
Can Transportation Management Reduce Traffic in the Suburbs?

Ask the Nuclear Regulatory Commission

MALCOLM D. RIVKIN

Can transportation management really work in the suburbs? Can programs devised by major employers markedly change commuting patterns, reduce peak-hour vehicle trips, and make public transportation a better alternative?

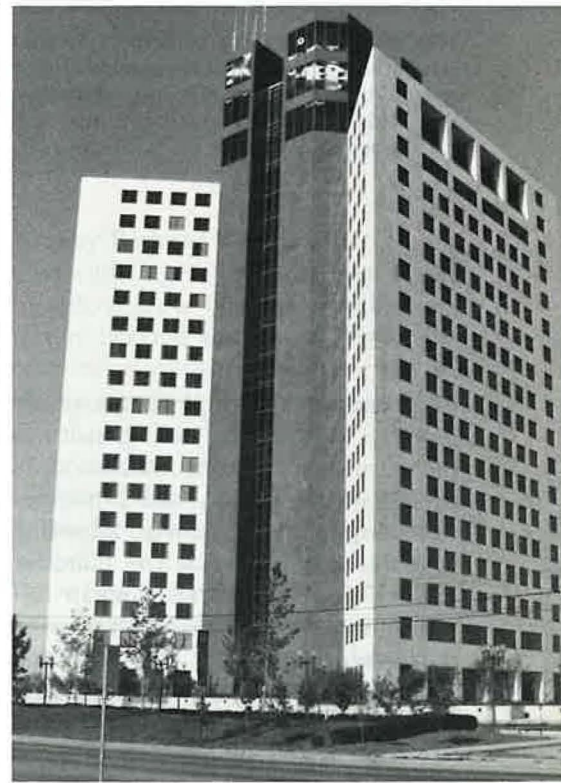
Suburbs increasingly dominate economic development in the United States, but suburban jurisdictions generally lack good public transportation and the money to build adequate roads. According to a recent study on commuting patterns by the Eno Foundation for Transportation (see *Urban Land*, October 1987), some 67 percent of all new jobs are being created in the suburbs, but the number of people who commute by transit today is less than in 1960. Interest in employer-based transportation management as a solution to increasing traffic problems has grown, but with few success stories to demonstrate

its effectiveness, that interest is based more on faith than on performance.

Enter one resounding success story. The employer: the U.S. Nuclear Regulatory Commission (NRC). The facts: in early 1988, NRC relocated 1,400 of its 2,450 staff members to the first building of its yet-to-be-completed headquarters complex 12 miles from downtown Washington, D.C., in fast-growing Montgomery County, Maryland. Before the move, NRC operated out of eight facilities in various parts of the county and the District of Columbia.

According to an April 1986 NRC survey of its staff, 54 percent drove to work alone most of the time. About 25 percent of the staff normally carpooled and less than 11 percent used public transit. The modest transit use was particularly striking because all eight offices were within walking distance of stations serving Metrorail, the Washington area's subway system.

In June 1988, four months after the headquarters move, an NRC survey of staff at One White Flint North, the new headquarters building, found that only



Only 42 percent of the employees at One White Flint North, NRC's new headquarters building, normally drive to work alone.

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The NRC headquarters building is located across the street from a Metrorail (subway) station that is also served by Metrobus and Ride-On buses, making it easy for employees to commute via public transit.

42 percent of the employees normally drove to work alone. Public transit was the normal commuting mode for 28 percent of the workers, and 27 percent were carpooling. Moreover, according to traffic monitoring at the building, most of those who drove alone or car-pooled were at work before the start of the morning peak hour (7:30–8:30) and most were leaving either before or after the 4:45–5:45 afternoon peak.

NRC's traffic suppression program was working so well that the building's morning peak-hour trip generation was only two-thirds the level that Montgomery County planners had anticipated,

and its afternoon trip generation was less than half that expected.

The Principles

NRC's trip mitigation success has been extraordinary, and the unusual circumstances attendant to the program will not be available everywhere, but the NRC experience does demonstrate the following principles:

- A large employer can establish economic disincentives to driving alone, in conjunction with economic and service incentives to use other means of transportation, that do have a chance to reduce car trips significantly.
- Public transportation has to be reasonably related to the journey to work and reasonably cost/time competitive with driving alone.
- Local government has many cards to play in the transportation management process. It must sit at the table with the employer.
- An effective, sustainable transportation management program (TMP) takes a lot of planning and hard work. Institutions as well as individuals may need to adapt their behavior and ways of doing business. Employers must approach the development of TMPs with the same seriousness and resource commitment as any major management decision.

