CHAPTER 8

Making Communities Accessible and Convenient

Americans are not irrationally car-crazed. We seem wedded to the automobile because policy after government policy encourages us to be.

—Jessica Mathews in the Washington Post. *[1]*

Since the 1950's, autocentric transportation policies at every level—federal, state, and local—have effectively destroyed transportation options for Americans. These policies have wiped out walkable, older communities while preventing the creation of new ones.

—Richard Moe, President, National Trust for Historic Preservation. [2]

INTRODUCTION

Much of what was stressed in the previous case studies centers on the "destination" and the role that transit can play in enhancing the communities where transit stops and stations are located. But this approach leaves out a fundamental goal of transit, which is to provide a convenient way for people to reach their destinations.

Many people in the United States have no option but to use a car to get from place to place. The design and planning of communities over the past decades precludes other options or makes them so inconvenient that few people walk, ride a bike, or take public transit. Even existing communities—older neighborhoods that had once been walkable and well-served by public transit—have been negatively impacted by automobiles so that, ironically enough, cars are now required rather than optional.

Today, as participants in focus groups for this study emphasized, people live complicated lives. With two working parents and the need to plan children's activities, everyone seems to be going—as one focus group participant put it—"from everywhere to everywhere." Those who cannot drive because of age, illness, or income are especially sensitive to the lack of convenience in their lives and their dependence on others just to get around.

Overview of Community Strategies and Role of Transit

Chapters 4 through 7 presented what communities, in general, are doing to improve livability before discussing existing and potential transit roles. In the case of concerns about access and convenience, transit is inseparable from overall community strategies.

While many people are tired of having to drive cars to do the simplest errand, of waiting in traffic jams and of chauffeuring their kids from school to music lessons, the automobile has clear advantages in terms of flexibility and comfort. In contrast, most transit systems have been based on rigid routes and scheduling, especially rail systems. For reasons of economic practicality, some destinations simply cannot be served or serviced as frequently as others.

However, new approaches are being tried to make transit more flexible, comfortable, and convenient—not to replace the car, but to provide more viable alternatives that meet individual as well as community needs.

Land-use strategies (see also Chapter 2) to change the design of communities so that they are more compact and, therefore, appropriate for a variety of transportation options have even been reported as a cover story in *Newsweek*. As the article begins, "Most of us actually know what we want in a neighborhood—we

just don't know how to get it, because developers have been building the wrong thing for 50 years." [3] While somewhat overstated, it is true that there is at least a debate going on today about land use and transportation that was less prominent a few years ago.

The goal of more progressive land-use strategies is to plan and design communities more compactly so residents can walk, bike, or take a bus and not always have to drive. There should be centers in a community where shops, schools, services, and other destinations are within walking distance of each other. The problem is that, at least for the present, very little new development provides such an alternative and established areas cannot be transformed overnight. As a result, land-use strategies, as important as they are, represent a long-term approach.

Retrofitting traditional communities or re-establishing pedestrian and transit networks in communities that were built prior to auto-dominated policies offers great potential for more immediate results. Case studies of *Pioneer Square in Portland; Davies Square in Somerville, Massachusetts; Woodbridge, New Jersey; the Los Angeles Neighborhood Initiative*; and *the Green Line, Chicago* are some of the key examples of the impact of retrofitting to improve pedestrian and transit access.

Effective transit systems that simply offer convenient service at competitive prices also represent an effective strategy. The Big Blue Bus in Santa Monica is one dramatic example of a bus system that provides convenience and accessibility in a city that is part of the car-oriented culture of Los Angeles. Many of the case studies presented here—such as *Davis Square, Somerville, MA; 16th Street Transitway, Denver*; and *Go Boulder, Colorado*—are transit systems that offer convenient service within neighborhoods, downtowns, or communities as a whole.

Figure 8-1. The Tohono Tadai Center, Tucson, AZ, provides a focal point for development near the Tucson Mall. (Credit: Steven Haines)

Another more specialized strategy has been the creation of transit shuttles and connectors, shuttle bus services that connect residential neighborhoods with employment centers. Some systems facilitate connections with commuter rail and rapid transit stations. These transit shuttles and connectors are often sponsored by developers and corporate employers, alone or in partnership with transit agencies, and financing usually comes from a combination of rider fares, employer subsidies, grants and public subsidies. Other systems, like Chicago's JobLink Corporation (see example in Chapter 6) takes inner city residents to job-rich suburbs in subscription vans and buses. Still other programs provide employer-sponsored shuttle buses from outlying regional bus and rail stations to office and industrial parks not served by regular transit. A variety of examples are provided in this chapter.

Intermodal transit centers help improve the functioning of existing transit and improve linkages between different modes of travel. *Meridian, Mississippi* is currently transforming its historic railroad station for this specific role. Most of the case studies presented in this report, however, have some sort of intermodal component to them: *Wellston Station, St. Louis*, combines local buses, shuttle vans, and light rail; *Corpus Christi's Staples Street Station* is a bus transfer center that connects to a downtown rubber wheel trolley. *LINC (Local Initiative for Neighborhood Circulation)* in Seattle is in the process of developing neighborhood intermodal centers with connections to regional buses and private taxis. The *Watts Shuttle* feeds regional bus lines.

Neighborhood-based transportation services may offer the most potential to support the goals of neighborhood convenience and accessibility. Case studies include two very diverse communities—*Watts, Los Angeles,* and *Aspen, Colorado*—where new transit services provide flexible service in smaller buses to local destinations. These systems are viewed positively by passengers because they offer more options than larger buses. Just the same, much remains to be learned about the long-term viability of these systems. Experimental demonstrations can be helpful in assessing their effectiveness, for example, the *LINC Shuttle in Seattle* was a 6-month pilot project to test specific assumptions and evaluate public response. In the future, such neighborhood transportation services can also create mini-centers of community life, help generate new jobs and businesses, and improve access to a larger region.

ENDNOTES

1. Quoted in *Surface Transportation Policy Project Bulletin* (June/July 1994) p.6.
2. Ibid., p.6–7.
3. "Bye-Bye, Suburban Dream: 15 Ways to Fix the Suburbs," *Newsweek* (May 15, 1995).

EXAMPLES

Santa Monica, CA: The Big Blue Bus Convenient and Accessible City Bus Service Builds Livability and Transit Ridership

We want to make riding a bus an enjoyable experience, so that the passenger steps on a clean bus, meets a helpful driver, and rides to a destination he or she wants to reach.
—Bob Ayer, Assistant Director, Big Blue Bus

For 70 years, Santa Monica has taken an active approach to transit to assure that the city and its nearby destinations are accessible and convenient for residents. In 1923, the sparsely settled community offered an exclusive citywide bus franchise to a private bus operator that would establish bus routes specified by the city. Within a few years, complications arose and neither state-run railroad nor private bus services were meeting the needs of Santa Monica's residents. In an attempt to improve the situation, the city bought buses and established its own routes. Later, the local private company merged with the city's Big Blue Bus (BBB). For almost 70 years, the BBB has operated local main line bus service to Los Angeles County's west side under local control.

The BBB carries approximately 19 million passengers per year on 135 buses. With a fare of 50 cents (the national average is 75 cents), the farebox recovery ratio is 46 percent compared to the U.S. transit system average of 28 percent. More than half of the company's revenue (61 percent) comes from fares and the rest (39 percent) from subsidy, which is precisely the reverse of the budget for Los Angeles County transit. Most important, the BBB received a rating of "favorable" by 98 percent of its passengers. According to Mr. Ayer, the favorable rating is a direct result of efforts to keep the buses clean and ensure that they "look like something people want to ride," rather than have people thinking "they don't care."

The BBB runs five lines to the University of California, Los Angeles, and four lines to the beach, one line to downtown Los Angeles, and it operates special monthly trips. The BBB takes input from the community on a regular basis regarding its service; almost everyone in the city of Santa Monica lives within two blocks of a bus stop. As residential to commercial service has proved successful, the focus of the service has evolved and is now geared toward linking business centers and providing point-to-point service between the aerospace center, El Segundo, and Santa Monica. In fact, one experimental route provides "family seating" and videotaped entertainment for aerospace commuters.

The newest development for the BBB is a citywide street enhancement project along Main Street and Pico Boulevard, which has marked a turning point for the BBB. The city, the BBB, and local businesses are now working together to enhance the community and transit amenities.

Figure 8-2. "For almost 20 years, Pico buses turned around in Ocean Park on a turntable. Celebrating its installation in May 1934 are Finance Commissioner T.H. Plumer, Ocean Park amusement man Jesse Kramer and local bathing beauties." (Credit: Santa Monica Library photo courtesy of the Big Blue Bus, as quoted in *History of Santa Monica's Big Blue Bus* by Bob Ayer, City of Santa Monica, CA, 1992, pg. 19)

Kids Kab: Reducing the Need for Parent Chauffeuring

One of the community livability challenges for many parents is transporting children conveniently and safely. Kids Kab is a privately operated transit service for children, designed specifically to meet the needs of busy working families. It offers individually customized door-to-door transportation to and from school, after-school activities, doctor appointments, music lessons, and weekend social and sports events.

The service was created by Pamela Henderson, a working mother of three children in Birmingham, Michigan. From its humble beginning in 1991, with three vans and manual dispatching, the business has expanded into a far-reaching network of franchises in 12 states that collectively carry 50,000 riders a month. The fast growth of Kids Kab—and numerous imitators—demonstrates that there is a market for customized transportation services focused on children and young teenagers.

The service is offered by subscription and on a single-ride basis. In some communities, Kids Kab carries students to and from classes at independent schools that do not have school bus transportation of their own. Peak demand occurs after school, with vans carrying children to sports activities, music and dance lessons, and dentist appointments. Weekends are also periods of high demand for transportation to sports events, birthday parties, and dances.

Because safety and security are uppermost in parents' minds, children are issued photo identification cards that become their bus admission ticket. Children are not left unattended; they must be met at the door by a parent or other pre-approved person. To allay parents' fears of turning their children over to strangers, drivers are carefully screened with an emphasis on hiring parents, school bus drivers and retired neighbors living in the service area.

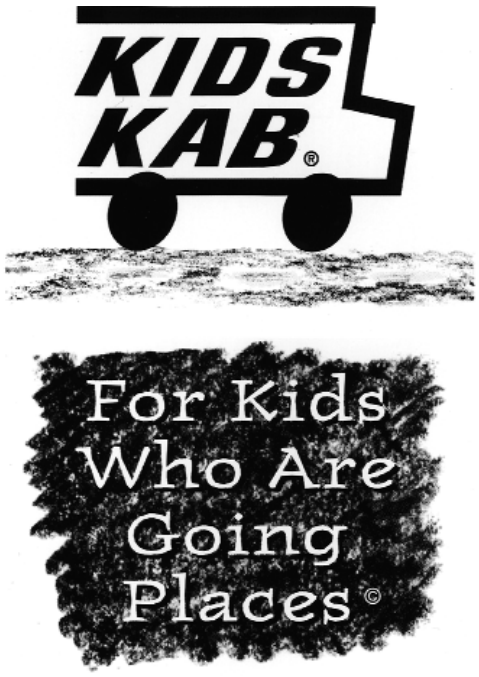


Figure 8-3. Brochure for Kids Kab, a privately operated transportation service for children, which provides transportation to and from after school activities. (Credit: Kids Kab)

New Jersey Transit WHEELS Program: Experimenting with Flexible Service to Serve Local Mobility Needs

When you ride our WHEELS you travel in comfort, and in the company of friends and neighbors. Without a worry about weather, traffic, or wear and tear on your car, and that means less wear and tear on you. So go ahead and laugh, talk, sleep and relax, on NJ Transit WHEELS. It's the way more and more people are getting around.
—From a NJ Transit promotional brochure

The New Jersey Transit WHEELS program is an experimental program to test special transit services to serve local mobility needs not currently served by traditional buses. Funding from CMAQ has, since 1993, made it possible every month for 138,000 people to travel to and from home, school, shopping, work, and commuter rail stations. The WHEELS program operates express service along a fixed route between residential areas and rail stations, office districts (corporate and industrial parks), and shopping centers statewide. Several routes pick up passengers at park-and-ride lots, bus terminals, hotels, and train stations. Between two and four 20-passenger minibuses service each route on weekdays.

The most successful of NJ Transit's 19 WHEELS Suburban Transportation Services is the Princeton Junction Rail Station-Lawrence route. The Princeton Junction service is a flexible subscription service, which requires passengers to reserve their seats in advance for a specific month, week, or day. The service operates every 30 min during weekday rush hours from 5 a.m. to 8 a.m. and from 5:30 p.m. to 8:30 p.m. between the Princeton Junction Rail Station (along the Northeast Corridor Rail Line) in West Windsor and residential neighborhoods in Lawrence (in Mercer County). Arrivals and departures are scheduled to coordinate with the trains. Fares range from $1.40 one way to $49.00 for a monthly pass.

The shuttle service was introduced by NJ Transit as a way to solve the serious parking problem that exists at the Princeton Junction rail station and to assist commuters traveling to destinations along the Northeast Corridor Rail Line. The service is operated by Mayflower Contract Services for NJ Transit, which requires Mayflower to coordinate passenger pickup requests closely with train arrivals/departures.

Ridership has more than tripled—from 471 to 1,968 in eight months—since the service began in August 1994. Brochures, Transit Days, free-ride coupons, give-away items, and direct mail solicitation have been used to draw more riders to this service.

Figure 8-4. NJ Transit WHEELS promotional brochure. (Credit: NJ Transit Corporation)

CASE STUDIES

Case studies present three different communities: Aspen, Colorado, a wealthy resort community; Watts, a low-income neighborhood in Los Angeles; and Meridian, Mississippi, a small city. Each has addressed the goal of improved access and convenience in a different manner, but the community-initiated process has yielded transit programs in all three communities that address the needs of residents in a more effective manner:

Case Study 8-1: Aspen, CO: City Shuttles
Community Develops Plan to Reduce Traffic Congestion and Increase Mobility

Case Study 8-2: Los Angeles, CA: The DASH Watts Shuttle
Community-Scaled Transit Links Neighborhood Destinations

Case Study 8-3: Meridian, MS: Union Station
Train Station Becomes Community Transportation Hub

Case Study 8-1
Aspen, CO: City Shuttles
Community Develops Plan to Reduce Traffic Congestion and Increase Mobility

Aspen cannot build its way out of traffic problems anymore than Los Angeles was able to solve its problems with ever larger and wider freeways. The community seeks to provide a balanced, integrated transportation system for residents, visitors and commuters that reduces congestion and pollution.

—Aspen Area Community Plan, *January 1993*

SUMMARY

Aspen, Colorado, a charming, old mining town and world-famous ski resort, was plagued with traffic congestion and a parking shortage until recently when a "pay-for-parking" program and increased local transit services were introduced. This "carrot and stick" approach was the only way to convince people to leave their cars at home, or at least outside the business district, according to Gary Gleason, the Marketing Director of the Roaring Fork Transit Agency (RFTA). While parking fees were instituted in early 1995 to discourage the use of downtown streets as free, long-term parking lots, an inexpensive demand-response van service and a free shuttle from outlying park-and-ride facilities were introduced at the same time to provide alternative transportation. Commuter service was also expanded in terms of frequency and number of express runs.The response has been overwhelmingly positive and there has been a substantial increase in transit ridership.

PLANNING PROCESS

Because tourism is Aspen's economic engine, the RFTA and the local ski corporations have long provided free bus service within the city and between the four ski areas as a service to visitors. Locals, commuters and tourists, however, still tended to clog up the unmetered streets of Aspen,

especially during the peak winter season. The full-time population of Aspen is only 6,000, but it expands to as many as 30,000 during the winter months. In addition, 60 percent of the people who work in Aspen live outside the city, primarily because of very high housing costs, and the full-time population in the entire Roaring Fork River Valley has expanded to 30,000 in recent years. To serve this large commuter population, the RFTA provides bus service along Highway 82, the corridor through the Roaring Fork River Valley—the only means of entering Aspen for most of the year. The parking fee program was intended to encourage even more of these commuters to take the bus. A new parking lot at the airport outside of town, serviced by another free shuttle, was also built to encourage both commuters and visitors to leave their cars outside of Aspen.

The pay-for-parking program, free shuttle buses, and other proposals for reducing congestion grew out of the Aspen Area Community Plan (AACP). Developing transportation alternatives was an important theme of the AACP, a document intended to "revive the vitality that previously characterized Aspen," while developing "a livable environment for the community's residents, employees, and visitors." The AACP published in 1993, was the result of a 2-year, community-based process, led by citizen task forces and professional consultants. Along with action plans to revitalize the permanent resident community by providing more affordable housing, promote sustainable development and maintain design quality, Aspen residents expressed the need, in the AACP's "Transportation Action Plan," to provide transportation alternatives in order to reduce their dependency on automobiles. The increase in commuter traffic caused by the displacement of the workforce was described in the AACP as "degrading both the air quality and the quality of life for both residents and visitors." Aspen residents realized that "Aspen cannot build its way out of traffic problems anymore than Los Angeles was able to solve its problems with ever larger and wider freeways."

The Transportation Action Plan proposed detailed solutions that would do the following:

- Limit vehicle trips into Aspen,
- Provide efficient valley-wide mass transit,
- Alter land-use patterns,
- Move people within and around the city without automobiles,
- Create a less congested downtown,
- Enhance pedestrian mobility,
- Improve bikeways, and
- Provide practical car storage facilities on the outskirts of town.

The developers of the Transportation Action Plan recognized that locals and visitors alike would only take advantage of the parking facilities outside of town if mobility within town, through frequent, accessible shuttle services, was enhanced. Likewise, the transit service would only be used if drivers were discouraged from bringing their cars into town. Thus, each component of the Transportation Action Plan was dependent on the implementation of the other components. Most of the steps outlined in the Transportation Action Plan were phased in between 1992 and 1995.

Figures 8-5 and 8-6. Case Study 8-1. Downtown Aspen, CO (Figure 8-5) and the Rubby Park Transit Center (Figure 8-6). To overcome its traffic congestion and parking shortage, the city of Aspen instituted a free shuttle service that ferries visitors and area employees from outlying park-and-ride facilities and bus stations into the downtown. Similar shuttles offer service from residential neighborhoods. (Credit: Project for Public Spaces, Inc.)

A controversial plan by the Colorado Department of Transportation to bring a four-lane highway into Aspen was recently rejected by the community. The city of Aspen proposes to build, instead, a new two-lane parkway from the airport, with a light rail system running down the median, to replace the overcrowded two-lane highway. The new road, called "Alternative H," would retain the historic character of the "entrance to Aspen," preserve open space, reduce the number of cars coming into town and force vehicles to slow down as they enter. "Alternative H" would provide a more bicycle and pedestrian-friendly approach to entering the town, and it would have fewer hidden costs, such as the additional parking garages needed for a four-lane highway.

STRATEGY

The RFTA has expanded the range of choices within the three types of transit service that it provides in the Aspen area as follows.

City Buses. The service hours of the free circulating bus system that has been operating for many years within the city were increased; it now runs from 6:30 a.m. to 2:30 a.m., on four year-round routes and two additional seasonal routes, at 20- to 30-min intervals. New services recently added to supplement the bus system include: a "dial-a-ride" van service, seating 15, that circulates on a 15-min fixed route— the service is free, but if the van picks up passengers at their doors, the charge is $0.50; the Galena Street Shuttle, a free, seasonal downtown trolley that runs north-south from the municipal parking structure through town to the Aspen Mountain gondola; and the Airport Park-and-Ride Shuttle, a free, seasonal service from a 350-car parking lot into the center of town, designed primarily for commuters.

Seasonal Bus Service. The local ski company pays for ski-area shuttles that operate in winter. In the summer, RFTA buses climb the winding road (no cars allowed) to the foot of the Maroon Bells, a spectacular group of high mountain peaks, for a fee of $5.00.

The Commuter Corridor to Glenwood Springs. The RFTA provides 1.5 million passenger trips a year, primarily for commuters, on buses that run along the Roaring Fork River Valley. With the introduction of paid parking in Aspen, the level of commuter transit service was doubled to encourage people to ride buses by making them even more convenient.

The parking fee introduced in the downtown business district to encourage people to use the many transit choices was only $1.00 per hour. But to make it equitable, and to counter the charge that only the rich could park in Aspen, parking was limited to 2 hours. Rather than individual meters, which were deemed to be unsightly, "pay and display" meters, which dispense tickets to place in the windshield, were attached to the historic-style lampposts at mid-block locations. Aspen also introduced the innovative idea of "in-car" meters which can be purchased from the city and credited with up to $500 of parking time, also in 2-hour increments.

FUNDING

The RFTA is funded by a 1 cent sales tax that was raised recently to 1½ cents to help fund the light rail system. While the ski-area shuttles are paid for by the ski company, the other free shuttles are paid for out of the regular operating budget of the RFTA. The cost per ride is about $2.00, relatively low by industry standards. The free service is perceived by the RFTA and the community as being critical to the success of Aspen as a comfortable and convenient resort destination, as well as a means of encouraging residents to leave their cars at home. Parking revenues, collected by the city of Aspen, go primarily toward the enforcement of parking restrictions, as well as to help pay for the free park-and-ride shuttle service from the airport into town.

OVERCOMING OBSTACLES

The RFTA and the city of Aspen have faced their share of obstacles; changing long-established behavior patterns, particularly within a privileged population, has not been easy. In addition, maintaining the character of a small town while coming up with big-city transportation solutions has, at times, created problems of scale.

The opposition to the parking fee proposal was fierce: a "honk-in" was staged a month before the program was to take effect to protest the end to free parking. Thousands of cars, with horns blaring, circled City Hall on New Year's Day for 25 min. Mayor John Bennett stood outside City Hall with a sound level meter, greeting the protesters, and handing out prizes to the loudest horns. Nevertheless, the program went ahead and within 2 weeks of its inception even its staunchest opponents were calling it a resounding suc-

cess: the congestion was noticeably diminished and the city was perceived to be more livable.

IMPACT AND ASSESSMENT

The parking fees have been remarkably successful as a disincentive, motivating people to take the bus. Commuter ridership in the valley is up 35 percent from last year to this year and ridership in the city is up 23 percent. Parking occupancy has dropped from 95 percent to 85 percent which has reduced vehicle miles traveled and parking "trolling." Average daily traffic into Aspen has declined by 3 to 4 percent since paid parking was initiated.

CONCLUSIONS

Although Aspen, a wealthy resort town with huge seasonal fluctuations in ridership, may have little in common with most urban communities, its problems of traffic congestion, degraded air quality, and arduous commutes are familiar livability concerns. The Aspen community's innovative solutions, introduced through a long citizen-participation process, can serve as models to other communities across the country. By carefully adapting urban-scale transit solutions to the needs of a small town, the RFTA and the Aspen community are succeeding at preserving the quality of life in the Aspen area while enhancing mobility. Transportation strategies, including improved transit and restraints on auto use, have made the area far more livable.

SOURCE

Aspen Area Community Plan (January 1993).

Case Study 8-2
Los Angeles, CA: The DASH Watts Shuttle Community-Scaled Transit Links Neighborhood Destinations

I love being the director of a transportation program that provides such a wonderful service to a community I've lived in my entire life. The people who use the Watts shuttle need it desperately and really depend on its services.
—Teddy Watkins, Watts Labor Community Action Committee

SUMMARY

The Los Angeles Department of Transportation (LADOT) began operating the local shuttle service in Los Angeles' Watts neighborhood in September 1990 as a transportation demonstration project, in response to the community's request for improved local transit service. The initial program was so popular that service was expanded and a second route was considered and added this year. DASH shuttles also operate within downtown Los Angeles, Pacific Palisades, Fairfax, Hollywood, Midtown, Crenshaw, Van Nuys, Warner Center, and southeast Los Angeles, for a total of 17 communities throughout the city. Most shuttles operate 6 days per week with 20- to 45-min headways. For 25 cents, residents are connected by DASH shuttles to the key retail, recreational, and social service centers in their neighborhoods.

PLANNING PROCESS

Watts is an economically disadvantaged neighborhood in Los Angeles, an area that never fully recovered from the Watts riots in 1965. Since that time, there has been a great deal of investment in the area, especially in the form of community services, retail, and educational and health facilities. While the hospital, shopping center, and park had done much to improve the livability of the neighborhood for residents, many people were unable to reach these destinations. They were scattered throughout the community and had limited public-access services. Residents approached their local councilwoman requesting a solution to the problem—a fixed-route shuttle bus service that would circulate throughout the neighborhood and connect residents to vital community centers.

The Mayor and City Council responded to the community's concerns by establishing a 1-year transportation demonstration project to initiate shuttle service in the greater Watts community. The project was funded through Proposition Local Transit Assistance moneys. In September 1990, two buses (with one backup) began to travel a bi-directional route every 45 min.

Many groups joined together to plan and implement the DASH shuttle service in Watts. They included the offices of the Mayor and two councilmembers and their Transportation Policy Review Committee; representatives from LADOT and the Los Angeles County Metropolitan Transit Authority (LACMTA); local senior centers and civic associations that actively solicited both the City Council and the LADOT for neighborhood transit service; and the

Watts Labor Community Action Committee (WLCAC), a nonprofit organization, which won the competitive contract to operate the service for LADOT.

STRATEGY

The Watts DASH Shuttle was approved by the Mayor and City Council in 1989. LADOT staff worked with the WLCAC to identify the community's activity centers, and WLCAC helped the community develop and propose the route it wanted to the City Council. The route connects residents to the neighborhood's most important destinations, including Will Rogers Memorial Park, City Hall, the Post Office, the Health Foundation, a hospital, a job and vocational preparation center, a social services facility, and two plazas within the neighborhood's retail and commercial corridor. It also connects to the 103rd Street and Imperial Metro Blue Line Stations, a light rail operating between downtown Los Angeles and the city of Long Beach. The shuttle and municipal/city buses share the same bus stops, which usually only consist of a bench and sign.

Now, with five shuttles (four in service and one spare), the service operates on 20-min headways from 7 a.m. to 6 p.m. on weekdays, and from 9 a.m. to 6 p.m. on Saturdays. The fare is 25 cents, but seniors and persons with disabilities ride free with an MTA pass. Half of LADOT's DASH buses now run on compressed natural gas or propane, which produce less pollution than regular gas or diesel-powered buses. However, the current buses used in Watts are diesel-powered.

DASH is only one component of the regional Metro System. In addition to DASH, there is Commuter Express bus service between downtown Los Angeles and residential neighborhoods, the battery-operated San Pedro Electric Trolley, and Cityride, a dial-a-ride van and taxi service that serves seniors and persons with disabilities.

FUNDING

The DASH Watts demonstration project was initially funded through City Proposition A funds, which the City Council appropriated for the Watts program. Now the city is using a combination of Proposition A and C funds.

The monthly operating costs of the DASH Watts average $34,000, which is paid to the WLCAC, the city's contract operator. Total fare revenue, at 25 cents per ride, averages $10,000 per month for DASH Watts, which has the highest farebox ratio of all the transit services operated by LADOT.

OVERCOMING OBSTACLES

Problems and difficulties facing DASH Watts have been vandalism of its buses (rock throwing, in particular) and gang-related problems. The WLCAC has mounted a 3½-year-long community outreach effort with area schools, block associations, the local police, and the parents of students, to enlist their cooperation in changing the behavior of the offending gangs. Using funds from the city and Proposition C, a Los Angeles Police Department (LAPD) sergeant has been assigned to address the security issues on community DASH buses and often rides the route with passengers. In recent months, the problems have stopped and no incidents have occurred on board the DASH buses. As part of this security effort, and in cooperation with the LAPD, the WLCAC has instituted strict rules governing on-board behavior, and violation of these rules results in a perpetrator's prompt removal from the bus.

IMPACT AND ASSESSMENT

In its second year of operation, the DASH Watts fleet for Watts expanded from two to four vehicles and carried 40 passengers per revenue hour, twice LACMTA's ridership standard. Two years later, in 1994, ridership had increased to 48 passengers per hour. LADOT began planning a second route to serve the northern and western sections of the Watts community; DASH Watts North was implemented this year. Today, 50,000 passengers ride the DASH Watts shuttle each month giving it the highest ridership per hour and the lowest subsidy per passenger of all of LADOT's services.

