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## Increasing Mode Split Through Parking Management: A Suburban Success Story

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### ABSTRACT

Accommodating commuter trips in rapidly growing suburban cities that do not have high levels of transit service is a difficult challenge. Many cities, including Bellevue, Washington, must face this challenge if development is to continue at the current rapid pace. A new employee transportation program at 450 Bell Terrace, the first building in downtown Bellevue to be constructed under the terms of a new zoning code, is described. The transportation program, serving 900 Pacific Northwest Bell Telephone employees, includes a substantial (\$60 per month) parking fee as a disincentive to drive-alone commuting and discounted or free parking for carpools. Parking demand must be accommodated by 410 parking stalls in the monitored Bell Terrace parking garage. The intensive assistance provided by the Commuter Pool Program (the regional ridesharing program) and by the city of Bellevue ridesharing staff was instrumental in achieving a 60 percent employee carpool participation rate. Only 19 percent of the employees are driving alone to work. Seventeen percent use transit. Other factors critical to success are the ability of a single firm to coordinate a program and the predisposition of employees accustomed to high levels of transit service in Seattle to form carpools in Bellevue.

In the spring of 1983, 900 employees of Pacific Northwest Bell (PNB) Telephone were transferred to a new computer center in downtown Bellevue, Washing-

ton, 450 Bell Terrace. Most of these employees had been working in downtown Seattle, and most of them had enjoyed high levels of transit service that would not be available in Bellevue. The telephone company, in keeping with the city's new zoning practices and philosophy, provided only 410 parking spaces in the new building. It was clear from the start that extraordinary levels of ridesharing would be needed for PNB to meet the demand for on-site parking.

By July of 1983 the move was completed, and PNB employees had made a general shift in commuting mode from driving alone and using transit to carpooling. In fact, 60 percent of the telephone company employees in Bellevue now carpool to work. Seventeen percent use transit. This unusually high ridesharing participation rate is the result of extensive planning and coordination on the part of PNB, Commuter Pool, and city staff. The nature of the company move from Seattle, where a large number of PNB employees commuted by bus, was also a major determinant of the transportation program's success.

### THE RIDESHARING ENVIRONMENT

Understanding the Bell Terrace transportation program, and its possible applicability to other work sites, requires a close look at the ridesharing environment to see what factors had an impact on company and employee decision making.

### Suburban-Urban Setting

Downtown Bellevue, with a work force of more than 13,000 people, is in a transition phase between a low-density suburban business district and an urban center. This transition is a planned redirection of the central business district (CBD) on the part of city planners and the business community, and re-

ceived approval from the Bellevue City Council in 1981 with the passage of zoning legislation allowing high-rise, high-density office and retail development with lowered parking requirements.

Spurred by the new zoning laws, the downtown has sprouted four major office buildings in 2 years, transforming the Bellevue skyline and underscoring the dramatic side-by-side suburban and urban character of the present downtown. For example, the Bellevue CBD is characterized by spacious surface parking lots between low-rise buildings, and in their midst a few office towers rise 16 to 21 stories. Beneath the office towers, below-grade parking structures may provide a maximum of 3 parking spaces and a minimum of 2 spaces per thousand square feet of office space. Compared with what they could do under the old requirement of at least 3.3 spaces per thousand square feet of office, developers can realize a substantial saving in parking construction costs (below-grade construction costs for parking are approximately \$10,000 per stall). Lower parking supplies at some sites are bringing substantial parking fees to Bellevue for the first time.

Average automobile occupancy in the Bellevue CBD has increased slightly from 1.15 in 1981 to 1.17 in 1982. Compared with Seattle, which has an average automobile occupancy of 1.33, Bellevue is still predominately an automobile-oriented community.

#### Parking Supply

Commercial parking facilities are not available in Bellevue. Each building supplies its own parking, whether surface or covered, and parking built before 1981 is generally free and plentiful. On-street parking is, for the most part, not available.