History

Montgomery County's development review process triggered NRC's entry into transportation management.

To begin at the beginning: when looking for a consolidation site for the NRC, the U.S. General Services Administration (GSA) was attracted to the White Flint North site for two reasons. More than 60 percent of NRC's staff already lived in Montgomery County, a 500-square-mile jurisdiction bordering the District of Columbia. And the site itself adjoined a Metrorail station, which was also a transfer point for feeder buses.

GSA purchased the 310,000-square-foot One White Flint North building

from its developer (White Flint North Limited Partnership) when it was still under construction. Needing more space for NRC's total consolidation, GSA executed a lease for a planned second building, which would remain under the developer's ownership. As a privately owned office building, the planned facility required Montgomery County approvals under normal development review procedures.

Construction initially depended on county approval of a revised development plan for the site. (The original plan called for a hotel and conference center.) If the revised plan were approved, the developer still could not proceed before demonstrating that occupancy would not overburden Montgomery County's traffic capacity under the county's adequate public facilities requirements. The amount of traffic generated by NRC's headquarters would be the principal factor in winning support for the new development. Rockville Pike, which adjoins the site, was already inundated with commuter traffic, and the county's ordinances established strict trip generation limits for White Flint North.

Things did not look good for the project after NRC, in conjunction with the developer, made its April 1986 survey of employee commuting patterns. Despite the presence of Metrorail next door, most staff members said they intended to drive to the new complex. NRC had no reason to doubt these intentions, given the current high level of staffers' automobile use. Once all the travel preferences were calculated, and estimated trip generation figures computed, it was clear that peak-hour trip generation from the first building alone would far exceed the county's limit of 465 trips for the building. Completing NRC's consolidation with a second building would mean exceeding the 640-trip limit assigned to the entire 13-acre site in the approved development plan.

Thus, GSA and its developer partner were faced with the certainty that under these circumstances Montgomery County would not approve a revised development plan permitting NRC consolidation at White Flint North.

A Transportation Management Program Evolves

Necessity breeds invention. For the federal government, improving NRC's efficiency through consolidation was a critical objective, and both the government and the developer were committed to working within the county's regulatory framework.

Although the survey results were unfavorable, the first building was not scheduled to be occupied for 18 months, and completion of the full complex was years away. Those involved still had time to persuade staff members to change their intended commuting patterns and thus make consolidation possible. Work began on a transportation management plan. A study team was assembled involving top management at GSA and NRC, the developer and its attorneys, survey research experts, and traffic and planning consultants. NRC's employees' union was consulted, and Montgomery County's Department of Transportation was approached for assistance. Meetings with county planning staff confirmed the study team's perception that its effort would be viewed by the county with skepticism.

Nonetheless, formulation of a TMP proceeded. The issue of charging for parking was examined: what amount would be reasonable, yet still serve as a disincentive to drive? Residential distribution of employees was analyzed in detail to determine what transit options could be made available. The cost of transit was considered: could its reduction through some form of subsidy convince drivers to switch to transit? Particular attention focused on the agency's work hours: if they were shifted, would staff travel take place out of peak periods?

Different options were tested out on agency staff through another survey, which drew an extraordinarily high employee response. The idea that NRC might make it difficult to drive to and park at the new facility distressed many employees. NRC responded that it would do everything possible to establish rea-

sonable alternatives to the solo car commute. Driving to work alone would cost; other alternatives might be more attractive.

With the help of the Montgomery County Department of Transportation, the transportation management program was established and put into effect when occupancy of the first building began in early 1988. It consists of the following elements:

Fee Parking

All parking space formally available to NRC staff is being charged at market rates: \$60 per month at the 365-space in-building garage, and \$30 per month at an employees' lot some blocks away.

Transit Discounts

Montgomery County, to encourage use of the transit system, offers a matching fare discount to employers in its jurisdiction that provides subsidies for staff travel. Because the federal government is legally constrained from providing such subsidies, the county's transportation director, Robert McGarry, agreed to make the county's discount available without a matching subsidy. This discount amounts to a 20 to 25 percent fare reduction for NRC employees. NRC purchases discounted fare cards, flash passes, and bus tokens from the county and sells them to staff at a central location in the building. NRC also dispenses information on transit routings and schedules.