CONCLUSIONS

The DASH Watts is vital to the livability of this transit-dependent community. The shuttle connects people to the many social, medical, educational, and community services that have been systematically developed for the benefit of Watts' residents. In fact, introducing new social services into a community without providing patrons with the means to access them makes the programs much less effective than if a transit component were incorporated as part of the project from the start. According to Teddy Watkins, Director of WLCAC, of the 100 DASH buses that serve 20 routes systemwide, DASH Watts is the most

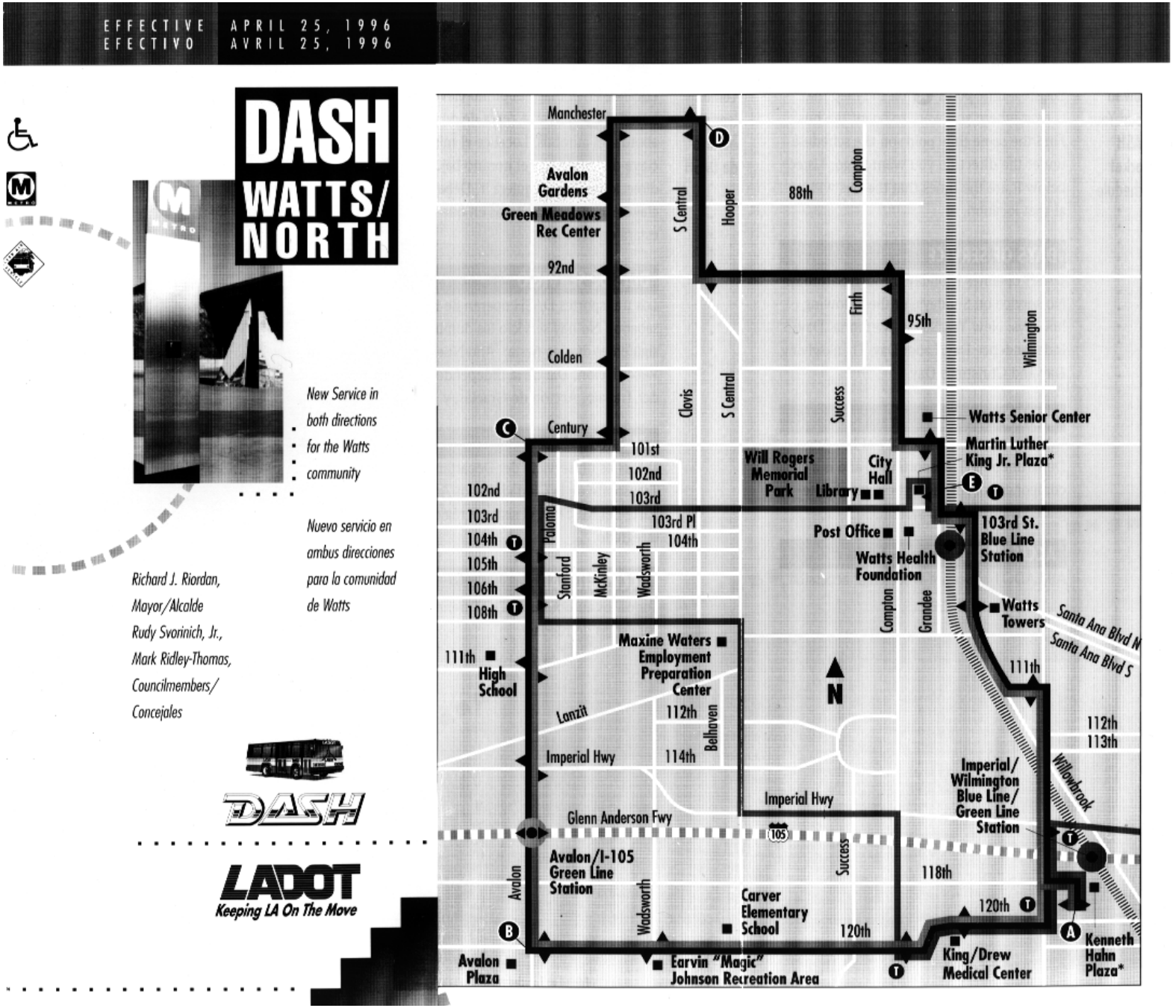


Figure 8-7. Case Study 8-2. DASH Watts Brochure and service route showing how the routes serve many local destinations, including the post office, library, city hall, and social services. (Credit: Los Angeles Department of Transportation)

successful primarily because it connects transit-dependent people with the destinations they want to reach.

Case Study 8-3
Meridian, MS: Union Station
Train Station Becomes Community Transportation Hub

SUMMARY

Often referred to as a "child of the railroad," Meridian was settled in 1859 along the Mississippi-Alabama border, at the junction of the Vicksburg and Alabama lines, and developed to accommodate employees of the rail lines.

Although Meridian now serves the transportation needs of nine surrounding counties, there are no transit centers where passengers can catch the bus or transfer from the train. The Union Station Multi-Modal Transfer Center is being planned to provide the predominantly low-income population with safe, reliable, and convenient access to buses and trains and to link all major forms of transportation. With nearly 30 percent of Meridian residents living below the poverty line and a median household income of $18,000 per year, efficient and accessible public transit is truly a necessity.

PLANNING PROCESS

The original Union Station was constructed jointly by the Mobile & Ohio, the Southern, the Alabama & Vicksburg, the New Orleans, and the Northeastern rail lines. The station opened in August of 1906 and had heavy rail traffic for the better part of the century, supporting 44 trains per day. Much of the original structure, including the central tower, was demolished by 1966, and all that remained was the eastern wing of the passenger depot, which currently serves as a ticket area, office space, and waiting room with a seating capacity of 50. Since 1966, Meridian has not had an adequate train station. Transit service is extremely fragmented, and people must travel all over town to catch and transfer between trains, buses, and taxis, creating disjointed and difficult transit access.

Many cite John Robert Smith, the mayor of Meridian, as providing impetus for the project. John Smith developed a strong interest in building a central multimodal transportation center (MMTC) in Meridian in December 1990 when—while building a model train set for his son—he researched the role of rail in the development of the west. Since then, Mayor Smith has expended considerable time and effort in generating interest in and educating the business community, municipal government, and citizens about the need and benefits of a multimodal facility for Meridian, and its potential to serve as a tool for economic revival. The goals of the MMTC are not only to centralize transportation services, but also to stimulate tourism by promoting the historic preservation of this important railroad town and to act as a catalyst for downtown revitalization efforts.

The project began with feasibility studies in 1991, funded by the Meridian City Council. The city then commissioned a team of architects and engineers to develop a design. They held a series of town meetings and discussion groups with community committees, key design professionals, citizens and railroad "buffs" to obtain community input and discuss conceptual designs. Based on this community input, the design team developed conceptual drawings that outlined the major components of the MMTC. Implementation is expected in 1996.

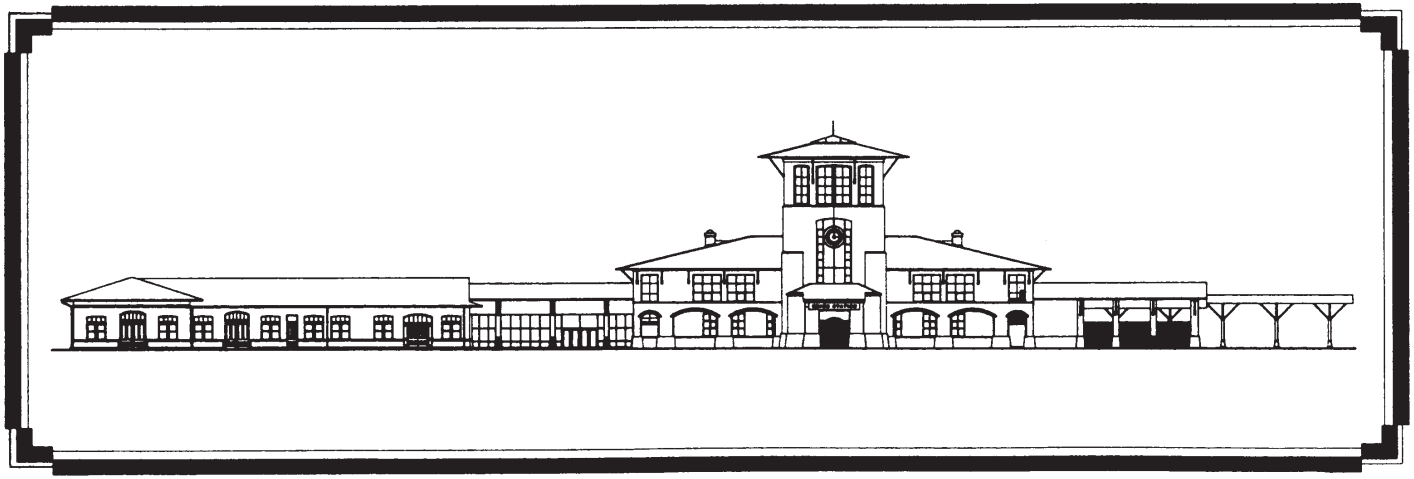
STRATEGY

The Multi-Modal Transfer Center will occupy four city blocks. Six acres of this space has been donated by the Alabama Great Southern Railroad Company and includes the existing historic station structure. The design of the Union Station Multi-Modal Transfer Center will resemble the original railroad depot that occupied the space in the 1900s. Construction is set to begin in June of 1996 and should last approximately 18 months.

Center facilities will include the Union Station Railroad Museum, a landscaped area with memorial brick pavers, a new terminal building attached to the surviving portion of the depot, and areas for future use. A site for a farmers' market and a landscaped park area with a covered stage for festivals and other city events are proposed.

The major transportation agencies that will have offices at the MMTC include the Meridian Transit System, Amtrak, Norfolk Southern Rail, Greyhound and Trailways buses, and local taxis. The Meridian Lauderdale County Partnership, an economic development agency that promotes tourism, economic and industrial development, and employment, also plans to relocate its offices to the MMTC and to assume responsibility for managing the facility. Auxiliary services and retail uses planned for the MMTC include the following:

- Conference rooms and convention activities;
- A hospitality center with special-event ticket sales;



A Special Invitation To Join The UNION STATION PATRONS CLUB

Figure 8-8. Case Study: 8-3. This Union Station Patrons Club Membership form invites local residents to purchase a brick or have their name inscribed on a plaque at this multimodal center being constructed at a historic train station. (Credit: City of Meridian, Mississippi)

- Restaurants and a food court, lounge, and gift shop;
- A trolley link to CBD-area locations;
- Historic train excursions;
- An airport and Naval Air Station shuttle service;
- Travel agencies and airline ticketing;
- A tour bus operation;
- A package express; and
- A welcome center.

FUNDING

The city of Meridian has received $2.56 million in Federal Transportation Enhancement Funds for the preservation of historic transportation structures to initiate the project. A $30,000 FTA Sec. 8 Planning Grant supported the intermodal terminal feasibility study. Another $1.3 million was generated by a Certificate of Participation and state bonds that covered the local match for design and engineering work.

In addition to public meetings, citizen involvement was encouraged by the Union Station Patrons' Club. Because of the strong railroad heritage, project developers created the Patrons' Club to encourage people to take ownership of the project. Engraved brick pavers identifying donors as "patrons" are being sold to raise money for the purchase of planters, benches, and other amenities not funded by the federal dollars, as well as to pave the walkways. To date, over 1,000 bricks have been sold. Another fundraising program in place is the "sale" to corporate sponsors of the 2,500 replicas of turn-of-the-century, Union Metal lampposts to be installed at the MMTC. Funds from the lampposts will also go toward opening the railroad museum at the station.

Robert West, an artist from Atlanta, has been commissioned to paint an original work depicting the station as it was at the turn of the century. Proceeds from this limited edition print are being collected by the Railroad Historical Society and will also help to fund the construction of the railroad museum.

OVERCOMING OBSTACLES

Amtrak reported that for the period between June and December 1994, Meridian's Union Station had more than 9,000 boardings. However, Amtrak has since reduced service from 7 to 4 days per week, and passenger figures have dropped substantially from approximately 1,800 people per month to about 900. Similar figures are expected with the construction of the MMTC.

While some opposition surfaced among community members regarding the necessity of such a transfer center, the majority of citizens supported the effort; support was reinforced by community involvement.

Because this project was the first ISTEA project for the state of Mississippi, completing the requisite paperwork has proven to be a major obstacle. The guidelines are new and unfamiliar to the state highway department, the agency administering the funding, which had little experience in implementing historic preservation projects.

IMPACT AND ASSESSMENT

Generating enthusiasm for a transportation project involving rail was not difficult in this railroad city and the success of the project thus far is attributable to the participation of all those concerned throughout the process. The citizens of Meridian have become more aware of the benefits and importance of multimodal facilities. Expectations of spin-off economic development and improved downtown development are high.

CONCLUSIONS

The success of the transfer center thus far has been due to the early and continued involvement of government leaders, property owners, the business community, concerned citizens, and users. Sustaining involvement and developing a sense of public ownership are of utmost importance in order for the project to be a success. Amtrak and the city of Meridian are hopeful that the project will reestablish the role played by rail in America's communities and provide the people of Meridian with a transportation center that will greatly enhance their mobility and livability.

CHAPTER 9

Shaping Community Growth

[We are] at a crossroads. We can either take control of our growth and channel it in ways that will enhance our communities, or we can sit and watch unmanaged growth destroy the things we value [most about them.]

—Seattle 2014 Plan

All we have to do is look at Los Angeles to see how many people want to leave it because it's a sprawling, violent, congested, smoggy, unlivable city. So what are we [Coloradans] doing? Not a damn thing different than they did in LA.

—Dick Lamm, former Governor of Colorado about Colorado's failure to pass growth management legislation. [1]

INTRODUCTION

The issue of guiding growth is very often considered the most important livability concern. Growth can create opportunity, but it also can cause people concern about the sustained livability of their communities. Mismanaged growth erodes places for community life and pulls the economic and social rug out from under older downtowns and neighborhoods. Some critics argue that sprawl is a no-win situation: trapping low-income and minority families in inner-cities while creating a not-so-good-life in the traffic-ridden suburbs. Cities like Phoenix have doubled in size between 1970 and 1990 and even environmentally conscious Denver has increased 77 percent since 1973, encompassing more than 550 sq mi. For this reason, the research team has included the issue of guiding growth as a separate chapter.

Overview of Community Strategies

In a recent front page article in the *Wall Street Journal*, Portland, Oregon, was praised for its regional approach to land use ("Portland Shows Nation's City Planners How to Guide Growth," December 26, 1995). In the 1970s, Portland implemented an ambitious program that combined the establishment of an urban growth boundary with strategies to focus gowth in downtown and encourage transit use (see Case Study 4-1). This initiative is considered integral to the economic success of the Portland region, its vital transit system, and high quality of life.

Communities that have chosen to take part in shaping their own growth have used a variety of strategies to do so. Portland's are typical: encouraging higher densities; growing upward rather than outward; containing growth by prohibiting or limiting development outside of established boundaries; and developing pedestrian-oriented residential and commercial neighborhoods.

While they are still the exception rather than the rule, many communities have instituted detailed plans to direct and control growth. These plans—which are usually enforced through zoning ordinances—direct growth and establish specific land uses in designated areas. Emphasis is placed on developing mixes of uses, rather than exclusionary single-purpose uses that generate more automobile trips. This kind of planning can only be implemented with foresight and is often difficult to initiate. Many cities have tried to adopt such plans, but have been

derailed by various interest groups and community pressures.

Increasingly more common are situations where communities prepare specific plans for large tracts of land, such as redevelopment parcels, within existing community boundaries. These plans are less threatening to communities when they are prepared with extensive community input. In addition, these plans actually help to encourage development because projects that comply with guidelines and regulations can proceed without delays, and developers are assured that neighboring projects will reinforce, not detract, from their own projects. By virtue of their specific regulations, these plans also offer opportunities to shape densities within areas and help make an area more pedestrian and transit friendly.

There is, today, strong interest in developing new models of suburbs that feature "neotraditional" communities—sometimes called "transit-oriented communities"—which re-create neighborhood development patterns more typical of the early part of this century. These design improvements often include grids of through streets, rather than curving cul de sacs; smaller lots with garages off rear alleys; sidewalks and front porches. Because only a few of these communities have been constructed, and these are located in exurban areas, their impact has probably been more on reshaping the orientation of planning and design professions than on shaping real growth.

Figure 9-1. Sprawling development in San Bernardino, CA. (Credit: Project for Public Spaces, Inc.).

Role of Transit

A major goal of guiding growth is to encourage the use of public transit. As Portland illustrates, the investment in transit helps achieve the goal of reducing sprawl and encouraging the development of mixed-use centers. Transit can play a leading role, however, simply by initiating community discussions about growth and livability. A number of different transit strategies can be pursued.

Transit-oriented development (TOD) (also called "pedestrian pockets" or "transit villages") is the term commonly used to express new development constructed around transit facilities. These facilities act as focal points for a community and are generally accompanied by higher densities of land use, with an emphasis on walking. The car becomes an option rather than a necessity. Most of the discussion about TODs has been in the western and southern cities and in suburban areas; eastern cities, which grew up in the 1940s, evolved a kind of natural TOD. *Davis Square in Somerville, Massachusetts*, did not have a subway stop until a decade ago, but it was originally developed as a tight, urban neighborhood and the station had an immediate impact on the area. *The Green Line Initiative in Chicago* and *Wellston Station in St. Louis* are examples of reintroducing TOD in an area where it existed historically, but was essentially obliterated by massive urban deterioration and urban renewal. *Fruitvale in Oakland, California*, is also applying these principles to an older area, focusing on a parking lot adjacent to a rapid transit station built in the 1970s.

Transit service reorganization is another method used to support growth concerns, often as part of a more comprehensive strategy. *GO Boulder in Colorado* is a program that includes special passes for buses and shuttles, as well as a variety of transportation management programs—all intended to reduce the use of the automobile and support community environmental goals. In *Seattle, LINC* is part of a broad community effort to create "urban villages" as part of a new regional strategy to direct growth; *Aspen's Shuttle* is also part of a broader development strategy for the community. *Corpus Christi's* transit program involves creation of bus transfer centers downtown and in neighborhoods to create strong centers of activity. *Tucson* has a similar program, for which the *Tohono Tadai Transit Center* near Tucson Mall is an important component.

Finally, new rail systems, have been used to encourage growth. In once car-oriented cities like Washington, DC; San Francisco, CA; Portland, OR; and San Diego, CA; light and heavy rail systems have begun to have a major impact on the shape and growth of the community. One example—Arlington, Virginia, a suburb of Washington, DC—is presented here. Unfortunately, such systems can be controversial. In Seattle, the light rail system was turned down by voters, in part because it would not serve many

communities: *LINC* is the alternative approach now being pursued.

ENDNOTE

1. *Wall Street Journal* (December 26, 1995) p.1.

EXAMPLE

Arlington County's Rosslyn-Ballston Metrorail Corridor Using Transit to Shape Growth and Create Community

> *Arlington had the vision to understand the enviable position it occupied in the Washington metropolitan region and then acted decisively to secure that position for future generations. The county took full advantage of the significant transit investment and planned for growth before it happened and then, when the rail system was completed and the market came of age, it was able to steer growth in the direction of the plan.*
>
> *—Robert Buchanan, Ballston Developer*

Arlington County, in Northern Virginia, is a densely developed inner-ring suburb in the Washington, DC, area. Occupying about 26 sq mi and located across the Potomac River from Washington, the county was largely built in the early part of the 1900s as a bedroom community for federal workers in downtown Washington. Since World War II, the county experienced almost 30 years of steady office growth, fueled first by the growth of federal agencies and more recently by the arrival of private firms doing business, directly or indirectly, with the government.

That success was blurred, however, by what came to be perceived as the darker side of growth. This is exemplified by the county's experience with Rosslyn, the focus of the first spurt of post-war redevelopment, whose transformation from a tawdry warehouse district into a high-density urban office center became the subject of much criticism. The absence of new residential construction discouraged retail and restaurant development, causing the area to become an "urban desert" at night. Also, a lack of open spaces and street-level stores, combined with the uncoordinated development of pedestrian and vehicular circulation systems, added to Rosslyn's rather unappealing image. Finally, speculation that neighborhoods surrounding Rosslyn would themselves become targets for high-density development led to their deterioration.

Toward the end of the 1960s, Rosslyn became a symbol of what Arlington residents did not want to see happen in the rest of the county. These attitudes were fostered by the emergence of a broader phenomenon—public questioning in Arlington County and elsewhere of the deleterious effects of new growth on the environment, the quality of life, and the viability of established neighborhoods. By the early seventies, it could be no longer assumed that county residents agreed—as they generally had in the 1950s and 1960s—that growth was a desirable end in itself. In this climate of opinion, it was clear that further redevelopment of the Rosslyn-Ballston corridor, especially of the areas around Metrorail transit stations, would require a new approach.

Well before Metro construction began, the county, anticipating both positive and negative economic and environmental impacts, began a process of sector planning for station areas to take maximum advantage of opportunities that the system offered and to mitigate its undesirable effects. In general, the sector planning process involved a clear commitment to (1) accommodate growth stimulated by the transit stations and a corresponding commitment to contain development within designated transit impact zones, (2) avoid undesirable spillover effects beyond these zones, and (3) preclude the kinds of urban design shortcomings evident in Rosslyn's redevelopment. Sector plans would encourage mixed-use development, focus on good architecture and urban design, reinforce the unique character of each station area, and clearly demarcate the high-density transit zones from surrounding low-density residential areas. Each of the five stations was to serve a unique function and have a well-defined identity: Rosslyn as a major business and employment center; Court House as a government and administrative center; Clarendon as an urban village; Virginia Square as the focus for cultural, recreational, and educational activities; and Ballston as a new downtown in central Arlington.

The planning effort for the five stations in the corridor involved extensive public participation. It produced detailed sector plans for each affected station area, governed by the following common principles:

- Highest densities would be concentrated within walking distance of Metro stations, with building heights, densities and uses "tapered down" to existing single-family residential neighborhoods. Within the Metro core areas, a mixture of office, hotel, retail, and high-rise residential development would be encouraged. Residential development would be a particularly high priority in all station areas. This mixed-use approach, coupled with common design criteria aimed at ensuring a

quality pedestrian environment, would ensure an active, vibrant core area.
- Existing single-family residences and most residential communities would be preserved. Neighborhood conservation plans calling for the establishment of buffer zones of relatively low-density development would be implemented.
- Commercial revitalization would come about primarily as a function of redevelopment of the core area and associated increases in residential land-use density.
- Each station would feature integral pedestrian circulation systems connecting residential areas, commercial facilities, and Metro entrances, and a streetscape program focused on pedestrian amenities and landscaping.
- Adequate open space in the station areas in general, and the core areas in particular, would be obtained through a combination of county acquisitions and the site plan approval process.

As a result of these policies, the overwhelming state of the county's commercial and residential development between 1970 and 1994 has taken place in these corridors within 1/2 mi of a Metrorail station. This development includes 14,700 residential units, 21 million sq ft of office space, more than 6,000 new hotel rooms, and 2.2 million sq ft of service and destination retail. These designated transit hubs have absorbed 94 percent of the county's new office development and more than 90 percent of its hotel and retail development. This concentration of intense mixed-use development has yielded a much higher use of transit in this corridor than in other inner-suburb locations in the greater Washington region. As a result of the development pattern, several Metrorail stations in this corridor have the highest daily boarding of any stations outside the district central-office core. In 1995, 77,400 daily boardings were recorded at corridor stations (more than 150,000 trips per day).

Nearly 19 percent of Arlington residents use public transportation on a daily basis and 42 percent rely on transit at least once a week. In addition, Ballston is a particularly attractive place to live for people with disabilities as they can easily access all of the shops in the area, live in an accessible area, and use public transit.

Today, the challenge for Arlington County is to upgrade the pedestrian environments in these high-density development zones, to provide better connectivity to the transit stations and to adjacent neighborhoods, and to plan for still greater variety in the land-use mix of corridor centers. These improvements will capitalize on the area's high densities to make it even more livable.

CASE STUDIES

Case studies show how three different communities in the west and south are incorporating transit as a key ingredient in a community growth and development plan:

Case Study 9-1: Boulder, CO: GO Boulder
New Transit Services Key to Meeting Local Environmental Goals
Case Study 9-2: Seattle, WA: Local Initiative for Neighborhood Circulation (LINC)
Neighborhood Transit System Channeling Community Growth
Case Study 9-3: Corpus Christi, TX: Staples Street Bus Transfer Station and the Downtown Trolley
Transit Reorganization Sets Stage for Downtown and Neighborhood Renewal

Case Study 9-1
Boulder, CO: GO Boulder
New Transit Services Key to Meeting Local Environmental Goals

Together we can move transportation forward, one idea at a time.

—GO Boulder Brochure

Designing transportation alternatives to match people's needs, properly pricing the use of the auto, and ensuring growth pays its own way for transportation needs—these are the policies our community has chosen to improve mobility and preserve Boulder's quality of life. GO Boulder's mission is to help us successfully implement these policies.

—Steve Pomerance, City Councilmember

SUMMARY

Boulder, home of the University of Colorado and gateway to Colorado's Rocky Mountains National Park, enjoys a well-deserved reputation as one of America's most livable communities. The city boasts the largest municipally owned open-space system in the nation, with more than 100 mi of paths and trails and 80 mi of designated bikeways. This includes an 11-mi, grade-separated path traversing the city along Boulder Creek, which has become one of the best known examples of an imaginative recreational use of an urban waterway. Boulder's Pearl Street Mall, unlike many of its contemporaries built in the mid-1970s, has remained a vibrant, commercially successful pedestrian precinct.

A threat to Boulder's livability comes from continued growth and its associated traffic, the result of a job-

housing imbalance that has brought hordes of new commuters into the Boulder Valley. The city's response has been to mount a series of actions intended to arrest the slide toward gridlock. Boulder's strategy can be held out as a model of how a community can preserve its livability through alternative transportation.

PLANNING PROCESS

Boulder has a long-standing tradition of growth management. In the mid-1970s, a citizen-led initiative imposed an annual 2 percent cap on residential growth, which the City Council subsequently made progressively more stringent. While the cap was successful in limiting growth within the city boundaries, it did not prevent leapfrog development in the surrounding communities, which grew at a rapid pace throughout the 1980s and during the early 1990s.

In the meantime, Boulder continued to offer a welcoming and attractive environment for clean, high-tech industry, which led to a robust expansion of employment inside the city. The combination of these trends created a serious job-housing imbalance that is the source of the present traffic problem. Boulder Valley has become a regional job center with a net inflow of commuter vehicles during the day. Of the total 510,000 daily vehicle trips with destinations in the Boulder Valley, 140,000—close to 30 percent—originate outside the valley. Regional land use-transportation forecasts estimate that traffic in the Boulder Valley will increase from 2.5 million to 4 million daily vehicle miles of travel by the year 2020. With no plans for construction of new roads in the foreseeable future, and with CBD parking capacity limited, Boulder's citizens have become justifiably concerned about the effects of these trends on the quality of life in their community.

Boulder's response has been to take an active stance. In 1989, the Boulder City Council adopted a Transportation Master Plan (TMP) with a goal of shifting 15 percent of existing single-occupant vehicle (SOV) trips to other modes by 2010. To help implement this goal, the council created GO Boulder, an "alternative modes" division within the city administration. Boulder is the only municipality in the nation to have created an operating unit devoted specifically to promoting transportation alternatives.

The TMP had an extensive public outreach process. More than 70 stakeholder groups and organizations were identified and invited to provide input. These included the Sierra Club, PLAN Boulder County, the Environmental Defense Fund, the Chamber of Commerce, the League of Women Voters and various neighborhood associations.