#### Transportation Program Conditions of Building Permit

The city's policy of encouraging carpools and vanpools must be implemented primarily through the efforts of building owners, with assistance from Commuter Pool. Therefore the building permits issued by the city for the new large office buildings are conditioned with employee transportation program requirements. These requirements, in PNB's case, include the following: (a) no more than 30 percent of the total parking stalls can be used by single-occupant vehicles (SOVs); (b) flexible working hours are to be arranged for as many employees as possible; (c) a permanent employee transportation coordinator is to be designated; (d) preferential parking garage assignments are to be made for carpool and vanpool vehicles; (e) an inverted parking rate formula is to be used as an incentive to high-occupancy vehicles; (f) a transit ridesharing center in the building is to provide information on transit routes, carpools, vanpools, and Commuter Pool services available; and (g) a carpool and public transit information day is to be held twice a year.

In 2 years PNB must submit a report to the city to determine if parking demand exceeds the on-site supply. If spillover is occurring, PNB will be required to modify or add programs to eliminate the problem. A maximum dollar amount of \$35,000 was set as a ceiling, in order to identify what (at the time of issuance of the permit) was considered an acceptable future expenditure for the company should its transportation program prove ineffective. 450 Bell Terrace was the first building in downtown Bellevue to be built and occupied under the terms of the new zoning code. Major building permits issued subsequently have set maximum expenditure as high as \$475,000. The dollar value is based on the cost of

enough vans to reduce parking demand to equal building supply.

#### Transit

Transit service in Bellevue has been typical of suburban locations. Peak hour use in 1981 was about 4 percent of the downtown work force of 12,000 people. The city's goal is for this service and use to increase to 25 percent of the work force by 1990-1995. To help achieve this goal, the Metro (transit) and Bellevue councils adopted a transit incentive agreement, which awards Bellevue transit service hours based on increased employment density and lowered parking ratios. Some of these new service hours are already operating. Aided by a new downtown transit center, a few of the larger CBD employers have achieved an 11 percent mode split for employee transit use.

450 Bell Terrace is within walking distance of all transit routes serving the CBD because an interim transit center is located three blocks (660-ft blocks) away. Thirteen Metro routes converge on the transit center during the peak hour. (A permanent transit center, even closer to Bell Terrace, will be constructed by 1985).

#### Employee and Company Characteristics

The work force of 900 people at 450 Bell Terrace consists primarily of professional-level data systems programmers and analysts with above-average salaries (\$30,000 midrange). About 25 percent of the employees are clerical and support staff.

Peak hour transit use in downtown Seattle is about 52 percent of the work force. A majority of the employees at Bell Terrace were transferred from downtown Seattle and were accustomed to getting to work on the bus.

Before the move to 450 Bell Terrace, the company had not become actively involved in employee commuter programs. With their Bellevue move, Pacific Northwest Bell was entering two new employee programs at once: parking management and employee ridesharing.

#### Ridesharing Assistance

The ridesharing program in King County is Commuter Pool, a regionally funded agency providing public vanpools, ridematching systems, parking management assistance, and extensive marketing assistance to employers willing to sponsor company ridesharing programs. Before the spring of 1981 Commuter Pool had helped several Bellevue employers (e.g., Unigard Insurance and Bellevue City Hall) sponsor outstanding carpool and vanpool programs for their employees and had provided support to two downtown employers (ENI and Puget Power) with somewhat limited parking. However, 450 Bell Terrace was the first building in downtown Bellevue with a critical need for ridesharing services. The Commuter Pool Bellevue representative and two half-time assistants housed at Bellevue City Hall dedicated approximately 20 percent of their time to the telephone company ridesharing project during a 4-month period.

#### TRANSPORTATION PROGRAM FEATURES

The Bell Terrace transportation program has focused primarily on a parking management program providing incentives to carpools and strong cooperation be-

tween PNB staff and Commuter Pool. The project was coordinated at the work site by Michael Brown, the PNB employee transportation coordinator.

