long term interests of Houston.

MAIN STREET ■ TV

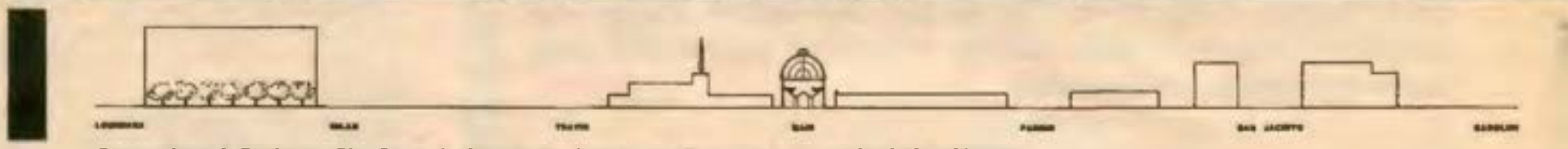


Plan, elevated guideway and stations, central business district *Drawing by Augusta Barone and Julie Robbins, Rice School of Architecture*

Section through Guideway, Main Street, looking West *Drawing by Guy Perry, Rice School of Architecture*

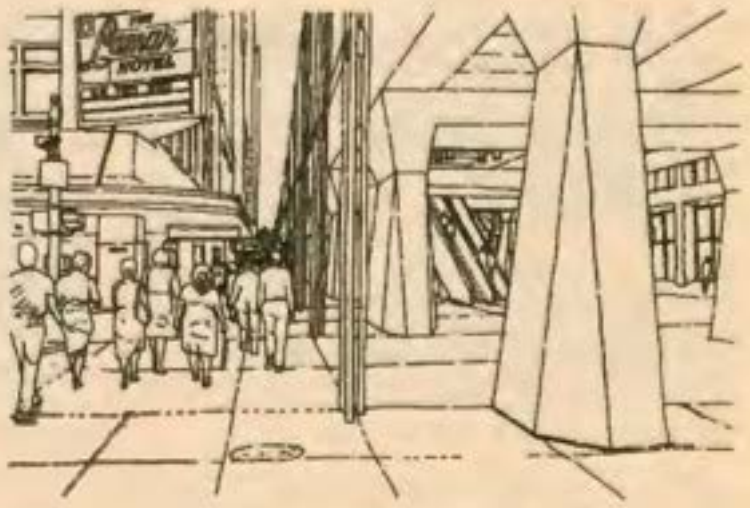


Section through station, Lamar Street, looking North *Drawing by Karen Cook, Rice School of Architecture*



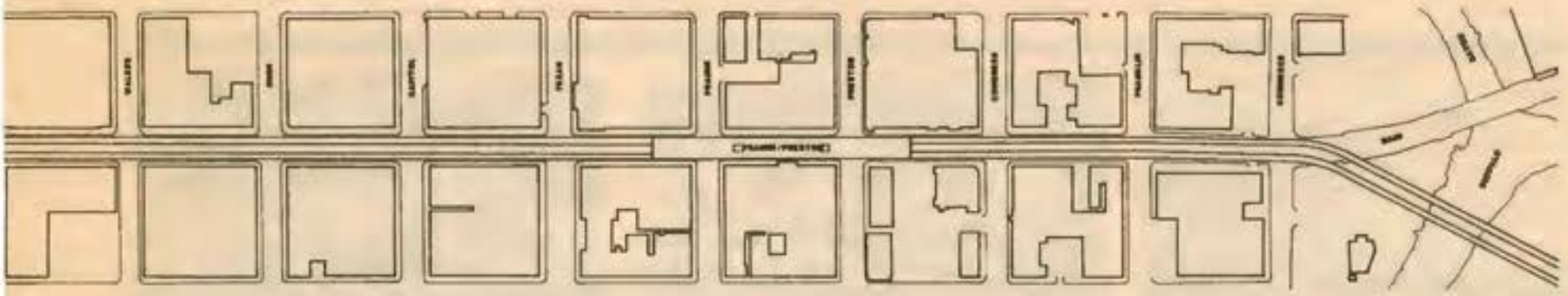
Section through Guideway, Clay Street, looking North *Drawing by Karen Cook, Rice School of Architecture*