In November 1994, a city-sponsored initiative proposed a wide-ranging program of transit service improvements, including more frequent service on local and regional routes, a transit pass offering unlimited access to bus service to all 80,000 downtown Boulder employees, and improved bicycle and pedestrian facilities. The $12.2 million/year Transit Initiative was to be funded through a combination of local taxes. The citywide referendum failed by a substantial margin, the victim of a general anti-tax sentiment and a belief that the measure was too narrowly focused on transit improvements.

STRATEGY

Following the failed referendum, the city proceeded to mount an aggressive multi-pronged strategy using its regularly appropriated budget. The strategy has several elements as follows.

The ECO Pass. The main instrument of the campaign is the ECO Pass, an unlimited-use annual transit pass for use on the HOP Shuttle, sold through employers. The pass is offered at a deep discount: $35–$65/year, depending on the level of transit. Participating employers, however, must purchase the pass for all their employees. The pass is provided to all university students for $12.00 per semester through an automatic charge to their tuition bill. ECO pass is also marketed to high school students, residents of suburban housing developments, and urban neighborhoods.

The "HOP" A Community Access Shuttle. To supplement the Regional Transit District (RTD) line haul and local service, the city of Boulder launched a local shuttle service in October 1994. The objective of the service is to encourage residents, employees, students and visitors to use public transportation instead of their cars

Figure 9-2. Case Study 9-1. HOP Shuttle, Boulder, CO, functions as a local shuttle service to encourage residents, area employees, students, and visitors to leave their cars at home. One cannot "hop" on, however, without first purchasing an ECO pass, which is an unlimited-use annual transit pass. (Credit: GO Boulder).

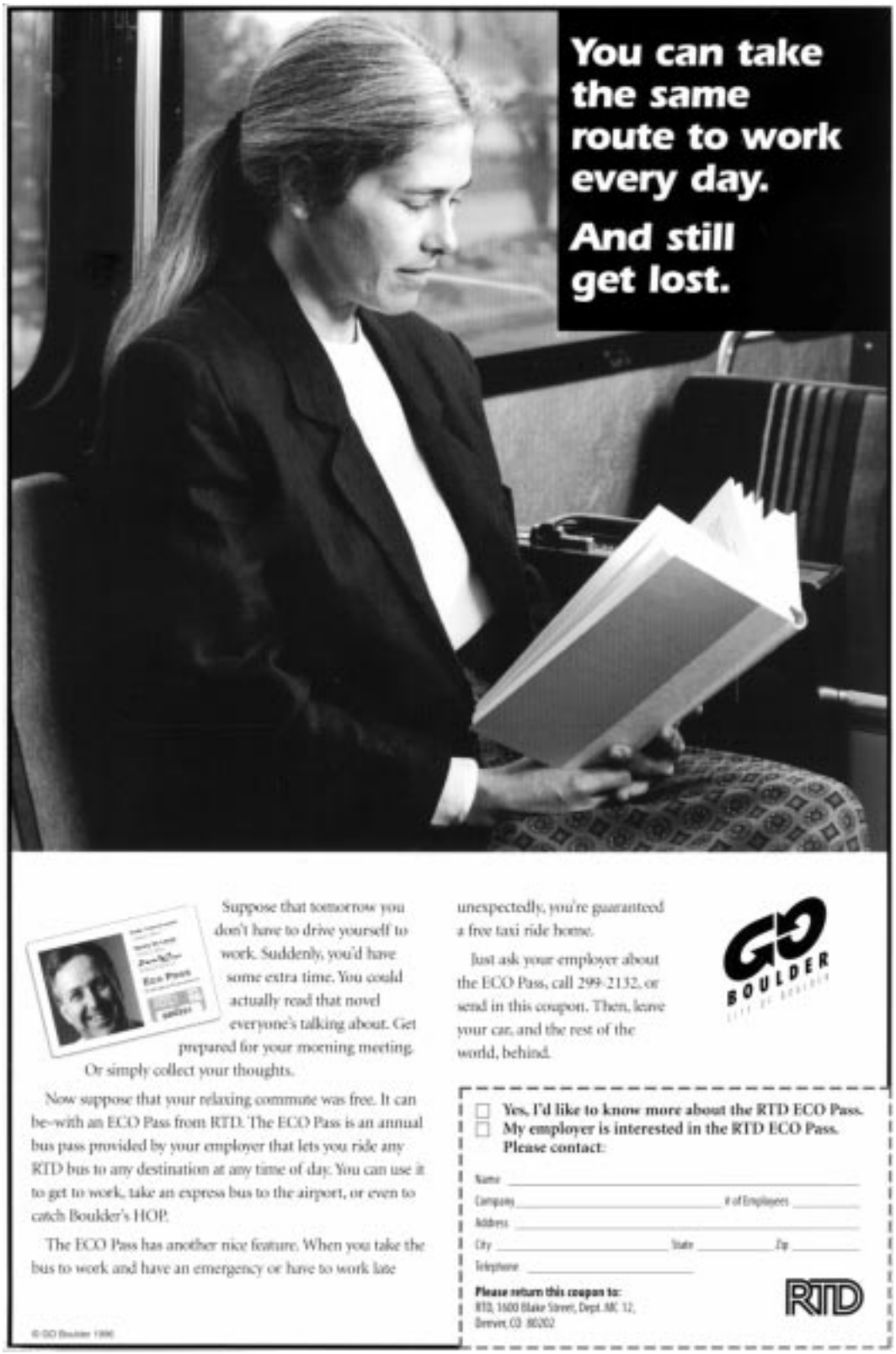


Figure 9-3. Case Study 9-1. GO Boulder's promotional materials and posters make their point in a clever and eye-catching manner. (Credit: GO Boulder).

during the day for trips such as shopping, lunch, errands and meetings, with the ultimate goal of persuading people to leave their cars at home in the first place. The HOP shuttle connects Boulder's three major activity centers: the CBD, the University of Colorado's main campus, and the Crossroads Mall, a major regional shopping center. The HOP operates weekdays from 7 a.m. to 7 p.m. on 10-min headways, using eight propane-fueled, 30-ft buses. Recently, nighttime service during the academic year was added at the request of the University. One cannot hop a HOP shuttle without having purchased an ECO Pass—no fares are collected on the bus. HOP's initial 6-month ridership goal of 2,000 daily riders was exceeded in the first 6 weeks. The shuttle carries 3,000–4,000 riders per day. The shuttle service is operated by a private contractor at an annual cost of $700,000, which is covered through ECO Pass sales, with the city contributing the rest from general operating funds.

Bicycle Facilitation. With more than 80 mi of designated paths and bike lanes, Boulder is a bicycle-friendly city par excellence. Bicycles are designated as "vehicles" and allowed to use vehicular roadways as well as dedicated bicycle paths and sidewalks. In the wintertime, snow clearance on bikeways is given the same priority as on city streets. After a heavy snow fall, bikeways are said to be often open to traffic before the city's roadways. A large student population and an aggressive marketing program contribute to making Boulder the second most bike-intensive community in the nation, with 12 percent of all trips made on bike (Davis, California, carries the top honors, with 14 percent).

Ridesharing. Carpools and vanpools constitute 24 percent of Boulder's total daily person miles and are actively promoted by the city in cooperation with the Denver Council of Governments. GO Boulder was the first city agency in the nation to receive federal funding to buy vanpool vehicles used to support employee transportation programs.

Residential Parking Permit Program. In 1986, in response to an increase in nonresident spillover parking in residential neighborhoods, the city developed a residential parking permit (RPP) program. Residents living within the designated zone and businesses located within the zone are exempt from the on-street parking restrictions after purchasing and displaying RPP permits in their vehicles. Everyone else is restricted to 2-hour parking between 9 a.m. and 5 p.m. on weekdays. Two RPP zones have been established.

Congestion Relief. By far the most ambitious and potentially controversial initiative is Boulder's congestion pricing project or, as Boulder's officials prefer to call it, "congestion relief" project. This project explores the technical, institutional, and political feasibility of using market-based measures to discourage automobile use among Boulder's residents, students, and workers. As part of its congestion relief initiative, the city will be exploring various strategies, ranging from voluntary employer-based transportation demand management (TDM) programs to regulatory, ordinance-based programs and pricing measures such as "smog fees," congestion tolls, pricing of off-street parking and taxes on private parking facilities. The congestion relief project, according to city officials, will carefully consider these issues with the help of an active public outreach effort. The intent is to remain in step with public opinion and to shape a strategy that Boulder's citizens will accept as reasonable and support politically.

The city of Boulder is currently updating its TMP. The 1995 TMP Update will be considered by the planning board and the transportation advisory board, culminating with a city council review and adoption in spring 1996. The transit portion of the plan reflects feedback from the failed public initiative. As part of this plan, the city is considering a new goal of reducing SOV use to 25 percent and increasing ridesharing to 29 percent, transit use to 7 percent, and bicycle use to 15 percent.

FUNDING

GO Boulder's operational funding is approximately $1.2 million per year. The budget is divided among transit, bicycle programs (20 percent), pedestrian improvements and marketing/public information (25 percent for each). Capital funding comes from a special capital budget. All of GO Boulder's funding and most capital transportation funding comes from sales tax; a small portion of capital funding comes from a development excise tax.

The city devotes 26 percent of its $4 million per year capital transportation budget to the bicycle/pedestrian capital program. The congestion relief project is funded with a $492,000 grant under the Federal Congestion Pricing Pilot Program.

OVERCOMING OBSTACLES

The biggest obstacle to overcome was the failure of the Transit Initiative. Through subsequent surveys and focus groups city officials attempted to gain an understanding of why the initiative had failed and what the community would like to see in the future. It was concluded that the initiative did not clearly communicate the benefits of the additional transit ser-

vices, which were perceived by the public as "just more big diesel buses running around empty." The fact that there were other competing tax increases on the ballot did not help either.

IMPACT AND ASSESSMENT

The city's aggressive promotion of alternative transportation has paid off. The marketing campaign has been highly successful: a total of 15,000 employees and 25,000 students currently carry the ECO Pass. Since the introduction of the ECO Pass in 1989, transit ridership has increased by 161 percent. Since the establishment of the GO Boulder program in 1990, SOV trips have decreased, while transit and bicycle use has increased. Boulder's current modal split is one that most communities would look on with envy:

Mode	*1990* (%)*	*1994* (%)*	*Goal (%)*
Single-Occupant Vehicles	47	44	25
Multi-Occupant Vehicles	24	22	29
Pedestrians	17	19	24
Bicycles	10	11	15
Transit	2	4	7

* Transportation Master Plan Update 2020, approved June 19, 1996, updated July 16, 1996.

CONCLUSIONS

GO Boulder demonstrates the benefits of addressing community livability and environmental goals together with transportation facilities and services. Programs to reduce use of autos and increase use of transit, bicycles, and walking have worked because of the comprehensive approach taken. In addition, new transit services are tailored to community needs and the ECO Pass makes transit usage convenient and inexpensive. These programs appear to be an effective base on which to build even greater transit ridership increases.

Case Study 9-2
Seattle, WA: Local Initiative for Neighborhood Circulation (LINC)
Neighborhood Transit System Channeling Community Growth

If we are really serious about cutting down on car trips, there needs to be some user-friendly, convenient type of service to get people around their neighborhoods and connect them with the regional service.
—Dan Williams, Metro transit spokesman [1]

SUMMARY

For 6 months in 1995, residents of Ballard, a neighborhood in Seattle, participated in the trial run of a new, more flexible local transit system. They were able to flag down a free minibus only minutes from their homes that circulated frequently around the community and linked them to the regional bus system. The shuttle dropped off passengers at their doors on the return trip. By moving people more efficiently around their neighborhoods, the city of Seattle and King County/Metro, the Seattle transit authority, hoped to increase transit ridership and discourage short, frequent, SOV trips. In addition, LINC (Local Initiative for Neighborhood Circulation) was the first step in a new, far-reaching transportation to replace Seattle's current radial-route system, focused on downtown Seattle, with a system that links transit hubs in neighborhood centers throughout the city, including downtown. The new three-tier transportation plan, also called LINC, was developed to reinforce Mayor Norm Rice's "urban village" scheme by meeting the specific transportation needs of each community.

The Seattle Engineering Department (SED), with assistance from the King County/Metro, developed the 6-month pilot project in Ballard to test the feasibility of this local transit service concept. While the experiment was necessarily limited in scope and did not entirely fit the needs of the community, it has set the stage for both a new approach to transit and transit-centered growth.

PLANNING PROCESS

The Seattle Transportation Plan. In 1991, the Washington state legislature passed a Growth Management Act requiring all municipalities to develop 20-year plans to project their future growth, define future land-use patterns and develop local and regional transportation alternatives to accommodate the growth. In Seattle, as part of its Comprehensive Plan, Mayor Rice's administration introduced the urban village concept as a means of channeling growth into specific neighborhoods, both new and existing, thereby controlling future development. These urban villages would become nodes of activity that could also serve as transit centers throughout the city. The transportation component of the Seattle Comprehensive Plan was developed to reinforce the urban village idea by providing a network of limited-stop arterial buses throughout the Seattle area, connecting transit hubs and taking people where they need to go, instead of largely providing radial service to and from the center city.

Figures 9-4 and 9-5. Case Study 9-2. The Local Initiative for Neighborhood Circulation (LINC) shuttle provides intra-neighborhood transportation service on smaller, more community-friendly, vehicles. The local transit agency developed refrigerator magnets (Figure 9-5) to market the service to local residents. (Credit: LINC).

The design engineer who developed this pilot project, Hiro Takahashi of the SED said he was motivated by the sight of "empty and half-empty buses running around." He had stopped using the bus system himself because he found it inconvenient.

Planners used the pilot study to do the following:

- Learn more about how a local bus service, using small shuttles with frequent stops, would actually work;
- Gain public input and gauge community acceptance of alternative transit modes;
- Answer technical and operational questions associated with the development of new types of services;
- Identify institutional barriers associated with the development of new types of services; and
- Determine long-term costs of the LINC program.

The SED, with assistance from King County/Metro, developed a temporary, 6-month planning study to test the local transit service using Metro staff and equipment. Ballard, a waterfront community in northwest Seattle, was selected for the demonstration project because of the significant number of people who use mass transit: many residents commute to downtown Seattle by express bus and students frequently travel by bus to the nearby university. Approximately 1 sq mi in area, the neighborhood has a diverse, primarily middle-income population of about 10,000. The pilot program, which ran from May 6 to October 31, 1995, did not replace or decrease any of the existing transit services in Ballard.

An eight-member community advisory committee of Ballard residents participated in the planning process for LINC. Three ½-day planning workshops were held between October 1994 and January 1995 at which the committee helped to select the routes, made recommendations on how local transit use in the community could be increased and provided input on the overall design of the pilot program. Upon completion of the project, the committee helped to evaluate its effectiveness.

The community was also involved in designing the logo for the LINC vans. A "LINC Bus Design Contest" was conducted in local schools in Ballard. The colorful, eye-catching design submitted by two high school students was selected. For their efforts, the students received a $200 savings bond from a local bank as well as an award from Mayor Rice.

STRATEGY

The underlying concept for local LINC service is that people only need to walk a block or two to a street where they can catch a passing shuttle. Passengers do not have to stand at designated bus stops to be picked up; they simply wave down the bus and it pulls over to the curb. Commuters on their way home can get off the bus from downtown and grab a shuttle home almost like they would a taxi. Thus, LINC is intended to provide service so frequent that people can travel around their community without consulting bus schedules. This custom-tailored, local transit service is intended to provide the "missing link" in the regional transportation system by serving the needs of the commuters and those making

short trips within a neighborhood and by making regional bus and rail services more accessible.

For the pilot study, the LINC service consisted of a fleet of six 10-passenger vans operating on four different routes. The buses operated between 9 a.m. and 7 p.m., Monday through Saturday, and between 9 a.m. and 5 p.m. on Sundays and holidays. The LINC service area covered approximately 2 sq mi. The routes were selected to allow easy transfer to regular Metro routes and to serve the business district of Ballard as well as local parks and civic institutions. The only posted stop was at Bergen Place in the business district, where all routes terminated.

Two types of neighborhood service were tested: a fixed-route circulator and a flexible routing service. The fixed routes operated vans every 30 min. The flexible routing service dropped passengers anywhere within a service area on their trips from the business district.

While SED was developing the LINC pilot program, Metro was investigating the design of the transit centers that will serve as connecting points between the local circulators and higher capacity transit lines. These transit hubs are intended to become activity nodes within neighborhood commercial centers.

FUNDING

The city of Seattle received a $500,000 Federal Transit Administration grant to pay Metro (the transit authority) for the project on a fee-for-service-hour basis. The funding was provided through the Central Puget Sound Transportation Account.

The LINC service was free during the 6-month trial period. Start-up costs, from June 1994 through April 1995, amounted to $70,619 and the operating costs for the 6-month demonstration project came to a total of $538,134. This resulted in an average cost per passenger of $11.30, much higher than Metro's latest estimate for regular bus service of $2.67 per passenger per trip in 1993.

OVERCOMING OBSTACLES

Christopher Sims, the Project Manager of the LINC demonstration program, and Harold Lewis, his counterpart at Metro, both regretted that more time could not be spent with the community while developing the system. They emphasized the need for more community involvement in the future and the importance of educating the public about a new system such as this. The community planning phase was inadequate, not only in providing the information needed, but also in giving the community a sense of ownership of the system. Marketing the service to the public in advance is critical in building acceptance for a new transit service and this will be increased in the future.

Another difficulty was designing a system that could reach the entire community. Christopher Sims reported that the waterfront and marinas were not on the routes and that residents and businesses in this area expressed displeasure in being excluded. The LINC's circular routes, although standard in many communities, did not correspond to the essentially linear layout of the Ballard community.

One of the major obstacles encountered by SED was simply running a transit system, because it is an engineering department not a transit provider. Although the drivers and equipment were provided by Metro, SED engineers and staff lacked the experience, flexibility, and training to operate a system efficiently. In future demonstration projects, an interagency team will be formed from SED and Metro staff dedicated to running the project.

IMPACT AND ASSESSMENT

The very fact that the LINC demonstration project tested only one piece of the proposed three-tier program, without changes to the existing transit system, necessarily limited the scope of the experiment and the information that could be gained from it. Regional bus schedules were not changed to coincide with LINC shuttles; thus the ability to transfer smoothly from a local to a regional transit system was limited. The inter-community component is not yet in place and the transit centers where residents will transfer to regional buses are not yet built. Therefore, the pilot program could only be evaluated as a test of a local service and not of the entire LINC concept.

According to surveys conducted in September 1995, and published in Metro's evaluation report in January, 1996, response to the LINC pilot project within the Ballard community was very positive. Of the 718 passengers questioned, 78 percent were very satisfied with LINC service and 88 percent were very satisfied with the comfort of the vans. Passenger counts, tabulated by means of random and non-random sampling techniques, showed that the average daily number of weekday passengers for all four LINC routes were 381 passengers in June and 277 in September. The 27 percent drop may have been due to the start of public school. The average weekday passengers per hour for all four routes was 6.3 passengers/hour in June and 4.6 in September. The average weekday passenger per hour was slightly higher for the fixed routes. LINC service appeared to have no significant impact on regular Metro ridership; ridership on the six regular routes remained constant between summer 1994 and summer 1995.

Surveys revealed that the majority (65 percent) of LINC riders were female and a large number (25 percent) were 65 years old or older. Fifty-seven percent of them did not work or volunteer outside of the home. The passengers took an average of 6.01 trips a week on LINC, but they said 44 percent of these trips would have been walking trips had LINC not been there. Only 6 percent of the trips would have been "drive alone," thus LINC did not appear to replace SOVs as a means of transportation. In fact, for 72 percent of the trips, cars were not available. LINC appeared to serve primarily a non-working population without cars rather than commuters: only 3 percent of destinations mentioned were work related, while 71 percent were on their way home. The "flagging-down" option was not necessarily preferred: only 25 percent of the rides started by waving down a LINC van. There was also no preference for one type of route over another.

Robert Mattson, the manager of the city's neighborhood service center in Ballard, believed that many people liked using the minibuses because they were free. In addition, they were perceived as being more comfortable and more user-friendly than the typical bus, especially since they were air-conditioned. Mr. Mattson also believes, that the system could have been integrated better into the community. He observed that the LINC system was not designed to meet a specific demand; Ballard residents and business owners did not seek the service, nor was the present bus system perceived as being inadequate. In addition, the nominal effort at citizen participation was not enough to build a mandate for the LINC system in the community.

According to Mr. Mattson, several flaws, inherent in a flexible neighborhood circulator, were mentioned by the users. Because the outbound LINC shuttles had no specific stops and could be flagged down, older people had no convenient and comfortable place to sit and wait (and the vans were not always on schedule). Many residents were also slow to learn how to flag down the minibus. Other complaints were due to the limited scope of the experiment. Since the normal local bus service was not suspended during the duration of the test, residents of Ballard often found the redundancy confusing and inefficient. Many residents believed the familiar bus service to be more convenient than the LINC shuttles on the inbound trips, although LINC was preferred on outbound trips because it provided door-to-door service. Because the transit center was not yet in place, LINC shuttle buses pulled into an existing parking lot to meet the regional buses, thereby blocking parking spaces and creating more congestion.

Metro has determined that three levels of transit would be unaffordable, but it is still planning some LINC-type, "level-3" services. Metro is working with the city to provide permanent service (not just demonstration projects) in western Seattle-King County. This service is anticipated sometime in 1997. This will consist of modifying existing bus service rather than overlaying new service as was done in Ballard. From the experience in Ballard, Metro has learned to allot more time for working with the community and to involve county and city planning offices.

CONCLUSIONS

Although ridership was not high and many feel that LINC was a failure because it did not get commuters out of their cars in the course of its 6-month trial period, two key lessons were learned. First, a new shuttle system should be integrated with other intercommunity transit services to give passengers the ability to transfer smoothly to the larger web of transit service. Second, more time and resources are necessary to develop and market the system to the community.

In March 1995, the Regional Transit Authority's referendum on a $6.7 billion regional rail transit system was defeated. Opponents criticized the plan for proposing to spend the bulk of the funds on regional rail systems focused on downtown Seattle without improving local service. The LINC concept places more emphasis on transit centers, thus creating a network of transit routes connecting the city's neighborhoods, and provides a local transit service designed to address the livability needs of specific communities.

ENDNOTE

1. *Seattle Post-Intelligencer* (May 5, 1995).

Case Study 9-3
Corpus Christi, TX: Staples Street Bus Transfer Station and the Downtown Trolley
Transit Reorganization Sets Stage for Downtown and Neighborhood Renewal

The Regional Transportation Authority (RTA) has had a need to develop a number of facilities in major public transit areas. The agency determined that the greatest community benefit would be realized if these transit projects could be used to stimulate additional redevelopment in the areas around the transit improvement. This has required that different entities both public and private, work together to achieve this goal.

—Steve Ortmann, former Chief Development Officer, Regional Transportation Authority, Corpus Christi, TX

SUMMARY

In 1995, the Corpus Christi Regional Transportation Authority (RTA) opened a new bus transfer station on North Staples Street, close to downtown and across from the new City Hall, to serve as the major hub of a new system of transit centers around the city. The new station replaced a string of bus stops along Staples Street, providing a more convenient and safer place to change buses. But this station was also intended to create a node of activity that would attract new business to a blighted neighborhood and help support the revitalization of the downtown. Corpus Christi, Texas, like many mid-sized cities, has seen the vitality and economic base of its downtown drained away by massive retail and residential development in the suburbs, leaving corporate and public institutions as the only presence in what was once the heart of the city.

The Staples Street Station is part of an RTA strategy to develop transit centers that can help improve service, while acting as catalysts for growth and development. Other transit centers are currently being planned.

PLANNING PROCESS

Corpus Christi is located on the Gulf of Mexico, about 200 mi southwest of Houston. The population of the city itself is 275,000, while the service area for the RTA is about 300,000. About 5 percent of the city's total population is transit dependent. Since the retail and commercial activity has been dispersed to the suburbs, primarily south of the city along a major commercial strip, Corpus Christi has evolved into a city without centers or corridors, making it more difficult for public transit to serve its customers efficiently. Therefore, the RTA devised a transit center-based approach to supplement or even replace the bus stops along corridors. This new strategy places transit centers where bus routes come together, thus potentially creating new nodes of retail or other activity, as well as pleasant places to wait that are safer and more comfortable than a typical bus stop. By rescheduling the bus system, the RTA has been able to bring as many as 14 routes together (as at the Staples Street Station, the first transit center constructed), thus assembling many more transit users together in one spot, necessitating a larger facility than a simple bus stop.

When constructing new facilities and upgrading existing ones, the RTA has tried to build a sense of pride and ownership among transit users for their facilities through architectural design and public art that express the character of the community. In addition, the RTA has realized that by making the surrounding community safer and more pedestrian friendly, the overall experience of transit users is greatly enhanced. In planning its transit center-based system, the RTA not only developed design concepts for the new facilities but proposed other public and private improvements that could make an even greater impact on the surrounding neighborhoods.

Community involvement, both in terms of developing the design as well as in actual participation in the project, was deemed critical to the Staples Street Station's success. As Steve Ortmann said, "It was important for the community to sense that this was their project rather than a project that was imposed upon the community." Transit users, local businesses, and employees at nearby public agencies were surveyed for their suggestions for the design of the new facility. A series of meetings was held with businesses and city staff—the bus station's neighbors—to determine key issues that would enhance the business environment around the station. In addition, numerous citywide public hearings were held to discuss the route and schedule changes necessitated by moving to a transit-based system. The public's comments and ideas have been incorporated in many of the changes as well as in the design of the bus station. It was also decided that a participatory public art project would be a strong mechanism for ensuring participation as well as ownership in the project (see Chapter 4).

STRATEGY

Design Strategy. The station fronts squarely onto Staples Street. It has a strong sidewalk "edge" and resembles a Spanish-style civic building with its tall clock tower and arched portals. The colorful tiles produced by the public art project break up the expanse of stucco at the entry portal and at the bases of the columns. High metal roofs extend back, supported on steel columns, providing the feel of a 19th century train-shed structure. A central open space surrounded by trees in tiled planters is a focal point, intended for a future fountain or vending area. A small building at the rear has a restroom and small eating area for bus drivers.

The station can accommodate as many as 5,000 people a day, with benches and shelter for all. Phones, waste receptacles, and lighting are more than adequate, but the station as yet provides no restroom facilities or enclosed waiting area for transit users. Historic-style street lighting surrounds the building, while a replica of a historic Corpus Christi fixture, with globe luminaries, provides accent light-

Figures 9-6 through 9-8. Case Study 9-3. Once an empty parking lot, the new Staples Street Station in Corpus Christi, TX, has become both a transportation node and a place for the Corpus Christi community. Future plans include retail kiosks, a weekly "mercado" and improving the pedestrian environment and access to the center from adjacent neighborhoods. (Credit: Project for Public Spaces, Inc.).

ing. The bus station was designed with the idea that small retail uses could be accommodated on its site: the front structure can be altered slightly to enclose retail kiosks within its walls, and the open space could accommodate several vending carts. These opportunities have not been taken advantage of, although the RTA is now considering sponsoring a vendor program.

Management Strategy. The transit center system has helped to streamline some management approaches. For example, the street supervisors, who circulate in cars to monitor bus operations, have found the transfer center system to be a more efficient way to check their routes; scheduling problems, breakdowns, emergencies, and other problems encountered within the bus system can be easily and closely followed.

Consolidating bus stops also makes patrolling them easier. Corpus Christi police officers are able to patrol the Staples Street Station on a random but frequent basis. Officers do not merely cruise by in their cars, as at many transit facilities, but actually stand with the bus passengers, offering information and assistance, and discouraging the homeless from settling in or from harassing transit users.

The Downtown Trolley. Enhancements to the transportation system were also deemed an essential component of the overall project. Strengthening downtown connections to the new facility would enhance the operation of the facility and would improve access throughout the downtown. Thus, a free downtown shuttle—a replica of an old trolley—was introduced, which operates every 10 min and provides an important link to the rest of downtown.