Shuttle buses provided by developer of White Flint Mall carry 3,000 persons a week the one-quarter mile between One White Flint North and the shopping center.

The Washington area Metro system's fares are among the highest in the nation. Many staff members had been reluctant to use Metrorail, Metrobus, and the county's own Ride-On system because of high fares, especially because they expected free parking on site. Fully one-third of the 1988 survey respondents who use transit say they do so strictly because of the county's fare subsidy.

Carpools

Carpools of two or more riders are guaranteed space in the building's garage, but receive no discount. NRC's transportation office offers a matching service for carpools.

Early Work Hours

The NRC's standard working hours are now 7:30 a.m. to 4:15 p.m. (changed from 8:15 a.m. to 5:00 p.m.) and further flexible arrangements permit many employees to start and leave even earlier during the working day. The change in work times is in accordance with employee preferences. It represents a major breakthrough—the first time the federal government has altered an agency's work-hour schedule in response to a local jurisdiction's traffic problems.

Nearby Parking Restrictions

Cars violating the parking restrictions in posted areas near the building are readily ticketed and towed, giving the restrictions teeth. In addition, the developer obtained agreement from owners of nearby shopping centers to tow illegal all-day parkers.

Beyond these current initiatives, the developer has made an unusual offer to subsidize an east-west commuter shuttle—a new element in the county's public transportation system. Daily traffic between the eastern part of Montgomery County and job centers near NRC is one of the county's heaviest commuter flows. Some 14,000 people take this route, which lacks effective public transportation services. In spring 1989, the county will open a large park-and-ride lot at a key junction on the Georgia

Avenue corridor. White Flint North's developer will directly subsidize shuttle bus service between that location and the White Flint Metrorail Station and other employee destinations in the area. An initial feasibility study indicated dramatic ridership potential. Trip reduction will be credited to NRC, further minimizing the traffic impact of its move to the suburbs.

The Regulatory Results

The transportation management program and the commitments by the developer and the government to sustain it led the Montgomery County Planning Board to approve unanimously in April 1988 a revised development plan for the site. The revised plan includes a second 364,000-square-foot building for NRC (containing ground-floor retail space) and, in line with the county's objective of intensifying residential development around Metro stations, 200 apartment

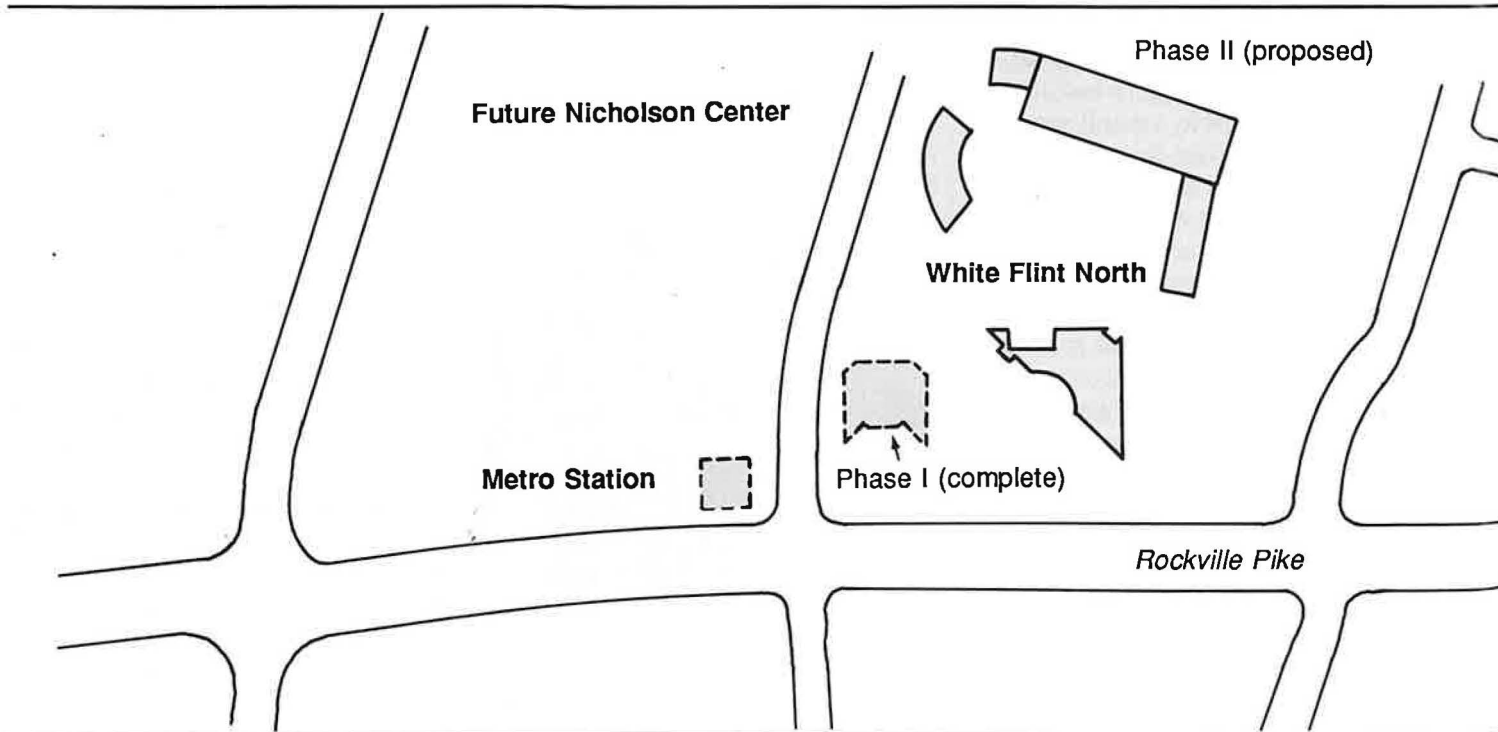
units. In July 1988, the county council followed suit. Both bodies indicated that their go-aheads rested on the strength of the TMP, and cautioned that results would be monitored and that ultimate approval of subdivision and building construction would depend totally on NRC's ability to sustain a minimal traffic impact. The employee survey and trip monitoring are the first measurement of results.