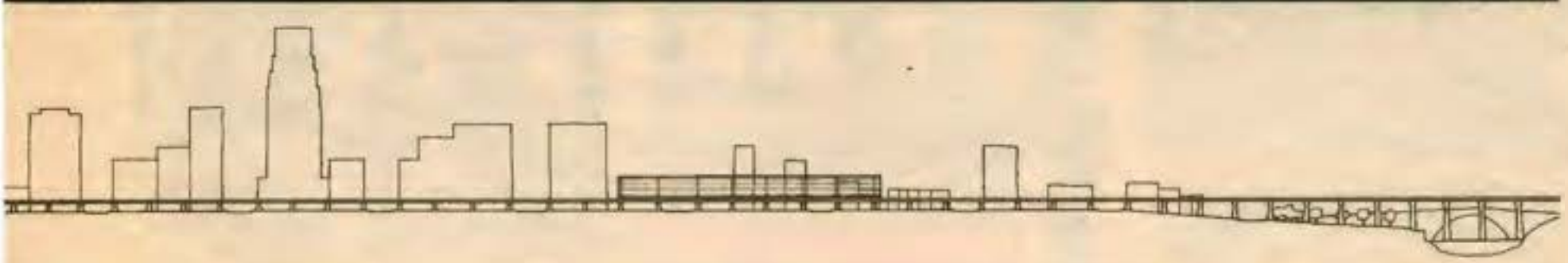
View North from Lamar, below Guideway

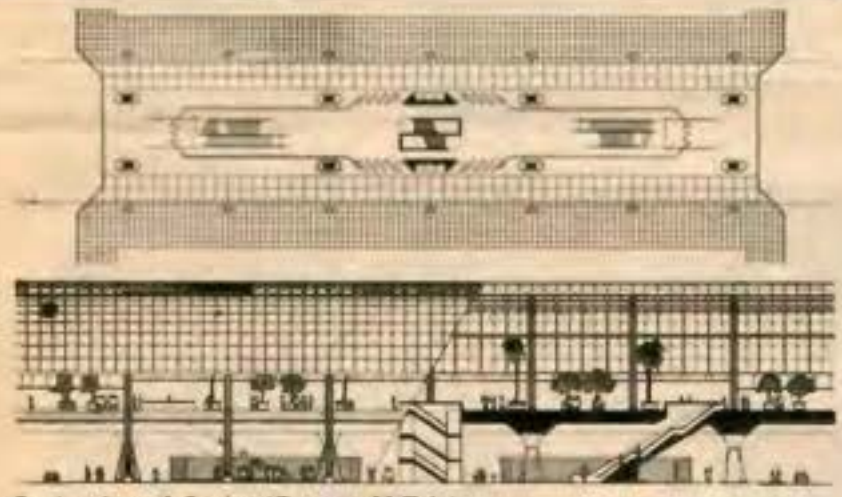


Drawings by Kirk Tames, Rice School of Architecture

VENTY BLOCKS OF EL







Section through Station (Courtesy M.T.A.)

Section through Guideway (Courtesy M.T.A.)

View North from Clay, above Guideway

Drawings by Ann Rosenwinkle, Rice School of Architecture

The Monuments of Main Street

Allen's Landing and the Main Street Viaduct. Allen's Landing was the front door of Houston during the earliest decades of the city's existence. (Paul Hester, Houston Architectural Survey. Courtesy of the Houston Metropolitan Research Center)

Houston National Bank Building. 202 Main Street. 1928. Hedrick and Gottlieb, architects. National Register of Historic Places, 1975. (Gerald Moorhead)

Union National Bank Building. 218 Main Street. 1912. Mauran, Russell and Crowell, architects. (Paul Hester, Houston Architectural Survey. Courtesy of the Houston Metropolitan Research Center)

Commercial National Bank Building. 116-120 Main Street. 1904. Green and Svarz, architects. (Paul Hester, Houston Architectural Survey. Courtesy of the Houston Metropolitan Research Center)

South Texas National Bank Building. 213 Main Street. 1910. C. D. Hill and Company, architects. Wings—1922. William Ward Watkin, architect. National Register of Historic Places, 1978. (Gerald Moorhead)