Pedestrian Improvements. The success of the Staples Street Station has encouraged the RTA to initiate two more community-based planning efforts that are being funded by the Federal Transit Administration's Livable Communities Project. A plan is being to improve the pedestrian environment around the Staples Street Station and to link it to a nearby low income neighborhood, largely transit dependent, located on the other side of a major interstate highway. The area around another bus transit center, the Six Points Station, located in a small commercial center in a residential community, is also being targeted for improvements that will help to create a sense of place. Crosswalks are being added, traffic-calming measures are being introduced and landscaping and lighting are being enhanced in order to improve pedestrian access to the station, encourage more pedestrian use, and help revitalize the local businesses.

FUNDING

The Corpus Christi RTA and its capital improvements are funded by a 1/2 percent sales tax. In the completion of the Staples Street Station, a Federal Transit Administration grant of $800,000 was used. FTA Livable Communities funding is being used to make the pedestrian improvements to existing transit centers.

OVERCOMING OBSTACLES

The station currently handles 14 bus routes in 10 slots, including the downtown trolley. Because of the tightness of the site, the bus area is smaller than is usually required for this number of bus routes. This necessitated the rerouting and rescheduling of the entire system to be able to use the facility more efficiently, but the RTA considered this to be a sacrifice worth making in order to provide better service.

IMPACT AND ASSESSMENT

The new bus station has met the RTA's goals of providing a safer and more comfortable place to wait and it appears to have had a positive effect on ridership: the RTA counted 3,000 people per day using the many separate bus stops at Staples and Leopard Streets in 1990; whereas, in 1995, 4,000 people per day passed through the Staples Street Station. PPS conducted a survey to assess reactions to the new station and its impact on the surrounding community and made on-site observations. The following is a summary of the results.

The new bus transfer center has become almost a town square or plaza not only because of the number of people who pass through it, but also because it attracts other people who simply come there to "hang out." This added benefit serves to make the place safer and more secure. In the afternoon, when the largest number of people were observed, the bus station had a festive feeling about it, with many people socializing and meeting friends. Bus drivers who stop there to wait for their riders also appear to be well-known by the passengers and often greet them, as well as chat with their colleagues. Passengers suggested that this pleasant atmosphere could be enhanced with the simple addition of a food and beverage cart and cafes or other retail opportunities surrounding the station, as well as by the addition of some simple entertainment.

Retail business in the area surrounding the Staples Street Station has not yet improved. Vacant storefronts are numerous and the primary businesses in the area continue to be bail bond establishments and pawn shops, although some of these appear to have recently gone out of business. A convenience store, located across Staples Street and one block north of the station, is the only store in the vicinity that sells food and beverages, except for a small Mexican restaurant next door. The manager of the store said that more than 50 percent of his customers are transit riders from the bus station. Likewise, the Mexican restaurant attracts a large number of transit users.

Although there was no explicit strategy to improve the retail activity in the area of the Staples Street Station, there was the hope that a new bus station across the street from the new City Hall would have a positive influence on what was perceived to be a blighted neighborhood. Although no new retail uses have opened since the completion of the bus station, the number of people who pass through the station everyday cannot help but create a new market that surely will be tapped.

Transit users questioned at the Staples Street Station were, for the most part, very pleased with the new station and found that taking the bus was safer and more convenient than it used to be. The major complaints expressed about the facility were the inadequacy of shelter during heavy rain and wind, and the lack of restroom facilities. In addition, many transit users wait at the station as long as an hour and requested food concessions at the station.

CONCLUSIONS

The RTA of Corpus Christi has found that by making people-friendly transit improvements, it can have a larger impact on the surrounding urban area, enhancing the vitality of the urban environment and encouraging economic activity. The Staples Street Bus Station has been well-received throughout the city of Corpus Christi and has been acclaimed around the country as a ground-breaking approach to the design of transit facilities. Its success has spurred the agency to reach beyond the boundaries of building a typical bus stop to the larger goal of helping to reshape communities.

Part III

A Guide for Implementation

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CHAPTER 10

The Community-Based Process for Creating Livable Communities

Livable communities do not simply happen. They are the by-product of a coordinated and participatory transportation and community planning process where transit decisions are made in conjunction with decisions on land use and other transportation investments. The principles of livable communities can be instilled throughout the planning and project development process.
—"Planning, Developing, and Implementing Community-Sensitive Transit" (The FTA Livable Communities Initiative) [1]

As the case studies in this report clearly show, there is no single planning process that applies to all communities in which transit is seeking to support community livability goals. Every community has its own character, style of accomplishing tasks, and level of community interest. Moreover, legally mandated planning processes for transit agencies also vary according to such factors as state and local government requirements, project size and scope, and funding sources used.

Still, there are many common characteristics to the various processes used in planning and implementing the case-study projects, and it is these common characteristics that are addressed in this chapter. Specifically, the case studies demonstrate the impact of a community-driven project, where communities have been given the opportunity—not just to respond to a plan—but actively to take part in identifying issues, developing concepts, and evolving strategies in a manner that taps their own experience. In this way, they have become "owners" of projects and have retained a sustained interest and stake in future progress.

In this process, many transit agencies have formed active partnerships with community organizations. As the case studies in this report demonstrate, this approach can enhance resources—both human and financial—available to undertake projects: very often a small transit investment can leverage other substantial local contributions of time and money.

Sometimes such a process has been instituted after a previous approach failed because of community opposition. While a community-based process may not be always quicker, issues of community concern are identified early on, thus avoiding collapse of a project at the end of the planning process or at the beginning of construction, when delays become extremely costly.

OPPORTUNITIES FOR COMMUNITY INVOLVEMENT IN CURRENT TRANSIT PLANNING PROCESSES

Recent changes in federal transit planning processes and policies are very supportive of community-based processes for creating livable communities. A community-oriented planning and decision-making process for transportation projects is, indeed, mandated by law. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) is a landmark piece of legislation, which recognizes that the Interstate Highway System is nearly complete and that more emphasis needs to be placed on system preservation and efficiency rather than on new construction. ISTEA seeks to provide more local control over transportation

decisions and encourages coordination among states and metropolitan areas and among different forms of transportation (pedestrian, bicycle, and transit uses—not just roads). ISTEA also emphasizes the importance of community participation and involving key stakeholders in transportation planning including the private sector, local community groups, and other government organizations.

This approach is also completely consistent with the new Federal Highway Administration/Federal Transit Administration Interim Policy on Public Involvement. The policy, which grew out of ISTEA, calls for "promoting an active role for the public in the development of transportation plans, programs, and projects from the early stages of the planning process through detailed project development."

The responsibility for implementing ISTEA in metropolitan areas, including public involvement, falls primarily on metropolitan planning organizations (MPOs); outside of MPO boundaries, the responsibility becomes one of the state department of transportation. MPOs produce a long-range (20-year) transportation plan as well as transportation improvement programs (TIPs), which describe projects that are to be funded and implemented over a 3–5 year period. The development of both the long-range plan and the near-term improvements offers a base onto which community involvement and transit and livability partnerships can be built. Because TIPs are updated at least every 2 years, they offer an ongoing opportunity for involvement and participation.

Other opportunities for building community partnerships arise when major projects (such as the construction of a new light rail system) requiring federal funds are planned. Such projects may require a major investment study (MIS) to evaluate the effectiveness of a variety of strategies to solve a specific transportation problem, which can include different combinations of transportation modes. Like the TIP, the MIS should be a collaborative process involving a broad cross-section of the community.

Not all transit projects are funded under ISTEA and there are many other contexts for transit planning relevant to improving community livability. Indeed, there has been a shift in funding away from the federal government to state and local sources. Different states and cities have different requirements, although most large projects generally have some requirement for public participation or review. Small projects, such as new bus shelters or renovating a train station, may have few, if any, "required" public participation components.

In general, case studies were successful because they went beyond the minimum required level of public participation from the outset—whether the project was large or small, federally funded or not. Indeed, since many projects and programs pre-dated ISTEA, the degree of public involvement is even more noteworthy. The next section describes ways that the public participation process has been enhanced in communities—resulting in the projects highlighted in the case studies.

Note: For further information about transit planning processes, consult "A Guide to Metropolitan Planing under ISTEA: How the Pieces Fit Together" (available from the US Department of Transportation, Publication No. FHWA-PD-95-031) and "Planning, Developing, and Implementing Community-Sensitive Transit" (The FTA Livable Communities Initiative, Federal Transit Administration, 1996).

PUBLIC PARTICIPATION: GOING BEYOND "REQUIREMENTS"

Public participation does not necessarily mean that communities are truly involved in a project or program especially if communities are asked to react to a plan rather than to help create and initiate concepts for improvement. Indeed, projects like *Fruitvale Transit Village in Oakland, California* were initiated because the community reacted negatively to the original project proposal by Bay Area Rapid Transit (BART). More common is the situation where projects proceed, but do not achieve their true potential because it is more difficult for people to be committed to projects that are externally conceived and do not stem from the needs of their communities.

On the other hand, the case studies show that, if the community is asked to define the problem from the

Figure 10-1. Meetings like this one held in San Bernardino, CA, are key to the process of involving communities in the transit planning process and in generating ongoing community support for these projects. (Credit: Project for Public Spaces, Inc.)

start rather than merely review a solution, the issues of concern to the community can be addressed. A community-based process, then, should include more than just approval or review, but should grow out of identifying community needs from the outset.

From the case studies presented here, three key strategies for enhancing the public participation process emerge again and again. These strategies focus on making places in communities more livable by forging community partnerships around those places and developing a step-by-step program of enhancements. This approach is very supportive of the existing planning processes transit agencies are already familiar with and practice. Making an extra effort allows transit to expand limited resources and builds a constituency for transit by linking it with community decision-making processes.

Strategy No. 1: Focus on Place-Making

As presented in Chapter 1, a place-making approach to community livability seeks to focus community participation around very specific issues to enhance quality of life in that place. Through this approach, people are encouraged to clearly define issues, contribute ideas and develop agendas that address their concerns as well as encourage them to participate in implementing strategies to address such questions as the following:

- What works and does not work about this neighborhood or space? What problems exist?
- What would make it work better? What kind of design improvements are needed? What types of management strategies should be introduced?
- How can transit support and enhance the activities of the place?

Addressing these questions not only allows for more concrete discussions of livability, but also encourages communities to look at problems and opportunities holistically—rather than as a series of separate, unrelated projects developed by different city agencies or different professional groups.

The case studies show that creating holistic communities requires that specialists such as traffic engineers, transit operators, architects, and community development officials work together towards the same community improvement goals. Focusing on what is needed to make a place better and relying on the input of those who use and experience that place on a regular basis helps to guide this coordination. Indeed, many of the successful case studies had architects and planners who approached the design from a community perspective, considered the broader needs of a place, and acted more as problem solvers and facilitators for community-identified issues. *Pioneer Courthouse Square in Portland, Oregon, Davis Square in Somerville, Massachusetts, and GO Boulder, Boulder, Colorado*, are examples of projects which grew out of such a holistic approach.

Figure 10-2. Strategy No. 1: Focus on Place-Making. The Portland community was and continues to be involved in decisions regarding both the expansion of transit service in Portland and the function of Pioneer Courthouse Square. The Square was planned concurrently with the new light rail system and was partially funded by the sale of bricks and other design elements (such as water fountains) to the public. (Credit: Project for Public Spaces, Inc.)

Chapter 11 describes in more detail the techniques that can be used for learning more about how a place is currently used and perceived. This chapter also includes a checklist that can be used by a transit agency or community organization as it undertakes a community-based planning process. In general, these techniques go beyond community meetings for obtaining input and may include (depending on the size and scope of the project) detailed surveys of public opinion, focus groups, and brainstorming workshops as well as actual studies of how a space or place is used by people. *Woodbridge Station, NJ; Corpus Christi Staples Street Station; and the Port Authority Bus Terminal in New York City* are all projects that involved extensive on-site observations, surveys, and analysis as part of the process of developing recommendations for improvements.

Strategy No. 2: Step-by-Step Implementation

These short-term projects are not interim solutions, but stepping stones within a plan's longer range context that can act as catalysts for change, while providing immediate enhancement for communities. While

Figure 10-3. Strategy No. 2: Step-by-Step Implementation. NJ Transit hired an artist to create this lively map of the Woodbridge train station area which includes a directory of local businesses and accurately depicts each building in the downtown. (Credit: Project for Public Spaces, Inc.)

Figures 10-4 and 10-5. Strategy No. 3: Developing Effective Transit/Community Partnerships. Volunteers, like this senior citizen in Portland, OR, can become involved in keeping transit facilities and stops clean and well maintained (Figure 10-4) or a partnership can be established with a local merchants or downtown association (Figure 10-5). Either way, more and more communities across the country are partnering with transit agencies to provide these important services. (Credit: Project for Public Spaces, Inc.)

large-scale, capital-intensive projects still have their role, improvements that can be implemented quickly provide opportunities for immediately boosting public interest, morale, and use. These small projects also allow an idea or project to be tested in the field before beginning more widespread implementation. For example, *LINC in Seattle* began as a 6-month experiment to test public reaction and the *Port Authority Bus Terminal Revitalization Program in New York City* started as a vending cart program to understand how positive uses might inhibit security problems.

The Los Angeles Neighborhood Initiative (LANI) projects are all designed to be completed in 6–12 months with the concept of maximizing the effects of small changes. For example, instead of placing a bus shelter at a location where the bus happens to stop, LANI works to coordinate it with other nearby amenities. The LANI approach is to work with a local business to put out a vending cart with cold drinks, a merchant's association to donate a bench, and the city to plant some trees. With these elements, a community creates a place where before there was none. Because LANI is working in several neighborhoods concurrently, it is also able to organize many disparate smaller projects under one program. *The New Jersey Transit Station Renewal Program* is taking a similar approach to its commuter rail stations. The types of changes adopted by NJ Transit communities deal with a wide variety of place improvements: new seating and amenities; economic uses such as public markets, vendors and cafes; special events and ongoing space programming; and so on. These changes can be seen, used, and enjoyed. By showing actual accomplishments, these programs are sustaining community involvement and support while creating opportunities to test and evaluate the effectiveness of improvements.

While large capital construction projects require a different and more involved process (with more federal requirements), small projects can be locally driven and accomplished in-house with little governmental intervention and, ironically, little required public participation. Clearly, however, these small projects benefit from increased public participation and community partnerships, which increase the likelihood of acceptance and implementation, as well as opening up opportunities for leveraging additional funding.

Strategy No. 3: Developing Effective Transit/Community Partnerships

Case studies in this chapter focus specifically on partnerships between communities and public and private entities as a means to achieving a community's vision. Community groups and transit agencies have found that, by working together, they create benefits beyond what a transit agency could do by itself and help to improve the livability of the entire neighborhood as a result.

The essential characteristic of a community partnership is that different government agencies, the private sector, nonprofit groups, and citizens communicate and work together on an ongoing basis. The process of analyzing problems and developing solutions together encourages people to work with each other in a constructive and creative manner. A momentum is achieved that would have been virtually impossible had people not been brought together to address common concerns.

The working relationship developed during the planning process can continue to function even after a plan is "complete" to guide future programs and projects. To ensure that such a relationship is sustained, an ongoing organization and public-private community partnership is needed that is vested with an appropriate level of financial, technical, and management support. This enables community members to continue their involvement to implement their plan, develop new ideas, and further fulfill the community's vision.

A community partnership structured around a place should be representative of the different interests or groups of stakeholders who have some role in that place: businesses, government agencies, nonprofit organizations, community groups, and so forth. Because every place is different, the composition and form of the community partnership will vary. The case studies demonstrate different types of organizational structures, ranging from ad hoc advisory groups to elaborately structured public-private community partnerships. It is for one structure to evolve into another, for example: a small advisory committee can become a board of directors for a permanent organization.

This approach suggests a different form of leadership in communities. A leader of a community partnership needs to inspire the active participation of people, but in a different manner than the more expected form of leadership, which tends to involve inspiration through force of personality or ideas. For this reason, a leader of a community partnership acts as a facilitator of ideas to ensure that every participant is heard in a fair and equitable manner.

Sustaining and Maintaining a Community Partnership

A transit agency participating in a community partnership will need internal organizational support and flexibility. Very often, however, there are internal needs—such as having to "fast-track" an important project—that transcend one department within an agency. *The New Jersey Transit Station Renewal Program*, for example, has a project manager within the agency that shepherds the projects through the various internal bureaucracies.

It is clear that community partnerships also take time, sustained energy, continual follow-up, and extensive communication with those involved to achieve desired results. The importance of communicating the visions to expand participation was often stressed by community leaders and transit agencies alike, to allow a project to leverage additional energy and support. This is why most community partnerships need strong staff support, usually from one organization that takes the lead. This organization does not necessarily have to be the transit agency. *Fruitvale Transit Village in Oakland, California*, is an example of one community organization that has taken on this responsibility. In *Wilmington, Delaware*, an MPO has taken on the role and the transit agency has benefited greatly from this community partnership effort.

Implementing Through Community Partnerships

The community partnerships presented have generally operated as collaborations where decisions are reached by consensus, multiple viable options are identified, processes are agreed to by parties, diverse perspectives are legitimized, stakeholders are involved at the earliest point, and there is free-flowing information. In addition, as seen in most of the successful projects, community partnerships provide an opportunity to pool funding and resources and to share responsibility for implementation and ongoing management.

Community partnerships present opportunities for participants to be responsible for specific aspects of a project and to identify new resources. During the visioning process for each *Los Angeles Neighborhood Initiative* project, neighborhoods were able to identify complementary funds to achieve greater community impact. Moreover, as projects proceeded, new resources emerged, including contributions of volunteer or in-kind labor and materials. In *Tucson, the Old Pueblo Trolley* took this approach to the extreme by using community volunteers to restore a historic trolley line. The project obtained state funding only after years of effort.

Transit agencies themselves have resources valuable to communities that are not always recognized. *Pioneer Courthouse Square in Portland, Oregon*, became financially feasible because the transit agency could contribute funds to the construction of the square because it was to be the hub of its new light rail system. Along the *Green Line in Chicago* the transit agency controls a considerable amount of underused land, which it plans to sell to generate additional income for the agency and ridership for the subway, while helping to rebuild communities along the route.

Finally, community partnerships open up new funding sources that would not be available for a transit agency alone. Since funding sources also carry their own restrictions, skilled community partnerships like *Fruitvale Transit Village in Oakland* have learned to develop specific aspects of their projects so that they become eligible for those funds. Fundraising campaigns—like selling bricks engraved with a donor's name to help finance *Pioneer Courthouse Square*—can also be planned from the start of a project.

ENDNOTE

1. Livability Communities Initiative, "Planning, Developing and Implementing Community Sensitive Transit," Federal Transit Administration (1996) p.7.

CASE STUDIES

Case studies in this chapter illustrate a variety of community partnership opportunities as well as planning processes for different transit-livability programs. These processes include use of community volunteers (*Tucson Old Pueblo Trolley*) and extensive community involvement and partnerships with grass-roots organizations (*Fruitvale Transit Village*). *New Jersey Transit Station Renewal Program* and the *Denver Partnership* have established strong links among transit, local government, and the business community. In *Wilmington, Delaware*, a transit agency is working closely with the MPO to achieve broadbased improvements to the downtown. Finally, *South Station in Boston* is an excellent example of a transit agency working with private developers to revitalize a historic train station.

Case Study 10-1: Tucson, AZ: Old Pueblo Trolley Volunteers Revive Historic Trolley Line
Case Study 10-2; Oakland, CA: BART Fruitvale Transit Village
Using Transit to Leverage Funding for Community Development
Case Study 10-3: New Jersey Transit Station Renewal Program
Creating Partnerships with Community
Case Study 10-4: Boston, MA: South Station Transit-Private Developer Partnership Transforms Historic Station
Case Study 10-5: Wilminton, DE: Wilmington Infastructure Studies
Intergovernmental-Private Sector Partnership to Promote Enhanced Livability and Economic Development
Case Study 10-6: Denver, CO: The 16th Street Transitway
Twenty Years of Public-Private Partnerships and Reinvestment

Case Study 10-1
Tucson, AZ: Old Pueblo Trolley
Volunteers Revive Historic Trolley Line

Don't start a project like this unless you want to dedicate your whole life to it.
—Eugene Caywood, President, Old Pueblo Trolley

The trolley helps people decide to come to Fourth Avenue. We hope it can become a practical, usable, everyday "hop on/hop off" means of transportation.
—Libby Stone, Executive Director, Fourth Avenue Business District

SUMMARY

In 1983, the Centennial Coordinator for the University of Arizona came up with an idea: why not restore trolley service to the University as part of the school's centennial celebration? With this goal in mind, an all-volunteer group called Old Pueblo Trolley began a 10-year odyssey to restore trolley service to downtown Tucson. Successfully achieved, although unfortunately missing the University's Centennial by a decade, the first trolley to run along Fourth Avenue and University Boulevard in 60 years took its maiden voyage in May 1993. Old Pueblo Trolley has purchased and restored vintage electric streetcars and trolleys and their current fleet has

vehicles from Belgium and Japan as well as rehabilitated trolleys from other parts of the United States. The entire effort, from track laying to trolley repair, was accomplished almost entirely by volunteers. Today, restored trolleys serve shoppers, visitors, and university students and brings office workers to lunch at the many cafes and restaurants along Fourth Avenue. The trolleys serve about 20,000 people per year.

PLANNING PROCESS

The first electric street car graced the streets of then small-town Tucson, Arizona, on June 1, 1906, as a replacement for horse-and mule-drawn streetcars. Service, which continued for the next 24 years, started with five double-truck, two-man electric streetcars that the Tucson Rapid Transit Company (TRT) purchased from the Los Angeles Railway. The route ran to the University of Arizona campus from downtown via Congress, Stone Avenue, and Third Street (now University Boulevard) and a second route brought passengers to Carillo Gardens via South, Fourth Avenue, Stone Avenue, and Seventeenth Streets—both routes serving shopping and residential neighborhoods. Over the years, a total of 12 streetcars were used, which carried between 16 and 30 passengers each. In 1925, buses were added and the routes expanded. In 1930, a petition to permanently replace the streetcars with buses was approved by the Tucson City Council. Rail streetcar service ceased at midnight, New Year's Eve, 1930.

The idea of restoring streetcar service to the University of Arizona was promoted by Ruth Cross, the University's Centennial Coordinator, as a way of celebrating the school's 1985 centennial anniversary. An all-volunteer group called Bring Back the Trolley (later officially named Old Pueblo Trolley [OPT]) was formed to realize Ms. Cross's vision. The dozen members of Bring Back the Trolley (which became a nonprofit corporation in September 1983) convinced the city of Tucson and state of Arizona to do a feasibility study in late 1983, which demonstrated that trolley service was both a feasible and useful addition to the city's public transit fleet. The report called for an 18-hour operating schedule with four trolleys along a route between two major downtown destinations—the University and the Convention Center. Unfortunately, the study and community support notwithstanding, a trolley bond issue was defeated in May 1984. The fact that OPT only had 2 months before the bond election to promote the idea is the major reason given for its defeat.

Rather than signaling the end of this trolley initiative, it heralded its beginning. OPT's members decided to continue the effort with the knowledge that 17,000 "yes" votes had been received for the trolley bond issue and that many other cities were undertaking similar efforts. A dramatically scaled back version was planned, which was to be accomplished solely with donations of money, materials, and volunteer labor. The strategy was to garner grass roots community support, build partnerships with the merchants, property owners, and the University along the proposed route, and start out small—with a manageable route and two trolleys.

In March 1985, OPT leased a historic streetcar from the Orange Empire Railway Museum (Perris, California) identical to TRT's Car No. 10, the last streetcar to operate in Tucson. Hauled to Tucson by truck in time for the University of Arizona's Centennial Founders Day Parade, the car took volunteers 8 years to restore to working order. The city's second streetcar, which was originally built for Kyoto, Japan, was purchased in 1992 from the Osaka Hankai Electric Tramway Company using funds from the state grant (see funding).

Figures 10-6 and 10-7. Case Study 10-1. Tucson's Old Pueblo Trolley was rebuilt entirely by volunteers, who continue to fundraise for its expansion as well as serve as conductors (Figure 10-6). Volunteers from the International Brotherhood of Electrical Workers uncover the original buried tracks (Figure 10-7). (Credit: Old Pueblo Trolley)

In September 1985, OPT won approval from the city to build and operate a streetcar route between the University's main gates and the OPT car barn, a building located on Fourth Avenue and Eighth Street that OPT leased for $1.00 per year. OPT volunteers also were permitted to work within the public right of way and the city agreed to expose existing historic tracks. Volunteers restored track salvaged from previous road work projects. From 1985 through 1993, OPT volunteers, including members of the International Brotherhood of Electrical Workers (IBEW), patched concrete, restrung overhead electrical wires, constructed track, and installed historic light poles. Operation of the OPT officially began May 17, 1993, on a 1.1-mi route along Fourth Avenue from the main gate of the University to OPT's trolley barn.

During the first two tourist seasons, the trolleys operated 7 days a week from November through May and on weekends the rest of the year, serving a wide variety of shops, restaurants, cafes, historic homes, and the University, and enhancing the retail activity along the Fourth Avenue corridor. This year, trolleys have only been able to maintain the summer schedule: Fridays from 6 p.m. to midnight, Saturdays from 10 a.m. to midnight, and Sundays from noon to 6 p.m.

OPT's long-term plans are the completion of restoration of two additional historic streetcars, expansion of their route and service to the Convention Center through the Downtown Arts District and the Ronstadt Transit Center, establishment of an Arizona Transit museum and restoration facility at the car barn, and recruitment of additional conductors, operators, mechanics, and dispatchers.

STRATEGY

There are four elements of OPT's strategy for getting a trolley system up and running again.

Track and Overhead. Volunteers, working in collaboration with the city's traffic engineers, performed all the track work, with members of the IBEW stringing the overhead electrical wires. Old tracks buried under asphalt had to be uncovered and repaired and new tracks laid. The city assisted in this effort by permitting volunteers to work in the public right of way and by cooperating with OPT in salvaging rail for restoration.

Vehicle Acquisition and Restoration. Because of its limited funds and the fact that no original trolleys remain in Tucson, OPT has been necessarily resourceful in its acquisition of streetcars. For example, the Brussels trolley had been shipped to Phoenix in 1980 and became part of a restaurant project, which later went bankrupt. It was purchased at a bankruptcy sale by Rod Wattis, who later donated it to OPT. The 1953 Japanese trolley was purchased for very little from the tramway company in Osaka; however, the shipping costs totaled almost $30,000. The first car obtained by OPT had languished on a lot at MGM studios where it had been used in movies depicting Los Angeles in the 1940s, then later had been outside at the Orange Empire Railway Museum until it was in need of total rebuilding.

Operations. Volunteers continue to be recruited and trained to operate trolleys and restore vehicles. Operators take a mandatory 60-hour training course, while conductors go through a 20-hour course. OPT probably has the youngest conductor in the nation: Silas Montgomery, who is 11 years old.

Public Relations. OPT also publishes *Trolley Tracks*, a quarterly newsletter with news of the organization, updates on operation, and historical information about Tucson's trolleys. OPT allows groups to charter its trolleys for educational trips, private parties, and other celebrations; the group is a member of both the Arizona Historical Society and the Association of Railway Museums.

FUNDING

The acquisition of streetcars, and everything to excavate the right of way, from cranes to crane operators, was donated or paid for through private contributions, support from the Fourth Avenue Merchants Association and University Boulevard property owners. During the first 7 years of planning, OPT was able to raise a total of $200,000. However, in 1990, the OPT faced a serious cash shortage, which threatened the successful completion of the project. In June 1990, the Arizona State Legislature allotted $500,000 in state lottery transportation funding to the OPT as a demonstration light-rail project, thereby ensuring that the project would come to fruition. OPT has applied for ISTEA funds for service extensions and improvements, including extension of the tracks and construction of a new "turn-around." It currently receives support from 200 members nationally, local foundations and businesses, in-kind contributions, and fares from passengers. OPT needs a permanent revenue stream to allow operation when volunteers are not available. Cooperation between the city, merchants, and property owners will be essential in making that happen.