### Parking

The new parking garage is managed to give priority to high-occupancy vehicles. Of the 410 spaces available, 298 are reserved for poolers. Parking for SOVs is restricted to 112 spaces and may be further restricted as carpool parking needs exceed the present allotment. Registered carpools receive a permit to be displayed on the window or dashboard of the carpool vehicle. Carpool vehicles may leave and return to reserved spaces in the garage during the day, but SOVs must pay a fee to return to the garage. SOV parking is allotted on a first come, first served basis from day to day.

Employee parking fees are the highest yet charged in Bellevue. Employees driving alone to work may park in the garage for \$3 per day when space is available. Individuals place the \$3 parking fee in a slotted coin box marked with the number of the corresponding parking space. A parking monitor makes daily rounds of the garage, checking for proper payment.

Carpools of two employees can purchase monthly parking permits for \$45.00. Carpools of three or more and vanpools park free, as do motorcycles and bicycles. Carpools are registered quarterly. Employees have been notified that abuse of parking privileges will result in memoranda to supervisors and department heads and revocation of the parking permit for 6 months.

### Carpooling

Both PNB and Commuter Pool staff realized that, for the program to succeed, carpools would have to carry the majority of employees, and therefore planning for carpool formation began 9 months before occupancy of the new building.

Initially, PNB had considered setting up an internal computer matching program using PNB staff resources at the new computer center. Eventually this plan was abandoned in favor of Commuter Pool's readily available computerized program, presumably in the interest of saving time and costs (Commuter Pool's ridematching system had been operating region-wide since 1974). A further advantage is that as more employers sponsor ridesharing programs downtown, Commuter Pool will be able to provide carpool matches with several other nearby buildings.

In the fall of 1982, a survey, compiled with the help of Commuter Pool, went out to all employees to be transferred to Bellevue, inviting employee participation in the computerized ridematching effort. Even though the move would not occur for several months, the matching process was initiated at this time to alleviate employee anxiety about commuting and parking; the applicants would receive match lists well in advance of the move, and could make tentative pooling arrangements.

Through the survey, 456 PNB employees applied for free Commuter Pool carpool matching help. Matches were found for all applicants, with an average of seven matches per match letter. The substantial parking fees and carpool discounts had just been announced at the time of the survey.

In February 1983 the telephone company began holding "move seminars" to brief transferees on the impending move. At PNB's request, Commuter Pool produced a custom-designed brochure explaining the carpool, vanpool, and parking management program. This

brochure was printed in quantity and distributed to all employees.

In March, when the first contingent of employees moved into the building, Commuter Pool initiated a telephone follow-up procedure designed to personalize the ridematching process through individual telephone calls to each applicant. Commuter Pool staff housed at Bellevue City Hall placed 260 calls to PNB employees during a 12-week period. (Approximately 75-100 employees were transferred every 2 weeks until full occupancy was reached in late June.)

In these telephone follow-up calls Commuter Pool staff encouraged applicants to call the names on their match lists if they had not already done so, updated file information (employees will continue to receive updated match lists), and helped commuters solve individual transportation problems. Although most PNB employees had already been successful in forming carpools by the time they received a Commuter Pool staff call, the PNB transportation coordinator received many positive comments from employees about the extra assistance offered through this personalized telephone method.

### Vanpooling

Two Commuter Pool public vanpools are carrying Bell Terrace employees at the time of this writing. One is driven by a telephone company employee and is parked in the PNB garage.

Commuter Pool's analysis for the Puget Sound Council of Governments 1990 Ridesharing Plan estimates that as many as 130 vans could be serving the Bellevue CBD in this decade if employment growth occurs as rapidly as forecast by city planners. Therefore, at a large employment site like Bell Terrace, vanpools right now are probably underused. The telephone company has chosen not to pursue vanpools aggressively as an employee transportation mode, at least not as long as carpools meet their ridesharing goals.