Sweeney, Coombs and Fredericks Building. 301 Main Street. 1889. George E. Dickey, architect. National Register of Historic Places, 1974. (Gerald Moorhead)

First National Bank Building. 201 Main Street. 1905, 1909, 1925. Sanguinet and Staats, architects. National Register nomination in preparation. (Paul Hester, Houston Architectural Survey. Courtesy of the Houston Metropolitan Research Center)

Dumble Building. 217 Main Street. 1883 (left) and the B. A. Shepherd Building. 219 Main Street. 1883. George E. Dickey, architect. (right) (Gerald Moorhead)

Stuart Building. 304-308 Main Street. 1880. Middle bay altered in 1924 by A. C. Finn, architect, and again in 1937 by Lenard Gabert, architect. (Paul Hester, Houston Architectural Survey. Courtesy of the Houston Metropolitan Research Center)

Main Street is a record of Houston's growth and development. Victorian street-fronts of extraordinary intensity, banking halls and office towers of classical grandeur, one of the city's first high-rise apartments, The Beaconsfield, and Houston's foremost Art Déco skyscraper, the Gulf Building, contribute to the sense of place which one experiences on Main Street, an unusual sensation in Houston, yet one that exists, or persists, nonetheless. Public recognition of this special character has been reluctant. However eight buildings on Main Street are presently listed in the National Register of Historic Places and nominations are in process for three more. This photo essay highlights the buildings and places which make Main Street special. Some are perhaps better known than others, but collectively they constitute a historical resource which has been too hastily overlooked or dismissed, as if there were nothing that elements of the past could contribute toward making a self-consciously "new" city more amenable, more livable and more humane. After all, where else in Houston does one find such celebrated American architects of the past as Daniel H. Burnham (Scanlan Building) and Ralph Adams Cram (Trinity Church) toeing the same curbline as architectural celebrities of the present like Gordon Bunshaft (First City National Bank Building) or Stanley Tigerman (Knoll International)? Only on Main Street.

Scanlan Building. 405 Main Street. 1909. D. H. Burnham and Company, architects. National Register of Historic Places. 1981. (Paul Hester, Houston Architectural Survey. Courtesy of Houston Metropolitan Research Center)

Kress Building. 705 Main Street. 1914. Seymour Burrell, architect. (Paul Hester, Houston Architectural Survey. Houston Metropolitan Research Center)

First Methodist Church. 1320 Main Street. 1910. Sanguinet and Staats and A. E. Barnes, architects. (Paul Hester, Houston Architectural Survey. Courtesy of Houston Metropolitan Research Center)

State National Bank Building. 412 Main Street. 1924. A. C. Finn, architect. National Register of Historic Places, 1982. (Paul Hester, Houston Architectural Survey. Courtesy of Houston Metropolitan Research Center)

Gulf Building. 710-724 Main Street. 1929. A. C. Finn, Kenneth Franzheim and J. E. R. Carpenter, architects. National Register of Historic Places, 1982. (Paul Hester, Houston Architectural Survey. Courtesy of Houston Metropolitan Research Center)

The Beaconsfield. 1700 Main Street. 1911. A. C. Pigg, architect. National Register nomination in preparation. (Paul Hester, Houston Architectural Survey. Courtesy of Houston Metropolitan Research Center)

Burns Building. 421 Main Street. 1883. E. J. Duhamel, architect. (Paul Hester, Houston Architectural Survey. Courtesy of Houston Metropolitan Research Center)

Gulf Building. Detail of Main Street entrance. (Paul Hester, Houston Architectural Survey. Courtesy of Houston Metropolitan Research Center)

Trinity Church. 3404 Main Street. 1919. Cram and Ferguson, architects. National Register nomination in preparation. (Paul Hester, Houston Architectural Survey. Courtesy of Houston Metropolitan Research Center)