Although successful, the transportation management program is not without problems. The parking fees are not a complete deterrent to solo drivers. Many will pay the price, and other parking options exist for those willing to accept some inconvenience. Less than 40 percent of the employees who drive alone to NRC park in the assigned market-rate spaces. Some use the substantial amount of free legal on-street parking in the general vicinity, and others take advantage of a free, practically empty commuter parking lot a quarter-mile away, maintained by the state of

Maryland. Those willing to walk can thus avoid parking fees. (In contrast, almost 70 percent of those who carpool park in the building's garage. Although the fee is the same, carpool occupants can split it. The advantages of cost-sharing and the space incentive are obviously attracting carpools.)

The carpool matching services also need to be improved. Most carpoolers continue to make their arrangements informally, and many drive-alones say they would consider carpooling if they could be effectively matched.

The survey returns make it clear that many of the drive-alones will not or cannot switch under any circumstances. For supervisors and top-level professionals, irregular working hours may be the reason. Other solo drivers have after-work commitments, need to transport children to and from school, or live in distant and dispersed locations. For these people, driving alone may be the only viable option. And there are some who just like to drive, despite the traffic.



NRC and White Flint North Limited Partnership continue to improve and refine the TMP. They intend to include a daycare center for employees' children in the second building. They are trying to form cooperative carpooling arrangements with other employers in the vicinity. And they continue to work on putting the east-west shuttle into action. Still in its early stages, the program thus far has been extraordinarily effective. Contrast its transit use results—28 percent of NRC's employees use public transit—with the recent finding by a county-commissioned study that less than 5 percent of all employees in the North Bethesda area (where White Flint North is located) commute by public transportation.

The Lessons

Large numbers of commuting Americans will always drive alone, especially if they work in the suburbs. But, as NRC's TMP demonstrates, Americans

can be induced to moderate their love affair with automobiles during the workday. This particular TMP may not work everywhere, but it affords some lessons that do have wide relevance for suburban America:

- People will think twice about driving alone if they face a cost penalty and if carpooling and transit are made reasonably competitive in cost and convenience.
- A local government's regulatory structure can play a key role in engineering effective efforts at trip reduction.
- Creative solutions to the traffic impasse can be found if developer, employer, and government are willing to sit at the table together and treat the problem with the seriousness it merits.

The question, as you remember, is: Can transportation management really work in the suburbs? The answer from this one case is yes—but only on the basis of deep and sustained commitment.

Note: The NRC was monitored again in October and the results were practically identical to those in the June report. The trip mitigation success has been sustained over a 6-month period, which bodes well for institutionalizing the program.

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