OVERCOMING OBSTACLES

The primary obstacles overcome by the OPT project were financial ones. Though it did not provide funding, the city assisted in salvaging track and allowing

the work to occur in the first place. Permitting volunteers to perform construction and electrical work on public city streets is truly remarkable. The state's disbursement of $500,000 dollars in lottery funds to the project at a crucial moment may not have occurred had the project not come as far as it had working solely with donations and volunteer labor. However, keeping together a cadre of active and dedicated volunteers for an extended period of time is a labor-intensive effort. There is only so much that volunteers may be able to accomplish. Fundraising, similarly, is a full-time job.

The trolley faced some physical obstacles as well. The height clearance allowed by the Southern Pacific Railroad underpasses at the northern and southern ends of Fourth Avenue is inadequate to allow the trolley cars to pass underneath. In addition, the grade of the road as it passes under the railroad is so steep that the trolleys do not have enough power to travel up the slope, especially when full of passengers. However, the underpass, built in 1916, is due for rebuilding with the design request for proposal scheduled for 1996. Within 4 years, the new underpass will be built, which will allow the OPT to continue its route downtown to the Ronstadt Transit Center and, eventually, to the Convention Center.

IMPACT AND ASSESSMENT

Since opening, OPT has served more than 60,000 passengers traveling through the West University neighborhood and Fourth Avenue business district on two restored trolleys. OPT is a popular attraction for tourists and provides low-cost transportation for university students, shoppers, and area residents, making it easier for people to leave their cars at home.

According to Libby Stone, Executive Director of the Fourth Avenue Business District, merchants within this business district are very glad that the trolley exists, because the trolley helps draw tourists to the area who spend money, while adding to the whole concept of Fourth Avenue as an eclectic shopping and dining district. Some believe, however, that the trolley is treated too much like a "museum on wheels" or a historic piece, and not enough like a practical form of everyday transportation.

CONCLUSIONS

The OPT could not have succeeded had it not been for community involvement and cooperative partnerships. The adage, "when the people lead, the leaders will follow" is particularly relevant to the OPT project. It has sought and gained national (and international) recognition in an attempt to convince suburban-dwelling Tucsonians that a livable center city is a viable place deserving their support and patronage. The dedication of the OPT members and volunteers is extraordinary and the success of the trolley is a tribute to their unflagging dedication and enthusiasm.

Case Study 10-2
Oakland, CA: BART Fruitvale Transit Village
Using Transit to Leverage Funding for Community Development

This project embodies the dreams of a community. Because of the dedication of citizens throughout the community and because of the dedication of Arabella Martinez, the dream will become a reality.
—former U.S. DOT Secretary Frederico Peña at the 1993 MTC Transportation Awards Program

There are two strengths of this project that have made it successful. One, SSUC mobilized neighborhood and political support from the onset of the project and two, they generated federal money to match private capital.
—Michael Bernick, BART Board of Directors

The Metropolitan Transportation Commission (MTC) sees projects like the BART pedestrian plaza as a way to use transportation investments to serve larger community goals. It is probably the best example of bottoms-up transportation planning in the Bay Area. We need more community-based groups that are willing to wade into the transportation arena to advance projects.
—Ellen Griffin, MTC

While the Fruitvale BART project presents an unusual opportunity to do "cutting edge" transit-based development in an inner city setting, perhaps the most unique aspect of the project is the grassroots origination of the project, and the collaborative approach to its planning. The leading role played by SSUC in the project will ensure that a community-based, collaborative approach will be maintained throughout the project and that community interests will remain at the forefront of development considerations.
—Rich Bell, Unity Council Fruitvale BART Project Manager

SUMMARY

The Fruitvale BART Transit Village development in Oakland, California, involves the conversion of BART's parking lots and adjacent public and private properties into a transit-based, mixed-use development and community center with a variety of attractions and community services for this low-income neighborhood. The Spanish Speaking Unity Council (Unity Council), a 32-year-old, nonprofit community development organization, is the developer of this national model of community-based transit planning. The new Fruitvale BART Transit Village has the potential of being designated a "station-area redevelopment district" under California law. The project

aims to increase transit ridership and employment opportunities in the area, attract social service facilities and retail businesses, and generally improve the quality of life and livability of the Fruitvale neighborhood.

The vision for the Fruitvale BART Transit Village includes the following:

- A pedestrian plaza connecting the BART station with the East 14th Street commercial district;
- Two parking structures containing retail stores and restaurants on the ground level and community facilities on the second and third levels facing the pedestrian plaza;
- Other public and private agencies such as La Clinica de La Raza, a senior center, a child development center and the Unity Council's headquarters;
- Affordable housing, including housing for senior citizens;
- Additional retail on the private parcels;
- An intermodal bus transfer facility behind the BART station; and
- Facade and street streetscape improvements along the East 14th Street retail corridor.

Although this project has yet to be built, the extensive community planning and visioning process already undertaken is perhaps one of the best examples of its kind in the United States. With the help of a $6.6 million EZ grant, the Unity Council and its partners have more than $23,000,000 in funds for predevelopment planning and for the construction of the Fruitvale BART Transit Village. Funding sources include the city of Oakland, DOT/FTA, BART, the Ford Foundation, the James Irvine Foundation, the William and Flora Hewlett Foundation, the Levi-Strauss Foundation, the BankAmerica Foundation, Citibank and the Departments of Housing and Urban Development and Health and Human Services.

PLANNING PROCESS

Oakland's Fruitvale is primarily a low-income Latino, Asian, and African-American community. Five major and several smaller nonprofit, grassroots community and social service organizations have established themselves in the community. One of the oldest is the Unity Council, a community development corporation whose mission is to reverse the deterioration of the neighborhood through a comprehensive program of physical, economic, and social development.

The Fruitvale Transit Village initiative got underway in 1991, when two contradictory assessments stirred extensive debate about the future of the East 14th Street commercial district. While the University-Oakland Metropolitan Forum had identified this area as a prime community development opportunity and recommended integration of the commercial district and the existing transit station, BART had proposed constructing a multilevel parking facility on a site adjacent to the Fruitvale station.

Seeing a new parking structure as offering little to benefit to the community, the Unity Council took the lead in organizing a broad, community-based planning process not only to develop alternatives to the parking structure, but also to conceive an overall vision for the project and a long-range plan for the Fruitvale neighborhood. The Unity Council began discussions and hosted planning sessions with the community out of which developed a proposal to create a pedestrian plaza linking the BART station with the East 14th Street business district. In 1992, the city provided the Unity Council with a $185,000 planning grant to further develop the project, marking the beginning of the city's commitment to the Fruitvale neighborhood.

The Unity Council continued to work with the community to formulate the neighborhood development plan and to meet with community leaders and representatives from BART and the city. It sponsored a design charrette in which five major architectural firms developed alternative land-use plans that were reviewed at a community design symposium in May 1993. Soon thereafter, the Unity Council established a public-private partnership with BART and the city to work together to develop the transit village. It signed a memorandum of understanding with the two public agencies and subsequently signed an exclusive negotiating agreement (ENA) with BART. It also completed a market study, a financial feasibility study, a Phase I EIS, a Phase II toxic assessment for the senior housing project, and a preliminary traffic impact study.

In late 1994, the Unity Council consultants prepared design guidelines for East 14th Street, with the involvement of the merchants, property owners, and interested residents. The city is likely to adopt these as part of the revision of its general plan and specific neighborhood plan.

In February 1995, the Unity Council also selected an architectural firm to lead the community site-planning process. Three public meetings and several forums addressing specific development issues were held with special constituencies such as youth and senior citizens, as well as with the city, BART, and AC Transit. A consensus plan emerged from the discussions that proposed closing East 12th Street. Because of community concerns, however, a second plan was developed merely to narrow the street. The new plan has received positive feedback from the city, BART,

FTA, and a number of community groups that have seen it and mitigates many of the environmental impacts of the consensus plan.

STRATEGY

In response to BART's proposal to build a new parking structure for the Fruitvale station, the Unity Council and the Fruitvale community developed a vision to do the following:

- Revitalize the area around their BART station;
- Create a transit- and pedestrian-friendly urban center for Fruitvale;
- Integrate the BART station into the community by creating a pedestrian-friendly link between BART and East 14th Street, housing, and existing community facilities;
- Improve bus and pedestrian access to the station as well as to the adjacent commercial district;
- Draw commercial activity to the area, particularly toward East 14th Street;
- Enhance the safety of residents and transit passengers alike, particularly along East 14th Street;
- Introduce entrepreneurial and job opportunities into the community by locating community services and commercial facilities at the site;
- Make street and facade improvements along East 14th Street; and
- Build affordable housing to decrease overcrowding, improve security in the area through an "eyes-on-the-street" approach and enhance retail sales in Fruitvale.

As proposed, the Fruitvale Transit Village will encompass 15 to 24 acres of BART land, adjacent city streets and private properties and will cost approximately $100 million to develop. Phase I will include the intermodal bus transfer facility, two parking structures (one for BART and the other for the tenants of the transit village), and the pedestrian plaza linking the BART station to the commercial district. Retail and community office space, a medical facility (Clinica de la Raza), a child care center, senior housing and the Unity Council's headquarters (housing other public and private agencies such as the Latin American Library) will also be built in Phase I. Phase II will include a supermarket, other retail uses and housing. The first elements of Phase I to start construction will be the senior housing and child care facilities in September 1996, after environmental clearance is received.

The Unity Council will initiate the facade and street streetscape enhancements in 1996. It will coordinate its efforts with the city's Office of Economic Development and Employment (OEDE) and its Neighborhood Community Revitalization Program. The city has already installed historic-style street lights, planted street trees, contracted with local artists to design and install an arch to span Fruitvale Avenue at the corner of East 14th Street, and initiated a facade improvement program using Americorps volunteers.

The Unity Council has established a community design board that will make recommendations as to which stores in the commercial corridor will get the facelift. Given limited funds, decisions will be made in accordance with guidelines that have been established to ensure that the facade improvement program complements the transit village. The Unity Council will hire a contractor and work with a crew of the East Bay Conservation Corps to do the work. It will provide business assistance to those property owners and merchants who want to make more improvements than are possible with Unity Council and city funds. They will be provided assistance with putting together business plans and loan packages to upgrade their businesses as well as their buildings. The program also includes an arts program that will hire local artists to produce a logo and banners with that logo to provide an identity to Fruitvale. The work of local artists will be displayed in empty store fronts. All of this is part of a marketing plan to enhance the image of Fruitvale and improve the business environment.

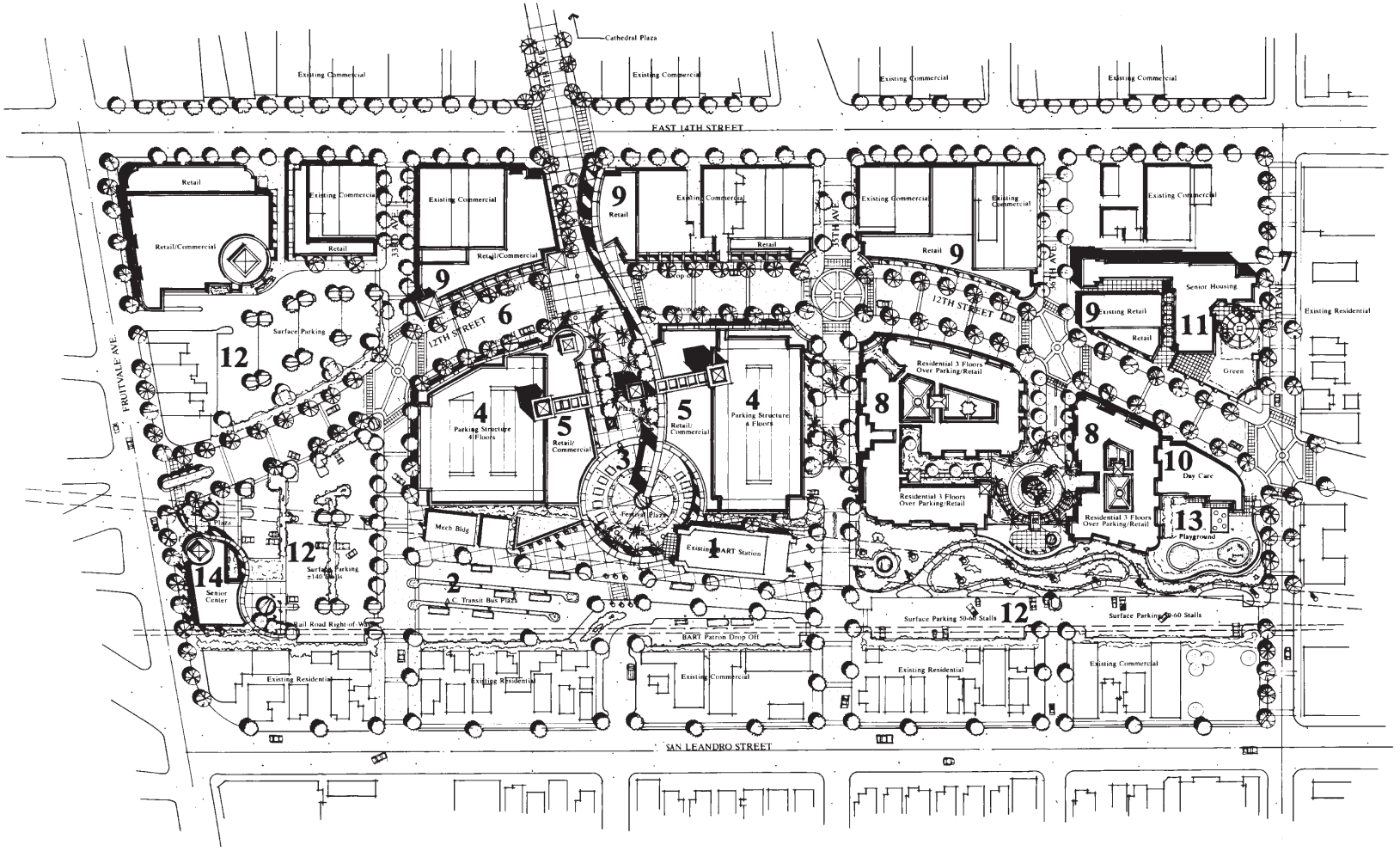
Construction of the other elements of Phase I is scheduled to begin in March 1997 and to reach completion 18 months later. Construction of Phase II is scheduled to begin immediately after that and be completed in the year 2001. After the transit village is finally built out, the Unity Council will focus on obtaining available, adjacent private parcels of land beyond the transit village.

The BART ENA with the Unity Council will lead to a development implementation agreement when the Unity Council completes all the requirements of the ENA. It will be the first time that BART has not issued a competitive request for proposal for bids for a joint-development project.

Controversial, unresolved issues, such as the type, location, and density of the proposed residential units, have been left open for discussion while other aspects of the plan, where consensus has been reached, have moved forward.

FUNDING

The key to the success of the Fruitvale Transit Village initiative has been the ability of the Unity Council to attract funds from a range of sources to



ILLUSTRATIVE SITE PLAN

"The preparation of this report has been financed in part by grants from the Federal Transit Administration, U.S. Department of Transportation. The contents of this report do not necessarily reflect the views or policy of the U.S. Department of Transportation."

FRUITVALE BART TRANSIT VILLAGE

OAKLAND, CALIFORNIA

LEGORRETA ARQUITECTOS

MV&P INTERNATIONAL

Figures 10-8 and 10-9. Case Study 10-2. Proposed plans for the Fruitvale BART Transit Village, Oakland, CA, feature a central square, senior housing, day care facilities and residential units to replace a parking lot and existing transit station. Key to Figure 10-8: 1-Existing BART Station; 2-Bus Plaza; 3-Festival Plaza; 4-Parking Structure; 5-Retail/Commercial; 6–12th Street; 7–34th Avenue; 8-Residential over Parking/Retail; 9-Retail; 10-Day Care Facility; 11-Senior Housing; 12-Surface Parking; 13-Playground; 14-Senior Center. (Credit: MV&P International and Legobreta Arquitectos)

Figures 10-8 and 10-9. (continued)

fund the many elements of the transit village project. In 1992, the city awarded a $185,000 planning grant to the Unity Council for planning the BART station area redevelopment project. In 1993, former U.S. DOT Secretary Frederico Peña and FTA Administrator Gordon Linton gave the Metropolitan Transportation Commission (MTC) a $470,000 planning grant for the Fruitvale project. To date, more than $23 million has been raised or allocated by the Unity Council and its partners, including the following:

- $6.234 million for the senior housing;
- $780,000 for the pedestrian plaza;
- $2.675 million for the intermodal bus transfer center;
- $2.250 million from the city of Oakland for a multipurpose/senior center;
- $1.869 million for predevelopment planning from the city, FTA, and foundations;
- $1.246 million for land assembly and relocation from the city, Department of Health and Human Services (Head Start), the Unity Council and La Clinica de La Raza; and
- $917,000 for the East 14th Street facade and street streetscape improvements from the city and Housing and Urban Development's (HUD) Hope VI funds through the Oakland Housing Authority.

Not included above are the staff costs of the city, BART, AC Transit, or La Clinica or the costs of the city's and BART's environmental impact studies. Also, not included is the $45,000 raised by artist Carolyna Marks from local community organizations, corporations, foundations, and individuals to finance the creation of her "Peace Wall" for the Fruitvale station, made of 3,600 tiles painted by students, community groups, merchants, local politicians, celebrities, and BART officials.

There are pending grants and loans from federal, state, and local governments as well as foundations and banks. This pending funding exceeds $10,000,000 and is subject to completion of specific grant conditions prior to disbursement.

There are financial gaps for some of the specific elements of the development, but most will be filled by borrowing from private lenders because projections show that debt can be repaid from the income flows from specific projects. A major financial gap of more than $10,000,000 relates to the BART parking structure. The gap exists because BART has a "no parking fee" policy which means there is no income to service debt. This is being discussed with BART and the city's redevelopment agency.

The Unity Council has used the transit village development to attract millions of dollars to the Fruitvale community that might not have been forthcom-

ing without the transit initiative. This transit project has served to generate momentum and, most important, funding for a myriad of other community and economic development programs.

OVERCOMING OBSTACLES

Inner city neighborhood redevelopment is a complex and extremely difficult undertaking. Private developers have usually shied away from such projects because of the difficulties. Few community development corporations have attempted to undertake a project of the scale of the Fruitvale BART Transit Village.

The Unity Council has faced a number of challenges and obstacles, and these have changed as the development advanced. The initial challenge was convincing BART, the city, and others that the Fruitvale BART Transit Village was not a dream. There were questions about the Unity Council's development capacity and its ability to raise large sums of money. These concerns were legitimate because the Unity Council is a relatively small community development corporation, had not been in the development business for a number of years, and did not have staff with mixed-use and large-scale development experience. These doubts have for the most part been overcome as the Unity Council has demonstrated its capacity to raise substantial dollars. Particularly important in changing perceptions were FTA's planning and HUD's senior housing grants. The concerns about the Unity Council's development capacity have subsided as the Unity Council completed one task after another and is now poised to begin construction on the senior housing. The concern about the Unity Council's development capacity has now changed to concerns about its implementation capacity. To mitigate this concern, the Unity Council is exploring the possibility of selecting a joint-venture partner with financing and large-scale construction experience.

A second challenge has been finding resources to build the BART parking structure. Building the parking structure is critical as an integral element of the pedestrian plaza, plaza retail, and community facilities. Also, its construction in Phase I allows for the building of the Phase II housing on BART land. Unfortunately, the capital improvement funds that BART was going to invest in the Fruitvale parking structure were used to build a parking structure at another station. The Unity Council initially thought these funds were replaceable, but this may not be the case. The Unity Council is discussing working with BART and the redevelopment agency to address this major financial gap.

A third challenge has been environmental clearance. The Unity Council could not begin the final environmental clearance process until there was a final site plan. The community site-planning process was extensive and time-consuming. The consensus site plan would have had substantial environmental impacts that would have been costly to mitigate because of the closing of East 12th Street for which there was also some community opposition. In addition, the amount of time needed to obtain environmental clearance for the consensus plan might have jeopardized some of the funding for the transit village. The Unity Council decided to develop an alternative site plan in which East 12th was narrowed, but not closed.

A related challenge has been the numerous and conflicting government rules, regulations, conditions, and timelines of the various grantors. DOT, HUD, and Health and Human Services (HHS) environmental clearance rules and processes are different from each other. The city and the state of California air quality requirements are different from the federal National Environmental Policy Act (NEPA) requirements.

Release of funding is also caught up with environmental clearance. The Unity Council has had to use its scarce unrestricted dollars to cover property acquisition until other funding is released.

The lack of funds has meant that the Unity Council missed the opportunity to land bank earlier in the planning stage when there was still some skepticism about the reality of the transit village. Now some property owners hope to make financial profits on properties that were not salable 2 years ago. This has raised the cost for the development of the transit village, and it may be difficult to attract retail because the land costs will not allow for rents that are in keeping with those of other developments in the area.

Beyond the technical and funding issues are community issues. The issue of the closing of East 12th Street has been partially resolved with the new site plan, although the issue of the type and density of new housing to be constructed at the site has been a long-standing point of contention. Some community members were exposed to a variety of types of affordable housing and ways in which they have been integrated into different communities through a series of slides, which were presented at one of the community site planning meetings. While it is clear to many people that the Unity Council and other nonprofit developers are responsible builders and landlords, they are afraid that the proposed up-zoning around transit hubs in the new general plan will encourage outside

private developers to come into these areas and construct very dense, structurally poor housing for low-income renters who do not have a stake in the housing or the community.

The community is concerned that building new housing will exacerbate the already overcrowded public schools of the area. Residents and other stakeholders are concerned with the low level of owner occupancy and the current housing market. The Unity Council will not be able to address all these fears, but it believes that some of these will be mitigated once it is able to develop the housing element in more detail.

IMPACT AND ASSESSMENT

Through the use of a community-based planning process, the community has reached agreement on a conceptual site plan as well as on the design program for the East 14th Street renovation and facade improvement component of the project.

Because the Fruitvale Transit Village project has not yet been implemented, the greatest impact of this project thus far is as a national model for planning community-based, transit-oriented developments. It is a model for demonstrating how communities, especially those with economically and ethnically diverse populations, can use transit projects to achieve community economic revitalization and development.

When fully implemented, BART anticipates 40 percent more people will leave their cars at home to take public transit from this station. More than 750 jobs will be created and retail sales and income will increase as will property values. More than 250 units of affordable housing, including nursing homes for senior citizens, will be built and the physical environment will be greatly improved by the new construction and facade improvement program. The area will be safer as a result of increased numbers of people in the area during the day and evening. The city will benefit from the recognition that it has succeeded in revitalizing one of the most seriously blighted, economically depressed neighborhoods in the city and from increased sales and property taxes.

CONCLUSIONS

From a $185,000 planning grant, the Unity Council and its partners have been able to leverage nearly $17 million to fund the development and construction of the Fruitvale BART Transit Village and all of the community and social service facilities to be housed there—uses which will make a substantial contribution to the livability of the neighborhood. The Unity Council in general, and Arabella Martinez, its Chief Executive Officer, in particular, are given credit for mobilizing and maintaining the broad community base of support for the Fruitvale BART development, which represents a model for the integration of transportation, land use, economic development, and community development. The development and construction funds the Fruitvale BART Transit Village has received attests to the success of its planning strategy and ability to bring together and sustain a coalition of public and private sector groups to work with a community in order to realize its vision.

SOURCES

Olsen, Laura and Chris Bender, *Mobility Partners Case Study: Transit-Oriented Communities*, Surface Transportation Policy Project, Washington, DC.

Metropolitan Transportation Commission, *Transactions*, Oakland, CA (October 1993).

The most important thing we did differently was we

Case Study 10-3
New Jersey Transit Station Renewal Program
Creating Partnerships with Community

worked in partnership with a lot of people and organizations locally that we don't always work with.

—Rick Richmond, Director, NJ Transit Department of Engineering

[Woodbridge Station] is more than a railroad station; it is an example of how people in a community can invest in that community and make it a rallying point of how vital the community is. Through this project, we recognize we're a vital part of the community we serve.

—NJ DOT Commissioner Wilson

SUMMARY

Despite significant investment in New Jersey Transit's (NJ Transit) 158 passenger facilities over the past 15 years, many of the rehabilitated stations have been vandalized and have become deteriorated because of poor maintenance and a lack of on-site management and/or sufficient operating funds. Efforts to rehabilitate these stations also were hindered by the poor quality of the adjacent environment and lack of maintenance resources. Many stations and their environs were perceived as unsafe by NJ Transit customers, and only a few stations had the kind of

passenger-oriented amenities that commuters want, such as a newsstand or a concession with hot coffee and breakfast food. Some did not have sheltered outdoor seating areas and a number of station buildings had been closed by NJ Transit or rented to other non-transit-related businesses. Clearly, there had to be a better way.

In 1991, a concept for a station renewal program designed to address these issues was developed through discussions between NJ Transit and Project for Public Spaces, Inc. (PPS). The goals of the program were to improve the condition, appearance, uses, and, most important, the management of its commuter rail stations to serve passengers more effectively, promote public transit, and act as a catalyst for economic development in the communities in which they are located. This program has employed an innovative, community-based approach to guide NJ Transit in its ongoing station renewal efforts.

PLANNING PROCESS

Five train stations were evaluated during the course of the program, including Bradley Beach, Maplewood, Netherwood (in Plainfield), Rahway, and Woodbridge (see Case Study 4-2). Each station offered a unique opportunity for making improvements that not only would help increase ridership, but would better integrate these stations into their communities and create sustainable partnerships between NJ Transit and each community. The five stations represented a cross-section of station types and environments, including a tourist location (Bradley Beach), a suburban station in a residential/business district (Maplewood), a historic station in a depressed urban center (Netherwood), a station with a high volume of passenger use (Rahway), and a station at the confluence of major highways and train lines in New Jersey (Woodbridge).

The planning process used in each community consisted primarily of meetings with communities and NJ Transit management; detailed observations of passenger use at stations at various times; surveys of train passengers; interviews with nearby retailers; informal discussions with ticket agents during peak and off-peak times; and studies of where people waited for trains, where they were picked up and dropped off, and what routes passengers used to enter and leave each station. In the survey, people were questioned about their general impression of the station, about types of retail and other services for the station, about other kinds of activities for the station and the surrounding area, and about their primary transportation needs and concerns. All of this information helped to create a clear picture of how each station was currently used and perceived.

In addition, community meetings were held to gain additional insight and share findings and observations with passengers, local residents, merchants, and city representatives. Participants identified their most pressing needs and concerns for each station and made suggestions for improvements to station buildings and adjacent areas. These meetings were arranged by NJ Transit in conjunction with representatives from each city and with local organizations, such as merchant associations.

The following common issues and problem areas were identified.

Lack of On-Site Management of Station Buildings and Adjacent Areas. At several stations, there was widespread concern among passengers that stations were unsafe and, in most of the communities studied, that the stations were poorly maintained. This perception was created by several overlapping aspects of the station surroundings, including boarded up and closed station buildings, poor maintenance of buildings and grounds, inadequate lighting of platforms and parking lots, litter, and graffiti. The combination of these problems had a major impact on passengers' sense of safety and security and detracted from the surrounding areas as well.

Most of the train stations operated by NJ Transit did not have regular on-site management. Bradley Beach and Netherwood lacked a management presence altogether. At many stations, people who provided transit-related information or sold tickets, refreshments, newspapers, and other items were only at the station for limited hours. At other times, the stations were closed and no active amenities were offered. Although general station maintenance was provided, small-scale maintenance and cleaning was not done on a regular basis. This gave stations the appearance of being uncared for and unmanaged.