Merrily We Rail Along

Since the Bay Area Rapid Transit Authority put its rapid rail system into operation in 1974, a number of other metropolitan areas within the United States have considered rapid rail transit. Of these, Washington, D.C. and Atlanta have managed to place new systems into operation. Baltimore and Miami have new systems under construction. Others are being analyzed and planned. To put Houston's own transit planning experience into perspective, a brief overview of four other cities' experience is offered here. These four cities—Atlanta, Miami, Los Angeles and Denver—share certain characteristics with Houston. All have the reputation of being "new" cities which have developed tremendously since the 1940s, spreading out at low population densities in a "sprawl" configuration which bespeaks the influence of the automobile on twentieth-century American settlement patterns. Like Houston, the transit planning authorities in these four places overlap governmental jurisdictional boundaries to reach out to separately incorporated or unincorporated suburban areas. Most experienced initial rejection of rapid rail proposals (Houston area voters turned down a proposition to create a transit authority in 1973), all were encouraged by the hope of massive federal subsidies for designing and constructing their systems, and all have had to face the prospect of operating lines at a deficit. Most lines stake potential rider appeal on attracting commuters tired of fighting freeway traffic. Thus the systems tend to join downtown business districts with middle income suburban areas, providing an alternative to automobile transportation rather than concentrating on the provision of service to lower income neighborhoods where people may in fact rely upon public transportation. In response to this inequity, all the examples profiled are undergirded by extensive bus fleets, constituting a less glamorous but essential component of the transit systems.

Atlanta

Atlanta, where MTA General Manager Alan F. Kiepper and Assistant General Manager William D. Alexander were general manager and assistant general manager, respectively, of the Metropolitan Atlanta Rapid Transit Authority (MARTA) before coming to Houston, has in operation the 13.7 mile "Phase A" increment of its proposed 53 miles of rapid transit lines. Voters authorized construction of the entire system in 1971. Three years were spent in analyses, design and engineering of the first phase, which was placed under construction in early 1975 and was opened in segments between July 1979 and December 1981. In 1973 the entire 53 mile system (which MARTA hoped to have in operation by 1981) was estimated to cost $1.75 billion. Previous estimates had been as low as $1.3 billion. Phase A cost over $1 billion, yet it represented only slightly more than one-quarter of the projected mileage of the entire rail transit system. It consists of two lines, an 11.8 mile east-west line and a much shorter 1.9 mile north-south line, which intersect beneath Five Points, the historic center of downtown Atlanta.

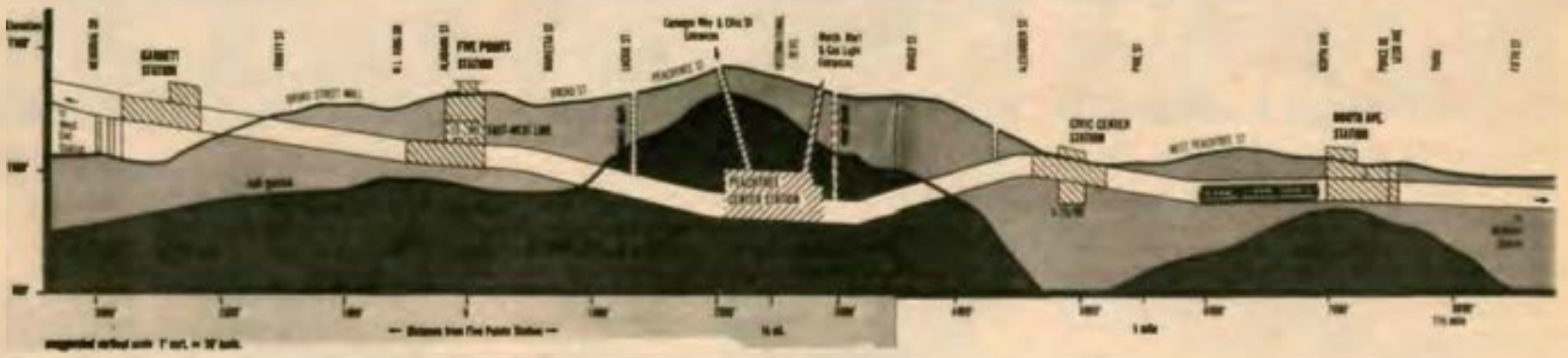
In the ten years that elapsed between 1971 and 1981, MARTA had to contend with federally mandated analyses and impact reviews of a much more extensive order than had been required of San Francisco or Washington, D.C. in return for an $800 million subsidy from the Urban Mass Transportation Administration of the U.S. Department of Transportation. It also ran head on into a spiralling rate of inflation that drove costs far beyond initial projections, despite the ironic fact that the recession of the mid-70's caused many of the early construction contracts to be awarded for less than MARTA's estimates. Kiepper and his staff responded to problems with a single-minded determination to get the system—or at least Phase A—into operation.