Two of the vanpools serving the PNB site are carrying passengers from other downtown firms including Puget Sound Power and Light Company and Bellevue City Hall. Because the downtown area is fairly small, many vanpools will be able to carry passengers from more than one building. The city is considering ways to address the need for pull-outs and loading facilities for vanpools in the CBD.

### Transit

As the direct result of Metro Transit and PNB cooperation in market analysis and planning, Metro added a new trip to an existing route serving the PNB building. In addition, a new transit route will be added this fall. Although many employers in King County (150 companies representing 20,000 employees) subsidize a portion of the bus pass for their employees, Pacific Northwest Bell is not participating in Metro's employer subsidy program.

### Other Features

PNB will be placing a commuter information center in a prominent location just outside of the employee cafeteria. The centers are three-paneled information kiosks that provide transit and ridesharing information along with timetables and carpool and vanpool applications.

Flexible working hours for as many employees as possible is a company policy at 450 Bell Terrace. Employees are able to set their own start times,

within limits, in order to make the most convenient carpool and transit arrangements. It has not been determined how successful this policy has been at the department level, but follow-up will be undertaken by Commuter Pool. Pacific Northwest Bell Telephone is also providing a company car for employees who, when they work late, must miss their bus or ride home.

#### PROGRAM RESULTS

With the exception of some temporary (and undesirable) on-street parking, the employee transportation program at 450 Bell Terrace has been an extraordinary success. The high levels of ridesharing and transit use at Bell Terrace, however, should not raise unrealistic ridesharing expectations for multiemployer office towers in Bellevue, where employee populations may not be as accustomed to leaving their cars at home as are PNB employees.

#### Parking Spillover

In an effort to avoid high parking fees in the garage, some PNB employees are parking along 110th Avenue N.E. and some minor arterials near the building, such as N.E. 3rd Street and 111th Avenue N.E. City staff believe approximately 140 cars belonging to PNB employees are parking off site, despite company and neighborhood objections. The city plans to impose time-restricted parking on these small side streets and will begin to tow vehicles found in violation of these restrictions.

#### Commuting Mode

Seventy-nine percent of the daytime work force regularly commute to Bell Terrace using a mode other than a single-occupancy vehicle. Approximately 175, or 19 percent, drive alone to work. Commuting mode in early July was as follows:

Mode	No. of	
	Employees	Percentage
Carpools of two	64	7
Carpools of three or more	460	51
Vanpools	16	2
Transit	153	17
Motorcycle and bicycle	13	2
Drop off	16	2
Drive alone	174	19
Total	896	100

The commuting mode information was compiled from PNB parking management data and a recent employee survey supplied by PNB and was confirmed through a telephone follow-up survey conducted by the Commuter Pool Bellevue office. On-site vehicle occupancy counts are being conducted by the city in spot checks throughout the month of July.

Both the transit ridership and the carpool participation rate are of special interest to those watching transportation issues in Bellevue. The 17 percent mode split for transit exceeds the city's current goals. However, it is not an unusual figure, given that these PNB employees were transferred from Seattle and enjoyed very high levels of transit service there. The carpool program yields the most surprising results. Certification of carpools by PNB staff indicates that 60 percent of all employees are in carpools of two or more. Because of this unusually high figure, it may be of interest to note some of the characteristics of this carpooling group.

#### Carpooler Characteristics

A telephone survey conducted by the Commuter Pool Bellevue office this spring revealed that many of those employees carpooling today were taking the bus to work before the company moved. Most of the carpools were not in existence before the move, and almost all were formed exclusively with other Bellevue PNB employees. One hundred sixty carpoolers were interviewed by telephone.

Before moving to Bellevue, the carpoolers interviewed used the following commuting modes:

Mode	Percentage
Single-occupancy vehicle	25
Transit	48
Carpool or vanpool	25
Other	2

Almost 30 percent of those interviewed said they used the Commuter Pool ridematching service (printed lists) to form their carpool. Nearly 75 percent have elected to remain in the computerized ridematch file to receive updated lists to maintain or improve their carpools.