According to NJ Transit, constricted operating budgets have limited management and regular maintenance of stations, station buildings, parking lots, and adjacent areas. It was also difficult for NJ Transit to implement even minor, yet highly visible improvements. Another approach was needed, therefore, to guarantee the management and maintenance of these stations in a manner that serves the needs of passengers, communities, and NJ Transit.

Underutilization of Station Buildings for Passenger and Community Use. Many of NJ Transit's station buildings lacked clear identities as train stations and did not provide adequate levels of service to passengers. Lack of attention to the historic character of the buildings, poor visual and difficult physical access, absence of identifying station signage, and lack of visual and

Figures 10-10 through 10-12. Case Study 10-3, Woodbridge Train Station, Woodbridge, New Jersey. The goal of this project shown here, before (Figure 10-10) and after renovation (Figure 10-11), was to create a "sense of place" for the station and to make the station more appealing to and function better for transit passengers. NJ Transit worked with the Township to turn this railroad trestle into a message of welcoming for the town and the transit facility as well. (Credit: NJ Transit Corporation)

physical connections between stations and their communities contributed to this lack of identity and sense of place. Furthermore, many of the station buildings have been adapted for other purposes (e.g., banks, real estate or physicians' offices). While this has solved some maintenance problems for NJ Transit, it also resulted in facilities whose transportation role was subsumed by the prominence of the tenant use.

Lack of Community Input into the Station Design Process. The station design process typically used by NJ Transit and other transit agencies in developing plans for new and rehabilitated stations was neither community- nor user-based. Rather, concepts were first developed by the transit agency, and communities were asked to react and give input.

STRATEGY

NJ Transit's lack of success with a typical planning approach made it clear that a new way of designing and managing stations and working with local communities was necessary. The current system worked neither for NJ Transit nor for communities. Opportunities for stations to become integral to the vitality of their communities and catalysts for economic and community revitalization were being overlooked.

Community-Based Design Process for Project Development. Through the process used in the five communities, NJ Transit learned that community involvement and participation, from the start of the design process through the implementation of station improvements, are key elements of a successful broad-based approach to station design and are essential to the development of community support for transit projects. Such an approach focuses on an understanding of the important and often disparate issues and needs within each community and relies on information gathered through station observations, interviews and community input to help design station improvements.

By establishing a program of uses for the station before the concept design is developed, appropriate, mutually acceptable, and beneficial uses evolve. Also, the community has the opportunity to share responsibility for ongoing maintenance and management of the station and the adjacent public spaces.

Public/Private Community Partnerships. The NJ Transit Station Renewal Program is an initiative in which individual communities share responsibility for designing and implementing station improvements as well as for ongoing maintenance and management of stations

and adjacent public spaces. Moreover, activities such as supplementing existing security services, retail leasing, and coordination of customer and community information is provided by communities in partnership with NJ Transit. Implementing such an effort enables NJ Transit to draw on a community's vast array of economic, creative, and human resources.

In this approach, communities have a major impact on the quality of the station environment. Some of the specific activities that have been undertaken by NJ Transit in partnership with communities at its commuter rail stations include the following:

- Working with the community to define issues and potential solutions and implement changes at the Woodbridge and Netherwood commuter rail stations.
- Providing maintenance for the station building (excluding major capital improvements). At the Maplewood station, local artists repainted a mural in the passenger tunnel. At Netherwood, a major neighborhood group is organizing a project at a local middle school in which students will paint murals on the tunnel walls and adjacent buildings.
- Working with residents of the Maplewood community to maintain station landscaping around their rail station. In Netherwood, a local community group entered a partnership with the Home Depot to fund and install flower planters on the station platforms. The group also helps maintain landscaping.
- Evaluating the need and providing for the informational and amenity needs of the community at the stations. An artist was commissioned by NJ Transit to create a decorative map at the Woodbridge Station of all retail, community, and recreational points of interest in the town.
- Developing a program of community social and cultural activities and events for public spaces adjacent to train stations. Several of NJ Transit's other stations have been the site of "First Night" family-oriented New Year's Eve celebrations for the past 2 years; in addition, a weekly farmer's market takes place at and under the East Orange train station during that city's free summer jazz concerts, and weekly farmer's markets at the Bernardsville station creates activity at the station each Saturday during the summer.

Passenger Service Center Programs Using Existing Station Buildings. When NJ Transit seeks to attract vendors and businesses to its stations, it looks first to businesses in the immediate vicinity before soliciting interest from national chains or retailers from other townships. In this way, local businesses are not forced to compete with out-of-town operations and are provided with additional retail outlets and a larger customer base, which helps them and adds to the economic vitality of the town as well. Train stations also are appropriate centers for incubator-retail activity, where small vendors or emerging retailers are given an opportunity to market goods and services or to try out new product lines.

As this program was being developed, the idea emerged that NJ Transit could encourage retailers or a "concierge" to run "passenger service centers." These centers are intended to make available to passengers the services and products of local businesses, either by providing retail spaces at stations as satellite business opportunities for local retailers, or through a concierge program in which the goods and services of local businesses would be sold by a concierge at the station, an on-site manager who contracts with local businesses to sell goods and services on their behalf, such as film and dry cleaning drop-off. This program is in the process of being implemented in Maplewood.

FUNDING

The plan for the NJ Transit Station Renewal Program, including station improvement concepts for five stations, was funded jointly by NJ Transit and the Geraldine R. Dodge Foundation. The Dodge Foundation is concerned about revitalization of communities in the state and provided a planning grant to Project for Public Spaces, Inc. In the long term, NJ Transit plans to partially fund managerial activities at stations through an income stream generated from selected parking fees dedicated to this purpose. These funds can then be deposited into a fund administered by a local entity (e.g., a downtown or merchants' association or nonprofit organization) responsible for station management and under contract to NJ Transit.

Station management projects will continue to be funded at NJ Transit by New Jersey Transportation Trust Funds, FTA capital funds, including ISTEA enhancement funds, and private funds. For example, the $2.1 million Netherwood Station Renewal Project, which is really a coordinated set of separate projects and funding sources, is a combination of grants to NJ Transit from the FTA (ISTEA), State Transportation Trust Funds; grants to the city of Plainfield from the Federal Highway Administration, FTA/State of New Jersey (ISTEA) and Urban Enterprise Zone Authority; and private developer funding (for station tenant).

In the short term, the community volunteer groups and city governments contribute time, project support

and implementation assistance as well as re-prioritize their own improvement plans so they are coordinated with those of the station renewal project. In the long term, the coordinated set of improvements and attention to the station and adjacent public spaces by a partnership of interest generates a viable, livable community capable of sustaining itself.

OVERCOMING OBSTACLES

This project changed the way NJ Transit views and manages its facilities. Change is usually difficult, particularly within a bureaucracy. While several NJ Transit managers were extremely supportive and excited about the community-based process to improve the train stations, others were skeptical and even uncooperative and went so far as to view this approach as subversive. The ultimate success of the Woodbridge project, which was the first to be completed, has done much to build confidence in the community-based approach to station renewal in the eyes of NJ Transit engineers.

IMPACT AND ASSESSMENT

The approach used in the NJ Transit Station Renewal Program greatly facilitated project implementation. With strong local support and a creative vision, these projects were selected for implementation by NJ Transit over others proposed. All of the improvements recommended for the Woodbridge station have been implemented. NJ Transit has received a design award from the Downtown New Jersey Association and has been nominated for an American Planning Association design award (see Case Study 4-2). The exterior restoration of Netherwood Station has been completed and work has begun on the parking lot and park redesign. A retail tenant is in negotiation to create a cafe in the station. In Maplewood, the concierge program is underway and landscaping and tunnel improvements have been made to the station by the local business association. At Rahway, a new station design has been accepted and construction is underway. The city and NJ Transit are moving forward to develop a concept plan to turn the plaza in front of the station into a large, urban central square.

NJ Transit has continued to work in partnership with these five communities on project implementation. In addition, NJ Transit staff has begun to understand the larger role that transit plays in communities and the importance of obtaining community involvement early in the project design process. This approach will be used in the redesign of future stations, such as Red Bank and Perth Amboy.

CONCLUSIONS

By jointly developing and implementing station improvement plans with communities, NJ Transit has demonstrated that stations can have active, publicly oriented uses and programs that contribute to the livability of the community. As projects are completed, security is improved, station revenues are increased, riders are attracted and stations can begin to act as catalysts for economic development in the surrounding areas. The partnership concept is necessary in order to manage and maintain train stations so that they can meet these ambitious goals and ensure the commitment of the community to sustaining the vitality and livability of the station area.

Case Study 10-4
Boston, MA: South Station
Transit-Private Developer Partnership
Transforms Historic Station

Railroads tend to build cities—whereas cars tend to destroy them. That's because a railroad system concentrates life and activity around its stations.

—Robert Campbell, The Boston Globe, Tuesday, November 21, 1989

[We all] began to realize what a wonderful place this is and how much better it is for all of our customers. We had better work well together because it is in our mutual interest."

—Jim Wright, project manager

SUMMARY

South Station serves as a gateway to Boston's revitalized financial and retail center. The station is the multimodal transportation hub for the Massachusetts Bay Transportation Authority (MBTA) Commuter Rail, Red Line Subway service, long distance inter- and intra-city buses, and Amtrak's Northeast Corridor train service. Slated for demolition in the 1970s to make way for the new headquarters of an engineering firm, South Station was saved when the Head House (main building) was listed on the National Register of Historic Places and was renovated as a result of increasing transit ridership during the 1980s. It is now the second busiest transportation center in New England.

South Station reopened in 1989 after undergoing major renovation, the concept for which has successfully transformed a rundown terminal plagued with

security problems into an active public amenity and focal point for the area around it. The renovation was funded through a three-way private-public partnership among the MBTA, the owner of the Station; Amtrak, an anchor tenant; and Beacon South Station Associates (BSSA). Beacon Management Company manages the facility today.

PLANNING PROCESS

South Station, a neoclassical revival-style building predating Grand Central and the old Penn Station in New York City, was dedicated on New Year's Eve 1898. For the next several decades, it was the busiest railroad station in the country, serving nearly 40 million passengers annually. By the 1960s, however, South Station was dilapidated and virtually unused. While saved from demolition in the 1970s, the station continued to function as a train facility both for Amtrak and commuter rail and had only one working elevator and one open staircase. In addition, the third floor had been closed after a fire and the fifth floor was completely abandoned. The desolate facility had become a haven for the homeless, which only served to exacerbate its negative image.

Restoration of the structure, which was performed by the MBTA, began in 1983 and was completed in 1989 under the Northeast Corridor Improvement Project. Funded by the federal government, this $4.4 billion program paid for the renovation of Amtrak train stations from Washington, DC, to Boston, Massachusetts.

The station was renovated in order to act as a catalyst for further development of the South Station/Fort Point Channel area; add an integral part to the city's patchwork of streets, parks, and public spaces; enable the MBTA to better meet the public's needs and to improve transportation service; and create a market square and public gathering place where people could comfortably meet, eat, shop, and mix.

The Federal Railroad Administration (FRA) hired the firm of DeLeuw Cather/Parsons to do conceptual designs for the entire transit corridor. Each station then sent out its own requests for proposals (RFPs) to select local designers for each part of the project, including station buildings, track beds, and platforms. Design fees were paid by the FRA directly to the local designers. As owners of South Station, the MBTA was involved in the design and worked with the local architect to build out the concourse, platforms, and tracks. At this point, the MBTA advertised for a developer manager to build out the concession and tenant floor. Beacon Management was selected through an RFP process. The specific development and management responsibilities were divided between the MBTA and Beacon and were put into a 65-year lease agreement.

STRATEGY

South Station handles about 36,000 passengers per day and runs 210 commuter and 27 Amtrak trains daily. About 1,000 passengers take Greyhound buses and 37,000 passengers use the Red Line subway each day. A new bus terminal is being constructed as part of the South Station Transportation Center.

Management. While the station is still run by the MBTA, Beacon Management Company develops and implements the merchandising plan for South Station and currently performs retail tenant management, the leasing of retail and office space and planning of special events. The company is also responsible for day-to-day management, maintenance, and security at the facility. Beacon Management Company hires and supervises maintenance staff and handles all public relations, including producing and distributing posters, brochures, and advertising of all station events.

Design. South Station is a five-story structure, the facade of which is Stony Creek granite and features 16 ionic columns. It was built as a double-deck station with 28 tracks. Two wings extend out from each side of a center section. The restaurant has coffered ceilings and the station has terrazzo floors, retail, a food hall, a grand concourse that is 300 ft long and 45 ft high, 125,000 sq ft of office space, and 25,000 sq ft of retail space.

Before the station renovation, the longer east wing, which ran along Summer Street, was torn down to

Figure 10-13. Case Study 10-4. Boston's South Station, Boston, MA, has become a venue for community and cultural events and fund-raisers as well as a transit station serving 36,000 passengers each day. (Credit: Beacon South Station Associates)

make way for Stone and Webster, an engineering firm, to construct their new headquarters. Originally, the firm had planned to demolish the entire station before landmark designation saved the building. The smaller west wing also had been partially destroyed. As part of the renovation, the MBTA made the two wings the same length and joined the ends with a glass wall; this served to create a new, larger concourse area.

Other unique design features include the only remaining double three-legged, hand-wind clock mechanism in New England, in the style of London's Big Ben. There is an eagle with an 8-ft wing span atop the station building. Much of the interior is mahogany and polished brass. As part of the historic restoration, original gas lights and station signage were also restored.

Beacon Management created standards for kiosk design, signage, and facades. They built four kiosks in the grand concourse, which camouflage ventilation shafts. Eight wooden benches conjure up images of historic train station decor. Additionally, more than 25 tables with chairs are located in the grand concourse and substantial seating is provided in the food court mezzanine.

Community Services and Events. More than 50 events per year are hosted by the Beacon Management Company at South Station. On a daily basis, there are exhibits, concerts, fund-raisers, performers, musicians, ballroom dancing, family-oriented programming, and health-related activities such as blood pressure testing. These events draw more than 50,000 people annually and help to support the station's 20 retailers. The community has been actively involved in running and advertising community-oriented special events and activities at the station.

Retail. Some 14,000 sq ft of retail space at South Station currently are occupied by 20 food, gift, and service providers. The retail mix reflects a wide variety of commuter-oriented services, which make South Station a convenient place for passengers to shop and reinforces the station's role as the "market square" for the area. Retailers include a florist, an accessory store, a bank, cafes, bakeries, a photo lab, trolley tours for tourists, a newsstand, a bookstore, and several local and national bars and restaurants.

Security. Security was not a design issue for the renovated station, as evidenced by the fact that there are now many more doors than before. Security has been improved primarily through the increased presence of several types of security personnel at the station. Boston City police patrol the exterior of the station, MBTA police have jurisdiction inside the station facility, Amtrak security handles the platform areas and trains, and the local private security forces, hired and supervised by the Beacon Management Company, monitor the station concourse and waiting areas. However, few security problems were cited at South Station; the large numbers of people using the station every day (50,000 total; between 3,000 and 5,000 area workers come to South Station daily for lunch alone) help create an active, safe environment. Later in the evening, security personnel ask people in the waiting room to show a purchased train or bus ticket.

FUNDING

South Station cost $100 million to restore. The FRA contributed $30 million, the FTA provided $10 million, and the remaining $60 million was funded through state bonds. In addition, Beacon Management spent approximately $25 million to develop the interior of the station, including the retail kiosks, seating, and so forth. Management and events programming are partially funded under tenant leases, including fundraising events to benefit the station, rental of the station to groups for private events, and by the MBTA's budget. Special events are paid for by sponsors and raise money for specific community causes (such as the Children's Museum). Profits, after all costs, are split evenly between Beacon Management and the MBTA.

OVERCOMING OBSTACLES

Multiagency partnerships can be unwieldy to handle, at least initially, if partners experience difficulty in sharing control. In the case of South Station, one partner oversaw station restoration (the MBTA), another manages the facility (Beacon Management), and both the MBTA and Amtrak run trains through it. This sort of arrangement can create design and maintenance difficulties, but they can be avoided if the people coordinating and overseeing the project understand all the key issues. Had the private developer/manager been brought on board sooner, the station build-out would have been more streamlined and cost-efficient because they would have had more input into the design and been better able to shape the retail and public areas, which they now lease, manage, and maintain. However, the partners at South Station have developed a good working relationship.

Financing also was difficult due to a complicated ground lease. In addition, the station has become so popular as a community gathering place that often times there is not enough space to accommodate the number and size of activities that occur there.

IMPACT AND ASSESSMENT

Once somewhat isolated by its location, the revitalization of this part of downtown Boston has created more than 6 million sq ft of office space in the area surrounding the station. Because South Station was in place, it provided a central focal point for the area and new developments have taken place around the station.

In 1990, the restoration of South Station was recognized by the Boston Preservation Alliance as the Best Large Scale Project and by Building Design and Construction as the Best Reconstruction project. In 1991, it was named the best Historical Commercial Rehabilitation project by the National Commercial Builders Council. South Station received a Merit Award in 1993 in the International Council of Shopping Center's MAXI Awards ceremony for community programming and received the 1995 International Building of the Year Award from the Building Owners and Managers Association.

Working with a private developer on the project has been so effective that the MBTA has privatized the management of South Station's new bus terminal over the train yards and contracted with Beacon Management Company for these services.

CONCLUSIONS

Through a public-private partnership, the MBTA has been able to create a transit facility that is integrated into and serves the downtown Boston community and provides innovative management and security strategies. These goals were achieved through the expansion of amenities and services at the station, which have helped transform South Station into a major activity center and contributed to the livability of the neighborhood, the downtown, and the city as a whole.

Case Study 10-5
Wilmington, DE: Wilmington Infrastructure Studies
Intergovernmental-Private Sector Partnership to Promote Enhanced Livability and Economic Development

SUMMARY

The Wilmington studies are a series of planning and design projects in the city of Wilmington, Delaware, intended to promote a balanced transportation system in the city giving full consideration to all modes of travel; to promote livability in downtown Wilmington and adjacent districts by providing a better connection between development, transportation, and public spaces; and to promote additional residential and commercial development in the city as a result of these proposed environmental and transportation enhancements.

The Wilmington studies include the following specific projects:

- A multimodal downtown circulation study;
- Four downtown gateway enhancement projects;
- Four residential traffic-calming and environmental enhancement projects;
- Two neighborhood retail district environmental enhancement projects;
- One major corridor design project;
- A transit center design project;
- Three intersection safety projects;
- One industrial development access project; and
- A signage program for downtown and adjacent districts.

All of these projects are being carried out under an innovative partnership among the transit agency, the city, the state transportation agency and the MPO.

PLANNING PROCESS

Downtown Wilmington is a typical U.S. city in many ways. Bounded both to the north and the south by rivers, the downtown is further defined by a major arterial street on the east and Interstate 95 on the west. With a shift of retail to the suburbs, the downtown, slightly more than 1 sq mi in size, has become primarily an office center, with more than 40,000 workers. The downtown has a small and weak retail core and several in-town residential rowhouse neighborhoods.

As in many cities, changes have been made over the last 40 years to the downtown to accommodate more and more vehicle capacity. Streets have been converted from two directional to one direction and many have been widened. Large surface parking lots have replaced aging residential and commercial structures to provide more parking for office workers. Superblocks have been created. Not surprisingly, over time, the downtown has become less transit, pedestrian, and bicycle friendly and more oriented toward private vehicles. In addition, the greatly modified traditional grid system does not even function very well in connecting vehicles with all desired destinations within the downtown.

In 1995, the Wilmington Area Planning Council (WILMAPCO), the designated MPO for the Wilmington region, the city of Wilmington, and the Delaware Department of Transportation (DelDOT), en-

tered into a partnership to enhance the environment of downtown Wilmington and adjacent residential and commercial corridors. The goal of the partnership is to promote the livability of the downtown and adjacent areas through the provision of a balanced transportation system that promotes a higher level of pedestrian, bicycle, and transit activities.

There are major jurisdictional overlaps related to the Wilmington studies. DelDOT, the owner and operator of a number of the streets downtown and in adjacent neighborhoods, serves as the operator of the transit system and as the primary source of transportation funding in the region. WILMAPCO is a regional planning agency that produces the regional long-range transportation plan and transportation improvement programs that guide funding. The city of Wilmington government regulates development in the study areas and also controls some potential funding. A program to substantially change the infrastructure and transportation services supporting downtown and adjacent districts requires a high level of cooperation among these institutions.

The Wilmington studies would not have proceeded had these agencies not undergone internal reorganization first. Specifically, WILMAPCO, as part of its long-range transportation-planning process, identified the need to reinvest and reinvigorate existing communities, a substantial policy change from existing transportation and land-use development trends. DelDOT, the operator of the state's road network and transit system, has recently gone through an extensive reorganization and reorientation as a result of a change in agency leadership. Historically, DelDOT, like many other state DOTs, was focused on new road construction, with less emphasis on maintaining the integrity of the existing system or promoting a balanced transportation system. As a result, the state entered the early 1990s with a very limited transit program and almost no investments in pedestrian or bicycle systems.

Figure 10-14. Case Study 10-5. Community meeting, Wilmington, DE. (Credit: Wilmington Area Planning Council)

The city of Wilmington, in an effort to improve its image and the quality of its business district and adjacent neighborhoods, initiated a citywide environmental enhancement planning program to create urban design guidelines and streetscape concepts for a number of key gateways and corridors in the city. The city plans to implement future plans through a series of demonstration projects funded through the regional transportation improvement program process and through a city capital improvements bond issue.

All of these very positive efforts to rethink public investments in urban environments at all levels of government are coalescing into a coordinated investment strategy for the city of Wilmington. The organizational structure of the Wilmington studies provides one of the key linkages between these initiatives.

In addition to this partnership, a broader steering committee, which oversees the progress of these projects, was organized. In addition to representatives of the three partners, the committee includes representatives of community groups, the business community, and special interest groups like the Delaware Greenways. The steering committee provides policy guidance and oversight for individual projects as they move through the planning and design phases. The steering committee had a significant role in amending the list of projects and project scopes to be included in the Wilmington studies. As a result of this committee's input, one major study corridor was substituted for another and project study boundaries were modified for several projects.

The organization for the Wilmington studies also has included the formation of a technical committee to provide technical guidance, coordination, and input into individual projects. For some projects, such as the multimodal downtown circulation study, the technical committee is central to the development of viable alternatives to be presented to the steering committee. The technical committee is composed of senior staff planners and engineers from the city, DelDOT, Delaware Transportation Corporation (DTC), WILMAPCO, and consultants. With this structure, a partnership is established both at the policy level and the technical level, which is proving to be very important in building and maintaining support for the projects.

STRATEGY

These Wilmington studies focus on developing recommendations for improving the downtown environment and creating opportunities for new development through transportation enhancements. Specific recommendations will be made for the transit system, bicycle routes, pedestrian environment,

and street configurations as means to enhance the livability of the downtown and the region.

Based on many meetings and community outreach, consensus formed around the importance of beginning with the multimodal downtown circulation study and phasing in the other projects. A consultant team was selected in December 1995 to begin work on this study. The multimodal downtown circulation study is structured as an intensive 7-month planning process that will include a series of four workshop cycles with the various committees and the public.

Although the time frame for completion of all planning and design work associated with the Wilmington studies is 15 to 18 months, particular emphasis will be given to early action items that can be implemented quickly and at a moderate cost. This is intended to build credibility and support for the project's longer term recommendations.

FUNDING

Planning and design efforts related to all of the Wilmington studies are anticipated to be well in excess of $1 million (exclusive of staff time from the agency partners). Final estimates are not available because some project teams have not yet been selected and as a result, scopes have not been finalized.

Funding for the planning studies comes from all three partners. For example, for the multimodal downtown circulation study, the city of Wilmington has funded an urban design consultant to establish urban design guidelines and streetscape concepts for the downtown; WILMAPCO, in turn, has funded consultant work for partnership coordination, public outreach, and an economic development assessment. DelDOT is funding the consultant team conducting the transportation assessment. This pooling of funds also supports the development of multiagency partnerships.

Funds have not yet been set aside for implementation of project recommendations, although three funding tracks have been discussed. First, once project planning recommendations have been made, these projects are eligible for funding through the TIP process, which uses state and federal program funds. A second potential source of project funding is a capital bond issue to be floated by the city of Wilmington in 1996. A third source of funding being explored for specific projects is the business community. Downtown Wilmington has a large corporate presence for a city of its size and there is a long history of corporate support for streetscape, parks, and road improvements adjacent to their buildings downtown.

OVERCOMING OBSTACLES

A number of institutional obstacles have been overcome to create an effective partnership. Most of the programs now being planned in a coordinated manner initially originated as independent projects of the three partners, with different but overlapping sets of stakeholders and technical consultants. A lack of coordination among the city, DelDOT and the MPO (which has the potential mechanism for funding) could have led to significant problems. For example, the city could go ahead with design plans for streets without input from the MPO and DelDOT. Likewise, DelDOT (the agency responsible for detailed planning and design for street, walkway, and transit improvements in the city) was formerly able to proceed without coordinating its efforts with the city and the MPO. This approach would have resulted in conflicting programs and counterproductive investment. Poor communication and institutional resistance to shared decision making were overcome through an ongoing series of intra-agency coordinating sessions where each agency presented its plans and issues. The limited pool of infrastructure funds played a major role in bringing all parties to the table.

CONCLUSIONS

Effective communication and coordination between various levels of government on a targeted urban planning and investment strategy, which coordinates transit and transportation issues, is difficult to achieve but essential to producing positive results. Prior to the establishment of the Wilmington studies planning process, agency efforts were proceeding independently and were often at cross-purposes. Now, the cumulative impact of a coordinated multiagency investment plan in a targeted area is likely to produce greater tangible results with broader impact on the livability of Wilmington than had each agency proceeded alone.

Case Study 10-6
Denver, CO: The Sixteenth Street Transitway Twenty Years of Public-Private Partnership and Reinvestment

Over the years, the mall has been the constant—growing in use and importance—as the downtown changes around it.
—Richard Bradley, President, International Downtown Association

SUMMARY

Denver's 16th Street Transit Mall—a mile-long transit way and public promenade lined with trees, shops, and restaurants—serves as a transit and pedestrian thoroughfare and demonstrates how a transit partnership can help create a livable metropolitan area. Exemplifying elements of innovative transportation services, high-quality design, and attention to management detail, the mall is an integral part of downtown Denver, nationally known as one of the most attractive and economically viable city centers in the country. The Downtown Denver Business Improvement District, originally called the 16th Street Mall Management District, is a public/private partnership that maintains the mall. Over 45,000 transit passengers use the mall daily and 45,000 pedestrians walk portions of the mall.

PLANNING PROCESS

The original concept for the downtown mall was developed in the early 1970s when downtown business advocates detected the same decline in retail sales experienced in other U.S. center cities. At the same time, the Regional Transportation District (RTD) was investigating methods to alleviate congestion, caused in part by downtown bus circulation, while improving the efficiency of its transportation services. In 1976, Downtown Denver, Inc. (DDI), a private-sector business association, joined the RTD and city officials to conduct feasibility studies for a combined pedestrian and transit way mall along 16th Street.

In August 1977, the architectural firm of I.M. Pei and Associates of New York, consultants hired by RTD, unveiled a model for a 13-block 16th Street Mall with bus transfer centers at each end. The entire 80-ft right of way would be dedicated to a pedestrian and transit path, flanked by retail shops. Within the "new" right of way, sidewalks would be widened and rebuilt with gray and red granite slabs. A 22-ft, extensively landscaped pedestrian area down the center of the street would divide two 10-ft lanes for specially designed shuttle buses. Except at cross-streets, all nonemergency vehicles would be excluded from the mall.

The plan received the enthusiastic support of most businesses, which saw in the proposal a way to create an attractive, pedestrian-oriented activity center that would entice people downtown and revitalize retail activity. An economic benefit study estimated the new mall would increase sales by 7.5 percent to 10 percent and that gains would be higher if the mall was properly maintained and managed.

Construction of the mall began in February 1980 and the 13-block transitway, the project's centerpiece, opened in October 1982. Patterned granite blocks replaced former street and sidewalk surfaces. Mature locust and oak trees, water fountains, special lighting fixtures, benches, and planters were all part of the unified design to enhance pedestrian use and enjoyment.