Controversies similar to the one stirred up by MTA's proposal to build the Main Street portion of Houston's rapid rail line in an elevated configuration also surfaced in Atlanta. In 1975 the Atlanta business establishment rose in arms when MARTA wanted to build the downtown subway sections of the Phase A lines with cut-and-cover construction. MARTA cited cost increases of $23 million to $36 million if tunneling was to be employed rather than one of two alternative methods of cut-and-cover construction. After engineering studies were performed however, the estimated differences were revised downward to a premium of between $2 million and $11 million for tunneling. The downtown lines were tunneled. The segment of the north-south line linking Peachtree Center with the main station at Five Points was tunneled at a depth of 52 feet below street level under a downtown street that was 65 feet wide and through soil that consisted of segments of rock, a mix of rock and clay, and clay. Dewatering was necessary also to circumvent potential problems when tunneling below the water table.

As in Houston, the Atlanta system managed to take advantage of existing railroad alignments for much of its right-of-way. Unlike Houston, Atlanta tied station locations, especially in and near downtown, to new or existing office, retail and convention center construction. The Urban Mass Transit Administration used Atlanta for a case study to evaluate the urban planning implications of station locations, a process helped by the fact that Atlanta has a strong tradition of civic planning. MARTA literature stresses the effectiveness of the system in promoting urban revitalization and conservation of historic buildings, especially of such landmarks as the flamboyant Moorish-style Fox Theater in downtown Atlanta and the old DeKalb County Courthouse in suburban Decatur.

MARTA was chartered in 1965 and it weathered voter rejection of its first transit plan in 1968. Design consultants for the system have been a joint venture of Parsons Brinckerhoff Quade and Douglas of New York, Tudor Engineering Company of San Francisco and, initially, Bechtel Inc., the consortium which designed San Francisco's rapid transit system. Designs for the seventeen stations in Phase A were commissioned from different Atlanta architectural firms. Phase B, a 9.7 mile extension to both ends of the north-south line, currently is under construction.

Atlanta: MARTA system. Phase A is darkest tone portion at center. (MARTA)



Atlanta: Diagrammatic section of north-south line, Phase A. Vertical scale is exaggerated. (MARTA)

Los Angeles

No other city in the U.S. can outdo Los Angeles when it comes to studying transit projects. In L.A. this tedious, expensive and (since it is so time consuming and costly) often controversial process dates back to 1954. In 1968 voters turned down an 89 mile elevated system (for which Tony Lumsden of Daniel, Mann, Johnson and Mendenhall produced a sleek, Archigram style station and guideway design prototype). Since then the Southern California Rapid Transit District (SCRTD) has received public affirmation in various referendums for various proposals, but the studying still goes on. It has long been agreed upon that the first segment to be built should be an 18 mile rapid rail line running from Union Station beneath downtown Los Angeles and out the Wilshire Boulevard corridor to Hollywood, where it would be tunneled beneath the Santa Monica Mountains to the San Fernando Valley. Tunnels would range from 50 feet to 200 feet in depth. The current estimated cost of the system is just over $2 billion. Los Angeles has been hard hit by Republican cut-backs in Urban Mass Transportation Administration funds. SCRTD had already extracted commitments for massive federal support. Whether it can now rely on those commitments is uncertain.

Kaiser Engineers and Daniel, Mann, Johnson and Mendenhall, which have collaborated on the Baltimore transit line (now under construction) and are two of the four firms that comprise MTA's engineering and design consultant group, Houston Transit Consultants, are the chief consultants to SCRTD. They also have developed a design for an extensive Downtown People Mover system, operating on elevated concrete guideways to serve downtown Los Angeles, which is considerably larger than downtown Houston. Their proposal lacks the flair of Lumsden's 1967 design and has been held up because of law suits brought by downtown property owners objecting to alignment. John Dyer, who had been Coordinator of Metropolitan Dade County's Office of Transportation Administration since 1971, was named General Manager of SCRTD in 1981.