Forty-four percent of the carpoolers said they are picked up at their home for the morning commute. Twenty-eight percent meet at a Metro park-and-ride lot. The Wilburton park-and-ride lot was most frequently mentioned, with nine carpoolers meeting at this facility just south of the CBD.

#### CONCLUSIONS

The 450 Bell Terrace employee transportation program confirms that carpools can, under certain conditions, regularly carry a large number of employees to and from work in Bellevue. Although the Bell Terrace employee transportation program has just begun, some tentative conclusions about its success and future directions can be drawn.

#### Success Factors

Today most ridesharing agencies in the country concentrate on working with major employers because of the number of employees with a common destination and the advantages of a firm's resources for communicating with employees and setting policies. The Bell Terrace transportation program was carried out under this ideal circumstance.

A crucial aspect of this employer setting is the appointment of an employee transportation coordinator with sufficient influence, ability, and staff assistance to carry out plans. Although it may seem obvious that a major program cannot be operated without someone to execute it, employee transportation may have low priority at firms where management does not see a direct company benefit in ridesharing. PNB, however, had appointed a management-level staff person to oversee their program almost a year before occupancy.

The company move from Seattle was a major determinant in achieving the 60 percent participation rate in carpools. Because most of the employees were transferred from a work site with very high transit service, few of them were accustomed to driving to work. Forty-eight percent of the carpoolers at Bell Terrace report that their previous commuting mode was transit.

The restricted supply of parking (0.45 spaces per employee) and its high cost (three times the cost of a one-zone bus pass, two times that of a two-zone pass) are clearly major disincentives to driving

alone. At the same time, carpools and vanpools are assured of parking spaces and have further incentives such as discounted monthly rates and in-and-out privileges.

The company's cooperative relationship with Metro (including Commuter Pool) was undoubtedly of central importance in establishing alternate commuting opportunities for Bell employees. An ideal ridesharing environment and carpool and transit incentives must be matched by the provision of ridesharing and transit services. The willingness of Metro to adapt transit service near Bell Terrace and Commuter Pool's intensive staff support and ridematching services are additional reasons for the success of the program.

#### Future Plans

The Bell Terrace transportation program will need to make some changes and adjustments in the near future. Parking will soon be prohibited along 110th Avenue N.E., and many of the employees now parking there will have to make alternative commuting arrangements. Vanpool use may increase, especially when the summer ends and employee vacation schedules decrease. In addition, a new transit route from northeast Seattle and the university district will begin service in September.

Enhanced ridesharing opportunities will occur as the new downtown office towers are occupied, because more Bellevue commuters will be seeking carpool partners. For example, Puget Sound Power and Light Company's employee transportation coordinator has already planned a ridesharing program there and is currently working with Commuter Pool to coordinate ridematching on site and between downtown buildings.

The PNB transportation program in Bellevue is the first program to be instituted under the city's new zoning code. Although the company program was developed under favorable circumstances that are not likely to be duplicated at downtown office towers, it can serve as a positive example and encouragement to the ridesharing effort in downtown Bellevue. City staff will continue to follow the results of this program as well as those of employee transportation

programs soon to come at major downtown Bellevue office buildings.

#### ADDENDUM

By the spring of 1984, 1 year after Bell Terrace began its program, the mode split at the site had changed somewhat. A survey undertaken early in the year indicated that, although the carpool rate was still extremely high for Bellevue, the number of employees commuting by single-occupant vehicle had increased to 32 percent. Current mode splits are given below:

<u>Mode</u>	<u>Percentage</u>
Carpools of two or more	53
Transit	11
Other	4
Drive alone	32

Although the city of Bellevue has eliminated the problem of illegal on-street parking by placing signs restricting parking to 2 hours, resourceful commuters have managed to find parking in nearby parking lots where excess spaces exist. This type of spillover is expected to disappear as nearby properties redevelop and begin monitoring their parking lots.

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