STRATEGY

There are two essential dimensions to the mall's effectiveness: the transit way with its free shuttle system, and the property owner assessment program, which privately maintains the mall.

Express, intercity, and regional bus routes were revised to terminate at the two transfer facilities rather than travel through the streets of the CBD to pick up and unload passengers. Twenty-six free-fare, custom-designed shuttle buses distribute passengers along the mall at 70-second intervals during peak periods, and at 3.5-min cycles during off-peak hours. This shuttle bus fleet has become a mile-long "horizontal elevator," serving downtown users 7 days a week.

The lower downtown Market Street Station, an underground, 10-stall bus transfer facility as well as new, aboveground headquarters for RTD, was completed in 1983. A year later, the Civic Center Station opened, incorporating a 9-stall bus transfer facility and underground parking garage.

To provide a broad array of supplemental maintenance, security, repair, programming, and marketing services required by a facility such as the mall, the downtown interests initiated in 1978 an amendment to

Figure 10-15. Case Study 10-6. The 16th Street Transitway was built and is maintained by a public/private partnership which also has been instrumental in promoting new development in the downtown. (Credit: The Denver Partnership, Inc.)

the city charter authorizing a special mall benefit district to pay for the care, management, and operation of the mall. The 16th Street Mall Management District (MMD) policy was set by a five-member board, composed of property owners, appointed by the mayor and headed by the city's manager of public works. The District was staffed by the Downtown Denver Partnership, which was created to manage DDI and the MMD according to the terms of a management agreement. Assisting the board is an advisory group of representatives from RTD, Downtown Denver Partnership, the city council, the police department, and various downtown business and residential communities. The mall's shuttle bus service and transfer stations are operated and funded separately by RTD.

Twenty years after its initial conception, the Denver transit mall is still part of conversations about the future of the downtown and the city. In 1992, when the original enabling legislation for the Mall Management District expired, a lengthy debated raged around issues as fundamental as the continued existence of the maintenance district. The outcome was the establishment of the Downtown Denver Business Improvement District, a self-taxing authority, which included a larger area of the downtown (while still focusing on the mall). The idea of mall management grew into the idea of downtown management.

The BID was expanded to include 130 blocks, or any property within four blocks of the 16th Street Mall. The BID now includes all of the lower downtown historic district, up to the southern boundary of Coors Field. The BID today provides the following mall enhancing services:

- Sidewalk area and transit way washing and sweeping;
- Trash pickup and removal;
- Landscaping and maintenance of trees and seasonal flowers;
- Lighting, electrical, and plumbing services;
- Granite paver maintenance and repair;
- Graffiti removal;
- Snow removal;
- Banners, public art, mall use permits, and management of sidewalk vending programs;
- BID management and administration;
- District-wide marketing, publicity, communication, and promotion;
- District-wide business retention and recruitment programs;
- District-wide support of city security services; and
- Special-events programming.

FUNDING

When the new mall was proposed, it received the blessing of the Urban Mass Transportation Administration (UMTA, now FTA), which approved federal funding for 80 percent of the construction cost, with the balance provided by the RTD. UMTA agreed with RTD that the mall's shuttle buses and transfer facilities would significantly improve accessibility to and within downtown as well as increase transit capacity and efficiency.

Capital costs for the entire project totaled $76.1 million, including $29 million for mall construction and $5.1 million for the initial fleet of 19 shuttle buses. The remaining budget provided for the construction of two transfer stations and renovation of the RTD administration building.

The $70 million public investment in the transit way leverages a $2 million annual assessment on private property (totaling $20 million to date) to help maintain and guide activities on the mall. The district's budget is raised through an annual assessment of district property owners. The assessment is calculated against land area and 5 percent of building area based on proximity to the mall, and currently ranges from 10 cents to 56 cents per square foot of land.

OVERCOMING OBSTACLES

The formation of the transit and pedestrian corridor was supported by the city, building owners and mangers, retail and hoteliers, and downtown residents.

In the past several years, however, major discussions have focused on issues related to development policies and the use of public incentives to support new economic activity along the mall, particularly to support retail uses that have been negatively impacted by the loss of downtown department stores. The appearance and marginal use of many of the buildings is a growing concern. As the economy of the center city changes, as new entertainment and sports facilities expanded at one end of the mall, traditional retail and office use began to decline. The result of the debate has been the decision to support the construction of a convention center, hotel and entertainment retail complex to help anchor the east end of the mall and to upgrade the attractiveness of this area.

The 13 year-old mall is also undergoing a significant capital improvement program to renovate and, at times, replace trash receptacles, street signs, maps and light fixtures. The BID is dedicating significant funds to this program. In addition, RTD is accepting propos-

als for newly designed and built shuttle vehicles to replace the current ones.

IMPACT AND ASSESSMENT

While the Downtown Mall Management District initially included only those properties between 14th and 20th Streets, in 1984 it was expanded to encompass approximately 865 property owners within a 130-block area of downtown.

The mall's unified design and creative solution for successfully combining pedestrian and transit users has received national acclaim. Major national retailers have been attracted to the mall, led by the two-block long, three-story Shops at Tabor Center, developed by an affiliate of the Rouse Company of Columbia, MD.

Moreover, the management district has been able to make many improvements, including reducing crime on a continuing basis. For example, in the last 3 years crime has been reduced by 17 percent, and now the downtown is considered to be one of the safest areas in Denver.

CONCLUSIONS

Today, downtown Denver is undergoing a dramatic resurgence. In the last 3 years, $500 million in public and private money has been reinvested in the downtown and an additional $250 million is planned to be invested in the next several years. While it is difficult to attribute this success exclusively to the pedestrian transitway, clearly many of these major investments are taking shape around the 16th Street Mall. Because the transitway has proved that it is an effective transportation link, it has laid the basis for the new cultural and entertainment economy in the city. Because of its dynamic nature, the 16th Street Mall continues its function as downtown's spine and civic open space, serving as a host, a beacon, and an entertainer for its diverse array of users and visitors.

CHAPTER 11

Planning, Design, and Management Strategies for Livable Places

As the case studies demonstrate, there are many simple and practical planning, design, and management strategies used by communities to enhance their livability. This chapter presents a process for developing these strategies as well as examples of typical projects and programs that can be developed to address a specific need or problem, including the following:

- Ways to identify whether or not a place is successful, using on-site observations and visual clues;
- Different methods for measuring and systematically identifying these problems;
- A summary of model design, management, and transit-related approaches that can be tried; and
- References to relevant case studies from this report.

This checklist is not intended to be all-encompassing, but rather to serve as a starting point for a community-based planning process. It can be used by professionals and lay people alike; professional planners may find it especially useful in developing more detailed plans and design proposals.

ABOUT PLACE PERFORMANCE EVALUATION

People often ask, "How can we avoid repeating past mistakes and build transit facilities that contribute rather than detract from the livability of our communities?" This section describes one method: "Place Performance Evaluation" (PPE). PPE is a series of tools that professionals and community members can use to measure the overall performance of an existing place (e.g., a bus stop, a train station waiting room, or the site of a future bus transfer center) using specific "livability" criteria.

Evaluation of the issues particular to a place can be undertaken through a variety of techniques. These include systematically observing and recording activities at relevant locations, conducting special interviews with community members to elicit ideas and opinions, distributing community surveys to gather input on a variety of issues, and, in some cases, taking time-lapse film and still photographs to illustrate issues of concern. When communities actually take part in collecting data, there often is a significant increase in the quality of information collected and the level of involvement in project implementation. Users of a place have a great deal of valuable personal experience and knowledge, even though they may never have observed or thought about how others use it. [1]

Evaluation tools include the following.

Systematic Observations. Observation is the best way to learn how a place is used, whether the place is a small neighborhood bus stop or a train station used by thousands of people each day. However, transit planners often focus on operational efficiency—for which there is generally much data—without examining how transit facilities are actually being used. The result is that issues of operational efficiency instead of issues of customer comfort and use become the primary criteria used in transit planning.

Systematic observation techniques are simply tools that help focus casual observations and help document issues or problems that might be overlooked. These techniques also enable an observer to quantify what would otherwise be regarded as intuition or opinion, contributing to a better understanding of the full extent or severity of a particular problem. Observation techniques include behavior mapping, where an observer records the location and type of activities taking place as well as information about

users at regular intervals throughout the day and over a period of time, pedestrian counts of major routes and "tracking" routes or paths taken by users through a space. Time-lapse filming is a more sophisticated tool that can be used to collect this type of information, which also has the advantage of being an effective means of presenting results.

In general, observation techniques help to define, in real terms, how transit can contribute to the livability of a community. For example, when judging the performance of a specific bus stop, or making sure that it is situated in the proper and most convenient location for current and future riders, one would be able to answer questions such as the following:

- How easy is it to get to and from the bus stop to the surrounding neighborhood?;
- Are there places to sit in the shade if it is a hot climate; does it look inviting and attractive; are people waiting comfortably?;
- Is the area "busy"—with activity either at or around the stop or in areas near to the transit stop?; and
- Do people speak to each other or interact with each other; do they seem to know each other or recognize friends?

Surveys and Interviews. In addition to observing how a place is being used, understanding people's perceptions is also important, particularly the perception of people who do not use a place. The main objective in measuring people's perceptions should be to find out what people like and dislike about a place and how they think it could be improved. Qualities such as cleanliness, safety, and availability of amenities such as food, newspapers, and restrooms can be rated by transit users if they are asked about a specific place with which they are familiar. These questions should also be posed to area businesses and other adjacent uses, as well as to people living and working in the immediate vicinity.

For the non-users of a place, the questions must be different and should address why they do not use a place and what, if anything, could be done to encourage them to use it. A similar approach is used if a place does not yet exist, such as a new transit facility. Surveying non-users is in many ways more complex than observing or surveying an existing place. However, with today's computer technology, it is not difficult to conduct mail or telephone surveys and tabulate the results.

Finally, interviews should also be conducted with key individuals and representatives of organizations who could play a role in implementing a project or program. These interviews are especially important as the first step toward building effective, ongoing partnerships.

Focus Groups. In many situations, small focus group sessions or informal discussions with targeted audiences (such as seniors, students, merchants, or a combination of groups) can be especially useful in the early, exploratory stages of a project before detailed observations and surveys are undertaken. Through these open, informal discussions, which can be guided by the same questions that are used for a survey, people talk and share their ideas about existing projects and programs with others. This invariably leads to numerous creative ideas for improvements that people and organizations can cooperatively undertake.

Community Workshops. Large community meetings are also useful, when properly managed, not only to involve people, hear what they have to say and resolve conflicts, but to challenge people to raise their expectations. To elicit the creativity of the community, to stretch perspectives and encourage bolder thinking, examples from other cities should be sought to demonstrate possibilities that stir people's imaginations. These examples can also stimulate thought and discussion about additional issues and potential solutions that can be put into action, which is usually most effectively accomplished in smaller focus groups. These groups can then report their findings to the larger reassembled workshop.

DEVELOPING THE VISION

Qualitative and quantitative information about the use of places that is gained from observations, meetings, and surveys can then be combined with information about demographics, transit ridership, and market research information. Together, all this information provides a picture of the broad range of issues that need to be addressed in planning a transit facility or service so that it contributes to the livability of the community that surrounds it. Some of the issues will directly impact transit, while others will not. An understanding and commitment to dealing with both transit and community issues provides an opportunity to develop important working relationships with community organizations, many of which may not have worked with a transit agency before. The result of this process is a vision: ideas for the program, goals of the community, and organizations or individual partners who should be kept informed and involved, very often through some kind of task force or working group, and the "tasks" to be accomplished.

LIVABLE PLACES: A CONCEPTUAL MODEL

Based on its own research as well as quality of life research, Project for Public Spaces, Inc., has developed a simple graphic that describes a model for evaluating the attributes of livable places. These attributes reflect the common issues that people tend to identify when they talk about livability in their communities, and include tangible, statistical aspects as well as the intangible qualities that people feel toward a place or a neighborhood. These attributes, which are presented in Figure 11-1, fall into two categories:

- *Key Attributes* of places are the components which, based on livability research, are essential ingredients of a place: uses and activities, comfort and image, access and linkages, and sociability. These general criteria arise again and again when people talk about the problems and needs of their communities.
- When people describe their communities, they use words like "safe," "fun," "charming," and "welcoming." These words describe the *Intangible Qualities* of communities that relate to specific types of attributes.

An important consideration in developing this model was not making value judgments as to the relative importance of different attributes to different communities. Rather, it is up to each community to choose its own priorities. Different socioeconomic situations, living conditions, and political context make each community unique. A community is also in the position to determine the scale of improvement, that is, whether a project or program should be initiated at a "place" versus in a larger neighborhood context.

This model can be extended to include other issues. For example, one of the challenges in creating livable places is the general lack of communication between different city agencies, professions, and interest groups responsible for a place. This model helps to identify groups (chambers of commerce, block associations, and so on) associated with specific attributes that could be approached to participate in a project.

Figure 11-1. This diagram depicts the principal attributes people want in their communities. (Diagram by Project for Public Spaces, Inc.)

STRATEGIES FOR CREATING LIVABLE PLACES

Each of the following sections presents a different attribute from Figure 11-1.

Uses and Activities

"Uses and Activities" are the basic building blocks of any place: they include all the reasons why people come to an area. The types of land uses or activities help determine what makes a place in a community special or unique. Uses and activities do not necessarily have to be inside a structure; public spaces, too, can accommodate a variety of activities.

Very often, transit uses and functions operate separately from other community activities. For example, many bus transfer terminals located in isolated areas have no other use than providing access to other buses. In this situation, where there is little or no other activity taking place, it is less likely that transit is a factor in enhancing livability, other than providing mobility. However, if the bus terminal is more centrally located, and there is a place where one can buy a newspaper, get a snack, visit a farmer's market, or window shop, then the transit use will be contributing to the overall activity and livability of that area.

Visible Signs . . .
. . . of Success

- ❏ Many different types of activities are occurring.
- ❏ Many different kinds of people and different age groups are using a place (children, elderly, families).
- ❏ Activities are not necessarily related to a specific facility or a planned event.
- ❏ There are several "choices" of things to do, and it is easy to go from one choice to another.

. . . of Problems

- ❏ Spaces are empty of people for all or part of the day.
- ❏ Security problems are evident (broken windows, graffiti, vandalism).
- ❏ Buildings are vacant or underutilized.
- ❏ Uses are isolated from each other or cannot be seen.
- ❏ Spaces are too small and congested for the number of transit riders present.

Ways of Measuring

- ❏ Record the number and type of activities at different times of the day and of the week.
- ❏ Survey the community or space users about their perceptions of current uses and activities and what they would like to see there in the future.
- ❏ Inventory existing land-use patterns to determine what activities are present or missing.

Approaches . . .
. . . to Design

- ❏ Create a public space that can be programmed for a variety of uses.
- ❏ Provide amenities that support desired activities.
- ❏ Provide specific uses and activities in adjacent or nearby structures.

. . . for Management

- ❏ Program community events and activities, such as markets and local festivals.
- ❏ Develop strategies to lease empty buildings to help revitalize an area.

. . . for Transit

- ❏ Make a transit stop the central feature of a place.
- ❏ Develop easy transfers between buses or modes of transportation.
- ❏ Provide amenities for transit patrons.
- ❏ Provide information about attractions in the area.
- ❏ Designate a liaison from a transit agency to coordinate with users in the area.
- ❏ Train on-site transit personnel (such as ticket agents) to provide information about uses and activities in the areas adjacent to a facility.

Selected Case Study References

- *Green Line Initiative, Chicago*
- *Pioneer Courthouse Square, Portland, Oregon*
- *Woodbridge Station, New Jersey*
- *KidStop, Shady Grove Metro Station, Maryland*
- *Davis Square, Somerville, Massachusetts*
- *Downtown Crossing, Boston, Massachusetts*

Comfort and Image

"Comfort and Image" reflect the subjective experiences of people as they use a place. Issues like safety and cleanliness are often uppermost in people's minds. Other issues are less consciously acknowledged,

although people are absorbing tremendous amounts of "data" being projected by the environment: scale, character of buildings, sense of safety, and "charm." People become aware of other specific aspects, however, like the need for a bench when they want to sit down.

Transit patrons are concerned about comfort and image during their entire experience: from the time they enter a station and board a vehicle until they reach their final destination. For this reason, issues of security and cleanliness to a community also affect transit riders. How a transit agency manages its facilities affects a broader area. In the same way, transit facilities can increase comfort in an area; for example, benches used by bus riders can also be used by shoppers if they are in a location convenient for both. Or, an attractive, pleasantly scaled transit facility can contribute to the attractiveness of a whole area.

Visible Signs . . .
. . . of Success

- ❏ Spaces are clean and free of litter.
- ❏ Seating is located near other activities.
- ❏ Users have a choice of places to sit or use, either in the sun or shade; appropriate weather protection is also offered.
- ❏ Antisocial activities are not able to dominate use of a space.
- ❏ Someone seems to be in charge.

. . . of Problems

- ❏ Few places exist for people to sit.
- ❏ The environment generally appears unattractive or unsafe.
- ❏ Buildings or spaces lack human scale.
- ❏ Litter and other signs of lack of maintenance are evident.
- ❏ Poor environmental (air, water, etc.) quality exists.
- ❏ No one is obviously in charge.
- ❏ There is a lack of weather protection.

Ways of Measuring

- ❏ Review actual crime statistics and complaints.
- ❏ Survey people's perception of an area (safety, attractiveness, and cleanliness).
- ❏ Analyze actual use of amenities such as seating.

Approaches . . .
. . . to Design

- ❏ Upgrade the physical appearance of a place with improved materials.
- ❏ Add public amenities (seating, telephone, and waste receptacles).
- ❏ Provide information (for transit facility and surrounding area).
- ❏ Create community-oriented public art.
- ❏ Restore or renovate existing buildings.
- ❏ Add trees and landscaping.

. . . to Management

- ❏ Provide special security programs, such as community policing.
- ❏ Increase security presence through uses and activities, or by having someone in charge of the area.
- ❏ Upgrade maintenance, including both daily cleaning as well as preventive maintenance of physical facilities.

. . . for Transit

- ❏ Ensure customer-friendly operations on and off transit vehicles.
- ❏ Initiate special security services for transit riders.
- ❏ Establish cooperative efforts with local communities and police.
- ❏ Reorganize organizational structure to create station and transit terminal managers.

Selected Case Study References

- *Tohono Tadai Transit Center, Tucson, Arizona*
- *Station Managers Program, New York City*
- *Port Authority Bus Terminal, New York City*
- *Los Angeles Neighborhood Initiative, Los Angeles, California*
- *Rider Advocate Program, Portland, Oregon*

Access and Linkages

Transportation "access and linkages" are ways to connect places in communities. A successful neighborhood allows access to and linkages between places: a variety of options for people to get from one place to another (that is by walking, transit, bike, or car). Or, said another way, a successful place has a variety of ways to get to it (not just by car).

Access and linkages also refer to how well a specific place, like a transit facility, connects to the immediate area around it, and the ability of people to circulate within that place and to reach different uses. There is a qualitative component to access as well: access is affected by other factors, including physical

elements (a continuous row of stores along a street is more interesting and generally safer to walk along than a blank wall or empty lot) as well as perceptual (ability of people to see a transit stop from a distance).

Visible Signs . . .
. . . of Success

- ❏ People can easily walk to the place; they are not darting between moving cars to get to the bus stop.
- ❏ The interior of the place or transit stop is visible from the outside.
- ❏ Sidewalks lead to and from adjacent areas, allowing for convenient pedestrian access.
- ❏ Occupants of adjacent buildings use the place.
- ❏ Continuity of street-level for uses makes for a pleasant walking environment.
- ❏ A variety of transportation options provide access (transit, car, and bicycle).

. . . of Problems

- ❏ Traffic is congested or fast-moving, acting as a barrier to pedestrians crossing the street.
- ❏ Bicycles are infrequently used as a way of access.
- ❏ People are walking in the street or along areas not paved as sidewalks.
- ❏ Pedestrian-oriented uses (such as storefronts) are discontinuous, creating an unpleasant walking environment.
- ❏ There is insufficient parking.

Ways of Measuring

- ❏ Conduct observations, counts, and tracking of pedestrian circulation within and around a place.
- ❏ Record the location and finish treatment of sidewalks and number of curb cuts to determine suitability for walking.
- ❏ Map the area (to determine which uses generate pedestrian activity).
- ❏ Survey pedestrians to determine attitudes and patterns.
- ❏ Survey the broader community to determine how and why different modes of transportation are used.
- ❏ Conduct parking turnover studies to determine efficiency of use.
- ❏ Conduct traffic studies to determine level of use during the day and, the week, as well as occupancy of vehicles.

Approaches . . .
. . . to Design

- ❏ Widen sidewalk or provide sidewalk extensions at crosswalks, better balancing pedestrian uses with other uses of street (vehicles, transit vehicles, bicycles, and deliveries).
- ❏ Construct more clearly marked or more conveniently located crosswalks.
- ❏ Make accommodations for bicycle users (bike lanes, lockers, and storage racks).
- ❏ Infill vacant lots with structures and uses to create continuity of pedestrian experience.
- ❏ Balance on-street parking with other uses.

. . . to Management

- ❏ Change traffic signalization or street utilization to improve pedestrian access.
- ❏ Improve utilization of parking through changes in enforcement or regulation.

. . . for Transit

- ❏ Establish neighborhood shuttle or circulator vehicles.
- ❏ Adjust or expand route locations and schedules.
- ❏ Create intermodal centers, allowing transfers between transportation modes.
- ❏ Establish services for special users (children, teenagers, and the elderly).

Selected Case Studies

- *Pioneer Courthouse Square, Portland, Oregon*
- *Davis Square, Somerville, Massachusetts*
- *Wellston Station, St. Louis, Missouri*
- *Aspen City Shuttles, Aspen, Colorado*
- *Watts Shuttle, Los Angeles, California*
- *GO Boulder, Boulder, Colorado*
- *LINC, Seattle, Washington*
- *Staples Street Station, Corpus Christi, Texas*

Sociability

Because neighborhoods are social places, the attribute of "sociability" is a crucial component of any good community place. When people meet friends, see and greet their neighbors or even feel comfortable interacting with strangers, they tend to feel a stronger sense of place or sense of attachment to their community.

This is generally a difficult quality to achieve around transit facilities, because the type of activity (waiting

USES AND ACTIVITIES

1 - Transit is a key use!

2 - Plaza becomes opportunity for new small businesses using kiosks and vending carts.

3 - Adjacent businesses benefit from spinoff activities.

COMFORT AND IMAGE

4 - Plaza provides variety of places to sit and attractive landscaping.

5 - Information kiosk about local services and transit.

6 - Shelters provided by transit riders, who can also wait in the plaza.

ACCESS AND LINKAGES

7 - Community vans connect to variety of local destinations.

8 - Regional buses connect to other communities.

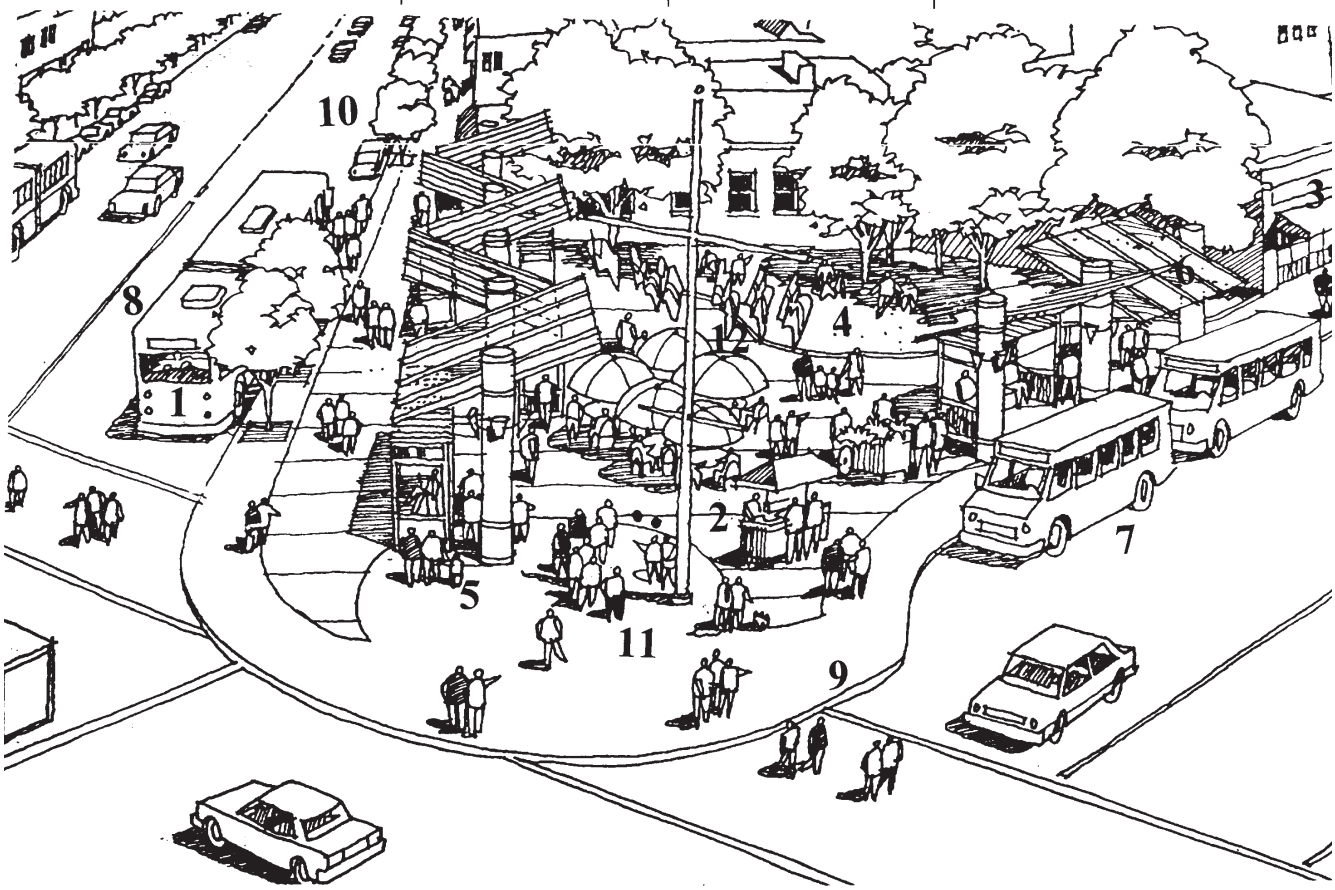
9 - Sidewalks widened to improve pedestrian access.

10 - Streetscape amenities improve connection to adjacent retail area.

SOCIABILITY

11 - Plaza provides setting for a variety of community events.

12 - With combination of transit and retail activities, plaza and cafe becomes a social gathering place.



Figures 11-2 and 11-3. Proposed LINC Neighborhood Transit Center (Figure 11-2) and proposed development near a historic station in San Bernardino, CA (Figure 11-3) illustrate place-making principles. (Credit: Project for Public Spaces, Inc.)

USES AND ACTIVITIES

1 - Historic train station renovated for commuter rail & Amtrak.

2 - Existing shopping center redesigned to create new space for local businesses.

COMFORT AND IMAGE

3 - New community plaza created with variety of amenities.

4 - Retail business and direct visual access help improve security.

5 - New trees and land-scaping make area more attractive.

ACCESS AND LINKAGES

6 - Station re-opened for new commuter rail.

7 - New bus stop connects to downtown.

8 - New grand stair connects plaza and retail center.