Los Angeles: Perspective rendering of Downtown People Mover system in Bunker Hill section of downtown Los Angeles. (Architectural Record July 1979

Miami

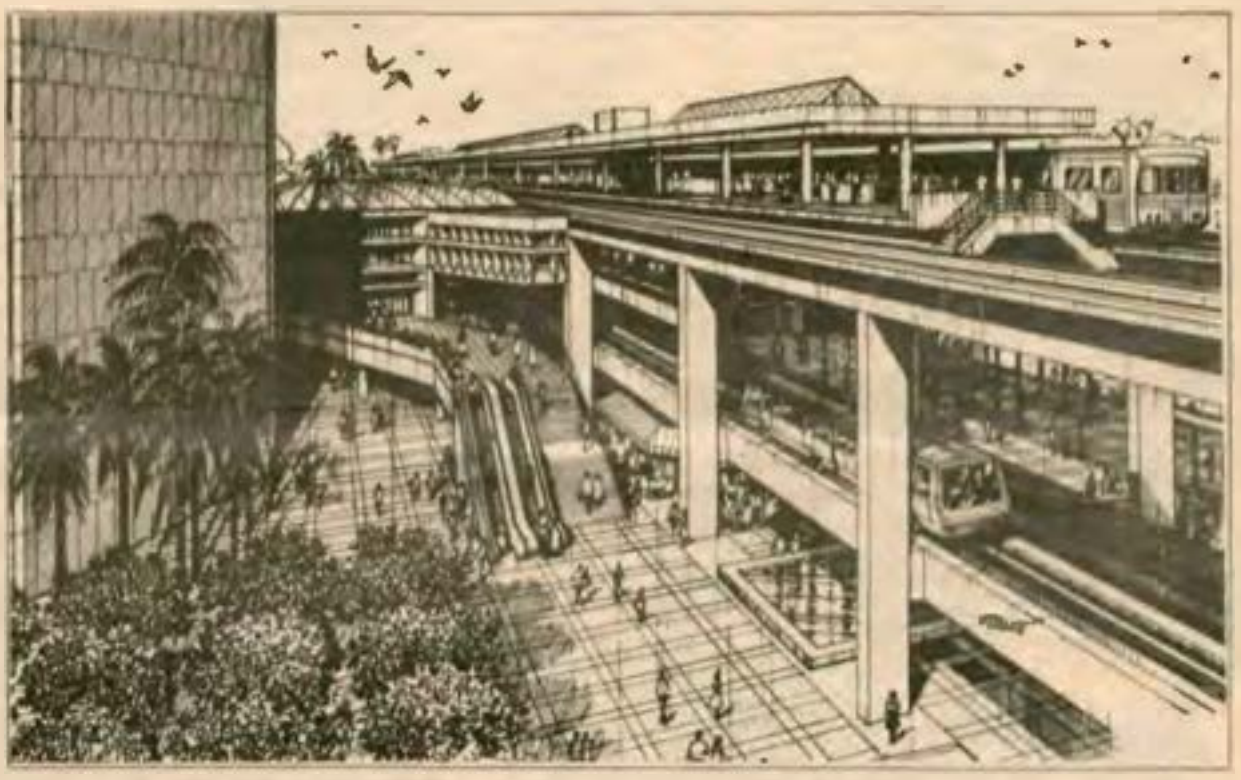
Metrorail, the rapid rail transit system being built by the Dade County Transportation Administration of Metropolitan Dade County, Florida—encompassing Miami and its suburbs—is the only recent U.S. rapid rail line to be built entirely in an elevated configuration. In fact, Bangkok appears to be the only other city in the world where an all-elevated rapid rail system has been authorized. Apart from the configuration of the system however, Metrorail has encountered the same problems that are seemingly endemic to rapid rail planning, especially escalation of cost projections due to inflation.

The Miami Urban Area Transportation Study, organized in 1964, suggested the feasibility of a rapid rail transit system for Metropolitan Dade County in 1969. In 1972 Dade County voters approved a bond issue of $132.5 million to serve as the local share of planning and building costs for a 54 mile rail system. This was to be all elevated; the Transportation Administration reasoned that Miami's high water table constituted a deterrent to subway construction. The Kaiser Transit Group (a consortium including Kaiser Engineers and the Chicago architectural firm of Harry Weese and Associates, which had worked on the Washington, D.C. Metro) was hired to do preliminary engineering for the system in 1973. By the time Kaiser presented recommendations in early 1975, the estimated cost of the system had jumped to $1.3 billion. Securing a commitment for 80% financing from the Urban Mass Transportation Administration (the same percentage figure with which MARTA was endowed) and defeating a referendum proposition to halt planning and construction of the entire system, the Transportation Administration began planning the 20.5 mile Stage One Metrorail line, a single line running southwest and northwest from downtown Miami, estimated to cost between $800 and $900 million. Construction began in 1979. It is hoped to have the first segment ready for trial operation by February 1983. The entire system is supposed to be ready by late 1984.

The downtown portion of Metrorail skirts the west side of the older part of Miami's business district, nearly five blocks from the current hot spot for new office and hotel development, a corridor between Brickell Avenue and Biscayne Boulevard. To compensate for this, the Transportation Administration began construction this fall on the first stage of a second mode of public transit, a 1.9 mile elevated Downtown People Mover, the estimated cost of which has risen from $76 million to $117 million since 1976. Connected to the Government Center Metrorail station, the main downtown stop, the Downtown People Mover will consist of ten vehicles operating on a double guideway loop encircling the present downtown area. A second phase envisions connections to near-town districts to the north and south. The Downtown People Mover is routed above sidewalks, boulevard medians, through a number of proposed new buildings and it is connected to the Metrorail line itself as a secondary line running beneath the main tracks. (The elevation of the Metrorail guideways along the downtown portion of the line is quite high) Operation is scheduled to begin in 1984 to coincide with the inauguration of Metrorail.

Metrorail stations are elevated reinforced concrete platforms, roofed but open to the air. According to the Transportation Authority, versions of a standardized design will be employed for most of the line's 20 stations, with extensive landscaping planned to ameliorate the impact of the structures. Metrorail renderings depict vines clinging to the pylons that support the guideways. Alignments tend to parallel streets or to be routed above boulevard medians.

Miami: Metrorail system, Stage One. (Metrorail)



Miami: Perspective rendering of Government Center Station illustrating dual level guideways: Metrorail (above) and Downtown People Mover (below). (Downtown Development Authority of Miami)

Denver

Over the past decade the Denver Regional Transportation District (RTD) has flirted with various technologies and alignments, but not until 1979 did it begin to focus on a 77 mile rail system. This would be a light rail system however, rather than heavy rail (as in San Francisco, Washington, D.C., Atlanta, Baltimore, Miami and as proposed for Los Angeles and Houston) and would operate at grade. A network of overhead wires provides the power source to operate light rail vehicles. That is, they are updated versions of the electrified street cars that began to be introduced in American urban transit systems around 1890. A 15 mile line, the Southeast Corridor, has been designated by RTD as the initial portion of the system to be implemented. Its alignment and configuration in downtown Denver have yet to be determined. DeLeuw, Cather and Company of Chicago, the principal engineering consultant in the design of the Washington Metro, is RTD's chief consultant. In 1980 the total cost of the 77 mile system was estimated at $500 million.

Denver's most publicized transportation project has been the Transitway/Mall, a 14 block concourse on Sixteenth Street. Vehicular traffic along the Mall will be restricted to shuttle buses running in two narrow lanes on either side of a wide central promenade. MTA had planned a similar sort of development for Main Street when it still intended to route a subway beneath the street. I. M. Pei and Partners are architects of the Denver Mall, which will be bracketed at either end by regional commuter bus terminals.

Denver: RTD Southeast Corridor. Diagrammatic route map of the first phase of light rail construction. (RTD)

Denver: Typical section (above) and plan (below) of Sixteenth Street Mall. (Architectural Record, July 1979)

"Just as soon as I understand what they're talking about."

(continued from page 5)

tem, would be concentrated on that portion of the service area.

A week later Whitmire was saying that she shared the concerns expressed by Hall.

The last major problem confronting MTA is convincing the public that the proposed aerial stations are a good idea. Confidence in MTA's planning for the stations has not been improved by the evidence that some of the questions asked since the model was unveiled have taken the MTA by surprise. Thus, MTA representatives have had to say that the glass on the canopies will not be clear, as in the models. It will be tinted or reflective glass, to cut down heat penetration into the interior. MTA's contention that the glass covered stations didn't include and wouldn't need cleaning equipment gave rise to Frank Glass's quip, "The only self-cleaning glass I know is me." MTA announced that cleaning equipment would be added. As questions arose about the temperature in the stations and the darkness underneath them, MTA officials first denied that there were any problems, then said that equipment would be added to redress the problem.

The questions about the temperature provide the worst example of MTA's lack of forethought. MTA officials first said that the stations would rely on natural convection cooling: pressed on how this would work, they said fans would be added to increase air circulation, then said that spot air-conditioning was a possibility, and finally argued that passengers would not spend more than ten minutes in the stations at any one time—an assertion which seems to contradict their contention that the stations and the equally un-air-conditioned space underneath would provide such exciting retail opportunities and be the "people space" Houston has been waiting for. Critics of the proposal want to know how much the additional equipment and operating expenses not figured into previous estimates will affect the comparison of elevated and subway costs.

When first presented MTA's plan seemed as slick and coherent as a block-long stretch of continuously welded steel track. On closer examination, it looks full of snags. To be sure, the proposal for a rapid rail system put forward by MTA is both timely and necessary, and Houstonians are at least to be congratulated for having had the foresight to create a system with sufficient financial resources to undertake a project of this magnitude without relying on the federal government for subsidies. But has MTA proposed a system appropriate to its context? Should the system be above or below ground in downtown? If a subway is chosen, should it be tunneled, or installed using cut and cover methods. If an aerial system is chosen, should it go down Main Street or Austin? Should there be a double pylon configuration or a single pylon in downtown, as over the rest of the system? Should the alignment of part of the railway be considered on Richmond, instead of the Southwest Freeway and Westpark, so as to be closer to the major employment centers of the southwestern area? Should the financing package be changed, and in what way? What will building this system do to the split between the eastern and western halves of the city?

It comes down to a question of constituencies and political choices among numerous competing alternatives. And it is plain that the debate needs to be broadened—that part of the problem has been as one local architect says, "This whole argument has been limited to about 30 people."

Or perhaps the crux of the debate—subway or aerial on Main—will be settled outside the political give-and-take of public policy, over a legal point.

In downtown Houston plats are peculiar. A property owner owns not only the lot in question as stated in the deed, he or she also owns the land out to the middle of the adjacent street. So that, for example, the land to the center of Main Street in front of the Kiam Building belongs to the partnership owning the building. The city has an easement on the street preventing building without a permit to allow for the untrammeled passage of traffic and utilities.

Friends of Main say that MTA's reasons for choosing elevated over subway are faulty, and that the train will transform the symbolic heart of Houston into a dangerous, littered cavern.

"But that doesn't mean the city has the right to build something in the street, or that the city can assign the air rights to anyone else," says Frank Glass. "If you could just suspend your cars up in the air, that would be a kind of uninterrupted flow of traffic protected by the city's easement to the property. But putting up a building in the space? No. The air rights belong to the property."

Glass emphasizes that he is not filing suit over air rights, and that he is not threatening to file one. However, observers have begun speculating on the outcome of such a case, and, more importantly, the length of time such a case could take to try.

"What would happen to your cost advantage for an elevated if you had a court case holding you up for a couple of years?," wonders County Judge John Lindsay.

Cite

The Rice Design Alliance seeks to provide an opportunity for community leaders, interested citizens, design and planning professionals and students to increase their awareness of various aspects of the physical environment. Lectures, tours, symposia, exhibits and publications are forums for debate and interactions among people concerned with architecture, public policy and environmental design.

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