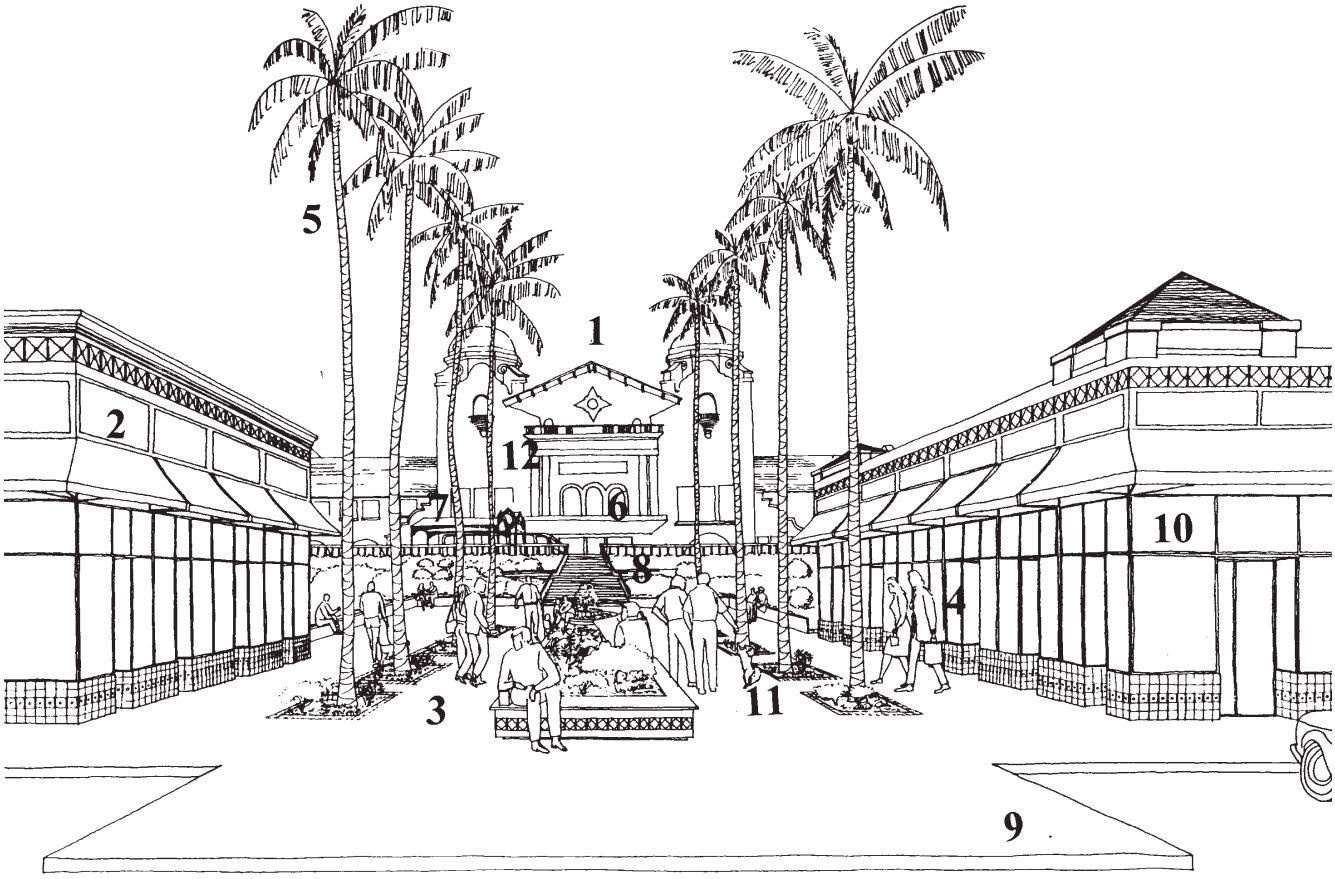
9 - Pedestrian improvements to parking lot improve access.

SOCIABILITY

10 - New community center/catering hall created.

11 - Plaza provides space for small events.

12 - Grand station lobby becomes space for community activities.



Figures 11-2 and 11-3. (continued)

for a bus or train) is not often a social experience; in addition, the vehicles themselves can create barriers to the sociable use of a space, through noise, fumes, and so forth. However, successful transit stops that integrate other uses and activities help to create an environment where socializing can naturally take place.

Visible Signs . . .
. . . of Success

- ❏ People use the place (or facility) regularly by choice.
- ❏ Users know each other by face or by name.
- ❏ "Triangulation" occurs (an event occurs causing strangers to talk to each other).
- ❏ People bring their friends and relatives to see the place or they point to one of the elements with pride.
- ❏ People are taking pictures; many photo opportunities are available.
- ❏ Strangers make eye contact; people smile and display affection.
- ❏ There is a mix of ages and ethnic groups that generally reflects the community at large.
- ❏ People tend to run into someone they know.
- ❏ People tend to pick up litter when they see it.

. . . of Problems

- ❏ People do not interact with other users of the place.
- ❏ There is a lack of diversity of people using a place.

Ways of Measuring

- ❏ Record people's use and behavior at different times of the day, week, and year.
- ❏ Record the location of activities.
- ❏ Survey people about perceptions of a place.
- ❏ Identify the number of people who volunteer to help or just assume responsibility for a particular area.

Approaches . . .
. . . to Design

- ❏ Develop public gathering places to accommodate a variety of community activities.
- ❏ Arrange amenities to encourage social interaction (groupings of seating, moveable seating, etc.).
- ❏ Provide a variety of uses in adjacent buildings to attract a diversity of people.

. . . to Management

- ❏ Stage special events and activities to draw people.
- ❏ Encourage community volunteers to assist with improvements or maintenance of a place.

. . . for Transit

- ❏ Integrate transit stations into spaces where socializing and community activities take place.
- ❏ Design facilities so that there is room for social activities to occur.

Selected Case Study References

- *Pioneer Courthouse Square, Portland, Oregon*
- *Downtown Crossing, Boston, Massachusetts*
- *Davis Square, Somerville, Massachusetts*
- *South Station, Boston, Massachusetts*
- *Staples Street Station, Corpus Christi*

PUTTING IT ALL TOGETHER

To create livable places in communities requires that many physical aspects of place be orchestrated at the same time as the planning process described in Chapter 10, which, as has been seen, is equally important to the final results. Each of the case studies has "put it all together" in different ways. The two examples shown here apply place-making strategies to two very different com-munities: LINC in Seattle (see Case Study 9-2) and a historic train station in San Bernardino.

ENDNOTE

1. Two publications by Project for Public Spaces are especially useful in understanding and applying different observation and survey techniques. They are *What Do People Do Downtown* and *User Analysis for Park Planning and Design*. Both are available for purchase through PPS at 153 Waverly Place, New York, NY 10014.

CHAPTER 12

Conclusions and Next Steps

Historically, transit has played a crucial role in advancing the livability of American communities. For nearly a century, until the late 1950s and early 1960s, transit was a potent force in spurring the development of communities and shaping community life, as well as providing the connections within communities that brought people together. Increased emphasis on automobile travel changed this situation. However, as the case studies show, transit is once more fostering communities where people can come together in a hospitable and livable environment.

History, however, is not exactly repeating itself. The old horse-drawn and electric trolley cars of the past now have a modern, more comfortable counterpart in light rail. Technology is not the only thing that has changed. Communities today face new challenges, conditions, and needs. As the programs presented demonstrate, innovative approaches can knit together communities and restore their livability—when they are designed in response to local needs through a partnership process that links transit agencies with the communities they serve.

Recent changes in federal transportation planning processes are very supportive of this new partnership role. While obstacles remain, all of the initiatives presented were able to overcome these obstacles to achieve improvements in transit and community livability that, in many cases, exceeded expectations.

The chapters—each presenting different livability themes—offer evidence of the potential for this approach to enhance many different facets of community life. They show the powerful role that transit can play in the creation of livable communities by doing the following:

Creating Places for Community Life. Livable communities are communities where people socialize and come together, which reinforce a sense of common purpose and establish centers for public life. Transit facilities are themselves activity focal points. The transition from transit stop to public space involves linking together activities that already take place or could take place in most communities.

Acting as a Catalyst for Downtown and Neighborhood Renewal. Livable communities are communities that have accessible and convenient commercial centers that support a community economically and socially. Commercial districts in downtowns and neighborhoods have traditionally been among the most important destinations for transit services. It is not a coincidence that the economic decline of these districts has been mirrored in the decrease in transit ridership across the United States. At the same time, transit facilities—whether they are simple bus stops or major stations—can act as "ground zero" for the rebirth and revitalization of downtowns and neighborhoods.

Creating Opportunity for Entrepreneurship and Economic Development. Livable communities are communities that offer economic opportunity to all citizens. Transit brings the foot traffic necessary to support small businesses and provides access to jobs. In today's society dominated by retail chains in far flung suburban locations, support for small, independently owned businesses and entrepreneurs is essential for the long-term economic growth of most communities.

Improving Safety and Amenity. Livable communities are communities where people no longer fear for their personal safety and feel comfortable in a public environment. With the loss of places where people feel comfortable has come the perception by many that transit facilities are places to fear and avoid, even though statistically they are usually safe and virtually free of crime. As a perceptual problem, the solution to crime cannot be separated from other livability issues and, in particular, from the need to create an en-

vironment where people feel comfortable and safe. Making transit facilities an asset and an amenity is an important step in improving safety.

Making Communities Accessible and Convenient. Livable communities are communities where people have a variety of transportation alternatives. The basic mobility function of transit is, indeed, integral to the livability of a community. Special services and approaches are emerging to enable transit to serve a community more effectively and efficiently, while encouraging new land-use policies that center around transit as a fundamental choice.

Shaping Community Growth. Livable communities are communities where growth enhances community life, not destroys it. Mismanaged growth erodes all aspects of a community: its accessibility and convenience, its centers of public life, its sense of safety and amenity. Transit can act as a focal point for reorganizing urban growth and creating mixed-use centers. It can also be an essential component of new land-use policies that set the stage for future, more livable places for people to live and work.

This report presents a compelling picture of what has been accomplished across the United States. It reveals the common threads that can link these separate themes into a more holistic vision of transit's role in enhancing community livability. The case studies and examples are presented in order to stimulate other communities throughout the United States to undertake similar innovative transit programs to address their own particular livability needs. At the same time, the work in the communities that the case studies have presented is by no means finished. Most of the projects presented, exemplary as they are, could be improved or built upon to generate even greater community improvement—whether it be minor design modifications or a major new development.

Figure 12-1. The Big Blue Bus, Santa Monica, CA, circa 1955. (Credit: The Big Blue Bus)

What must be done now is to raise widespread awareness of the viability of these programs as springboards for rekindling the kinds of comfort, activity, and convenience that enhance community life. The programs described herein can act as a beacon for future initiatives, along with other livability-oriented transit programs taking place that still need to be investigated. In addition, other, untried transit innovations must be applied, tested, and evaluated, and those already in place have to be tried in other settings and situations.

Clearly, what is needed is a broad campaign to advance such efforts and integrate the community partnership approach into the way transit agencies plan, design, and build transit. In fact, this approach needs to be applied to transportation planning in general. It is hoped that communities and transit agencies alike will find this report a useful tool in this vital effort.

APPENDIX A

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TCRP Project B-9: Market Segmentation Strategies to Increase Transit Ridership.
TCRP Project B-10: Role of Passenger Amenities and Transit Vehicle Characteristics in Building Ridership.
TCRP Project B-11: Customer-Defined Transit Service Quality.
TCRP Project F-6: Guidelines for the Effective Use of Uniformed Transit Police/Security Personnel.

TCRP Project G-1: Information Technologies—State-of-the-Art Applications for Transit Properties.
TCRP Project H-3: Policy Options to Attract Auto Users to Public Transportation.
TCRP Project H-4A: Strategies for Influencing Choice of Urban Travel Mode.
TCRP Project H-4B: Transit Markets of the Future—The Challenge of Change.
TCRP Project H-4E: Sustainable Transportation.
TCRP Project H-8: Using Public Transportation to Reduce the Economic, Social, and Human Costs of Personal Immobility.
TCRP Project H-10: The Costs of Sprawl—Revisited.

APPENDIX B

A Review of Livability Research

From the research conducted for this study, there seem to be three different schools of thought on quality-of-life research, research that actually reflects the approaches of different disciplines (economists, sociologists, and geographers) who have conducted the research.

THE STATISTICAL APPROACH

One school of thought states that quality of life can be measured statistically through variables available from census data, climate information, economic measurements, demographics, and other government statistics. For example, one team of economists developed a sophisticated model using census data on climate, environmental, and urban conditions to rate 253 urban counties. Their highest ranked: Pueblo, Colorado; Norfolk, Virginia; and Denver-Boulder, Colorado. Their lowest ranked: Birmingham, Alabama; Milwaukee, Wisconsin; and St. Louis, Missouri. [1]

Many popular publications have taken this same approach to quality of life: rating and comparing hundreds of towns and cities across the United States. With names like *Places Rated Almanac: Your Guide to Finding the Best Places to Live in America*, these books appeal to Americans looking for that greener grass or corporations thinking about relocating to a more "livable city." Unfortunately, comparisons between cities are based solely on the variables an author selects, which are subjectively weighed relative to other factors. Even with more sophisticated models, the results of such approaches are questionable, because the statistics selected for analysis ultimately pre-determine the outcome.

Not surprisingly, different authors have come up with radically different ratings for the same cities. "Comparing the rankings of some cities in *Places Rated* with those in the *National Metropolitan Area Study* is like comparing dirt to diamonds: The ranking for Midland, Texas shot up from 258 in *Places Rated* to 1 in the new survey. Rochester, Minnesota, jumped from 200 to 7 overall. These results are so encouraging that the city plans to incorporate them in a marketing program for the area . . ." [2]

Of course, the volatility of these factors should warrant suspicion about their value—although people in communities (especially those given low marks) take them quite seriously. The authors of *Places Rated* report, "We get a lot of mail about our book. Some of it ticking." [3]

This outpouring of community pride, whether the city is rated high or low, shows that there is a great deal more to livability than a collection of statistics, and that community perceptions need also to be considered. For example, in the 1987 *Places Rated*, Austin was given a very low rating for climate; however, surveys of residents of Austin show that people do not dislike their climate. [4] In addition, as one author pointed out about these rating systems, "Is climate more or less important than the number of jobs, the employment level, in the community? In practice, researchers usually give each factor the same weight. This is the most unrealistic but most convenient thing to do. These factors are not equally important in the mind of the individual." [5]

THE PERCEPTUAL APPROACH

The realization that quality of life can vary according to "the mind of the individual" has led to the next most common approach to studying community livability: surveys that ask people to actually rate quality of life in their own city or region. As one analyst pointed out, these surveys are more useful because "Quality of life means different things to different people . . . (It) is in the eye of the beholder." [6] Surveys of this type have been done in hundreds of communities, as well as on a national level. In a cross section of

Americans asked to define quality of life, in fact, the main response was "getting good things, living well, and enjoying peace, security, and happiness." [7]

While it is hard to argue with these principles, city-specific surveys are more useful because they can form a basis for understanding how people rank different factors about livability. For example, in a study by Donald Appleyard, San Francisco residents were asked to state what was most important to them when choosing a street to live on. "The two most dominant concerns were "cleanliness" (86%) and "crime" (86%). . . . (The extremely high emphasis on "cleanliness" and "appearance" was further confirmed by widespread mention of "neighbors keeping up property" (78%), "attractive appearance" (74%) and "greenery" (71%). . . . It was much higher than mention of social or economic qualities. Access to public transport (79%) was the third most common priority. This was considered substantially more important than other aspects of access. Of these others, "good walking conditions" was followed by "access to shops" and "parks." Access to parks, sixteenth on the list, was very much lower than expected. . . . Of the traffic-related emissions, "minimal air pollution" (75%) was the fourth priority overall, while "peace and quiet" was the tenth, followed by "safety from traffic." [8]

"What people want from a residential and street environment," Appleyard concludes, "may be security, peace and quiet, comfort, cleanliness, attractive appearance, privacy, territorial control, convenience, good parking, street life, neighborliness, or other amenities. Expectations can significantly affect perceptions and satisfaction. . . . The more affluent are likely to be more critical of their streets because they know of other choices, whereas lower-income groups may be satisfied with what they have." [9]

In a larger survey of New York State residents, people were asked to rank the importance of different factors in helping a person decide where to live. [10] "Not surprisingly, the sample of New Yorkers chose economics as the most significant feature of the place they would like to live, followed by climate, crime, housing, education, health care and environment, recreation, transportation, and finally, the arts." [11]

Surveys of community perception of livability have been compiled into a unique publication that compares 261 separate surveys that evaluated both local government services and quality of community life throughout the United States. Published by the International City Managers Association, this book, *Citizens Surveys: How to Do Them, How to Use Them, What They Mean*, by Thomas Miller and Michele Miller, standardizes the results of these surveys so that future studies would have a benchmark for comparison. [12]

Miller and Miller asked what distinguishes a community whose residents gave high marks to quality of life in the community. What they found is that "The community where quality of life is more likely to be rated high is the one that has outcommuters (is a suburb), has between 10,000 and 250,000 residents, has lower crime rates, has residents with higher incomes and more education, and provides good services as evaluated by the residents themselves. Almost half of the variation in ratings of community quality can be explained by a community's size, perceived level of local government service, wealth, and proximity to a metro employment center." [13] However, Miller and Miller could not find a correlation between general perceptions of quality of life in a community and the rankings of specific city services.

From the 261 surveys, Miller and Miller developed what they call "percent to maximum" norms for different categories of quality of life. In other words, they adjusted the findings of different surveys (which used different types of rankings), so that results could be compared. A city conducting a new survey can therefore see how it compares with other cities asking the same question. A few examples follow:

Quality of City	**76.8 PTM***
Parks	72.3
Police	71.8
Education/Schools	69.4
Safe Community	68.1
Transit/Bus System	61.9
Planning	57.5
Traffic and Light Timing	55.9
Shopping Opportunity	54.8

*Percent to maximum

The overall evaluation of community services showed that the average rating was 67.2. It is important to note that transit/bus systems are typically rated significantly lower by residents than other services, such as parks, police, and schools (perhaps because so few people across the United States use transit on a regular basis).

One of the conclusions that one can draw from this work is that, as one reviewer noted, "Most people tend to like what they have and the places in which they live, wherever they live. Most Americans think that the quality of life which they enjoy is better than that of other people living in other parts of the country." [14]

A 1995 "Quality-of-Life Poll" conducted by the Regional Plan Association and the Quinnipiac College Polling Institute compared quality of life issues in the New York City region with Atlanta, Dallas-Fort Worth, Seattle, and Los Angeles. It is interesting to note that there is virtually no difference in opinion

between the five cities about the "very important issues" to quality of life. A minimum of 80% of those surveyed in all the cities said these issues were clean air and water, safe streets, race relations, and quality public schools. A minimum of 50% (and usually at least 60%) said greenery and open space, sense of community, uncongested roads and highways, and low state and local taxes.

Perhaps more revealing, however, was the response to a question about the "one or two things you like about your local community." In all five cities—a minimum of 45% responded, "a strong community"; 20–30% responded, "access or convenience"; and less than 15% said, "low crime," "environment," or "recreation or culture." Indeed, this strong appreciation about "sense of community" as well as "access and convenience" is one that can provide support for new thinking about how transit initiatives need to be more closely allied with efforts that build a "sense of community." [15]

Despite their value, surveys of quality of life have their limitations. The way that quality-of-life questions are asked will determine the type of response. Many quality-of-life surveys, for example, focus more on "personal well-being": family life, job satisfaction, salary, recreational opportunities, etc. They do not ask about "shared community factors. . . . which are drowned out" by a focus on people's personal lives. For example, one survey in Austin that asked about "your quality-of-life" and another one that asked about "Austin's quality-of-life" yielded significantly different results. In the personal well-being survey, quality-of-life satisfaction was increasing; in the city survey, it was declining. [16]

Another limitation: quality of life measured at the citywide scale will not reflect variations within one city. What is valued in one neighborhood may not be of importance in another. Indeed, people often feel more positive about their own neighborhood than about the city as a whole.

For example, in New York City, the Commonwealth Foundation asked a random sampling of New Yorkers about their perceptions on "quality of life" in New York (this predates the Regional Plan survey mentioned above). The survey evaluated the city on scores of issues ranging from safety, to air quality, to appearance, to general subjects like "as a place to raise a family." While it may not come as a great shock to most non-New Yorkers, perceptions about the city were extremely negative. Two-thirds rated New York City as "negative" as a place to live, and only one-third said "positive." Other negative factors were extremely high: safety on the street (88% negative), cost and quality of housing (85%), street cleaning and garbage collection (67%), and so on. Only 21% were "positive" about New York City as a place to raise a family. [17]

What is interesting, however, is the difference in these perceptions compared with surveys PPS has conducted in individual New York City neighborhoods. For example, in a survey conducted in 1991 of residents of the Sutton area, located on the Upper East Side of Manhattan, only 17% rated safety and security as the most important neighborhood improvement and 6% rated cleanliness and garbage collection as the most important. Most people felt safe both during the day (96%) and in the evening (67%). [18] While the Sutton area is regarded as one of the most desirable neighborhoods in the city, the difference between the surveys cannot be explained simply by demographics or location. Indeed, the issue is that people feel more positive about the place that they know and are familiar with than with the city as a whole.

This is borne out in the responses to many other PPS surveys, which show that people generally feel safe in places they use. For example, in Belmont Shores, California, 79.1% of residents considered their shopping district safe during the day, and 52.1% felt it was safe during the evening. 67.9% of Brooklyn Heights residents felt that safety on Montague Street was good during the day, 25.7% felt it was fair, and 80.5% thought it was good or fair in the evening. In Hoboken, New Jersey, 80% deemed downtown safety good or excellent in the day, while 67% felt the same about safety at night. In Springfield, Massachusetts, 53.5% of surveyed pedestrians gave safety during the day a "good" rating, 36.8% said it was fair, and 60.3% said evening safety was good or fair. [19]

Perceptions of quality of life are clearly not fixed, and can almost be viewed as a kind of "moving target." "For example," one researcher writes, "an easy commute to work and easy access to the workplace can change as growth brings the traffic congestion they tried to escape five years ago." [20]

Finally, quality-of-life surveys may not adequately account for why people feel as they do. Factors influencing livability are often at a very small scale, and people may not be conscious of how these almost trivial aspects of their daily lives influence them—especially if the livability survey focuses on broad issues at the citywide scale. In his introduction to a series of papers published in *The City Journal* about Quality of Life in New York City, noted urban analyst Roger Starr writes:

> Cities should be comfortable places. People should be able to expect good things from the cities where they live, trivial as well as major things: a cheerful wave from a neighbor, the replacement of their garbage can covers by the refuse collectors, a prompt and pleasant ride—perhaps even a seat—on the bus or subway, a

> good education for their children, an unbroken lock on their front door. All of these simple hopes combine a major expectation: that life will be increasingly fruitful in the future because its essence, the quality of life, will continue to improve.
>
> In an uncomfortable city, by contrast, people expect bad things to happen: to find trash deposited on the sidewalk in front of their homes, to be subjected to the verbal assault of a mugger, to discover that their car stereo has been stolen, to face constant reminders of poverty and depression. All too often, this is the image people have of New York today.
>
> The term "quality of life" has come into common use as the impression continues to spread that in big cities, and perhaps above all in New York, the specific circumstances the term comprises are in fact getting worse not better. A deterioration in the quality of life affects people in subtle ways. One may fear auto theft because one's best friend's car has been stolen—or because the garbage collector has made a mess of the sidewalk in front of one's home. If the city doesn't care about one aspect of its citizens' lives, they infer, it probably doesn't care about others. Thus, poor garbage collection implies careless policing, inadequate schooling suggests the deterioration of the city's infrastructure, official tolerance of aggressive panhandling hints that citizens are vulnerable to theft or violence.
>
> In an almost subliminal way, urban residents sense the connection between signs of deterioration they glimpse around them and the potential for other kinds of harm. . . . Understanding precisely what causes the public to perceive such decay is essential if the government and other organizations are to establish rational priorities for making the city more comfortable. [21]

PLACE-BASED APPROACH

Although people's perceptions about quality of life enhance understanding of the purely statistical approach, geographers and many urban experts alike argue that there is still something missing: an approach to defining quality of life and livability that includes people's often deep attachment to the places where they live and work. This spotlight on "place" and desire for "strong community" adds another dimension to understanding quality of life, a dimension that actually helps bring the whole discussion into clearer focus.

Susan Cutter, a geographer, perhaps summed it up best when she wrote: "A geographical definition of quality of life incorporates the concept of individual well-being but focuses more on places rather than individuals. . . . From a practical standpoint, geographical quality of life is the measurement of the conditions of place, how those conditions are experienced and evaluated by individuals, and the relative importance of each of these to the individual." [22] This approach avoids value judgment as to whether a place is the "best" or the "worst" and recognizes that "everyplace is different and has good and bad attributes." [23]

This approach to livability involves holistic understanding of a place: concrete, quantifiable, and statistical measurements as well as people's perceptions about the place. Cutter suggests that "The art—science to some—of evaluating quality of life in a place involves two states: a goal state and an appraisal state." Goals are what people would like to have in a place, while appraisals measure what is actually there. Quality of life is the "measured" difference between the two. These measurements must take into consideration objective measurements (climate, socioeconomic data, etc.) as well as the more subjective attachment that people have to places: What is the image of the place? What experiences do people associate with a place? How do they feel about it? As Cutter writes, "Often, our individual image of a place overtly or covertly biases our evaluation of quality of life found there." [24]

Social ecologists take this approach further to explain how human activities are influenced by the physical space or place in which they occur as well as how neighborhoods become locations for groups of people and their activities. As early as 1946, observers like Walter Firey were exploring the implications of these factors—especially the sentimental values people associate with places. He writes of his research in Boston where he discovered that "land can be put to uneconomic and even dis-economic uses—all because certain values have become attached to a locality and have in that way found symbolic representation." [25] He continues:

> Boston, more than most other cities, has a great many historic sites which serve as "reminders" of its civic identity. The presence of old colonial dwellings, venerable cemeteries, ancient public buildings, hallowed churches, and distinctive neighborhoods exerts a definite civic-building influence upon the residents of a community. Out of such an influence emerges the kind of sentiments upon which real citizen participation depends—loyalty, a feeling of belongingness, and a purposefulness that goes beyond individual ambitions. Boston needs these sentiments. Through them it can win the interest and support of its people in civic improvements. Without them it can only appeal to the varied special interests of pressure groups to accomplish its objectives. Sentiment is one of the surest community-building forces that any city can have . . . No city or metropolitan plan would be complete which overlooked this. [26]

Herbert Gans, a sociologist and urban planner, studied a Boston neighborhood a decade later while it was in the midst of massive redevelopment. Gans writes that the social and community networks are essential to the neighborhoods being disrupted. "Since relocation procedures do not allow for the transfer of the social system, the shock of the reloca-

tion process itself is likely to affect negatively a number of people who have never lived anywhere except in the West End, and where social and emotional ties are entirely within the neighborhood." [27] Unfortunately, he was absolutely right.

George Hemmens adds a third dimension to the relationship between spaces and activity—that of time. He indicates that people's decisions as to whether or not to undertake an activity (like shopping) are influenced by the location of the activity as well as the time of day and the length of time an activity takes. This model brings into clearer focus the role that transportation plays. "If facilities for a particular activity are relatively inaccessible that activity will likely be performed infrequently. And it may be that an activity will have a longer duration when access is difficult than when access is easy." [28]

The interrelationship between places and activities makes the place-based approach to livability a practical tool: it allows people to take concrete steps to improve their lives by improving the places where they live and work. As one city planning researcher Dowell Myers suggests, "planners, local officials, and interest group leaders must negotiate knowledge about local quality of life." [29] He recommends a "community trend" approach that stresses that quality of life is part of an ongoing development process and that encourages participation of local citizens as part of the "negotiation" process. "The data that result form a realistic description of the community's quality of life, broadly enough based that all segments of the community can accept it as a basis for subsequent decision making." [30]

The place-based approach also recognizes that here is an interactive relationship between places and people, and that places influence us in ways we are often not aware. Tony Hiss, in *The Experience of Place*, put it this way: "These places have an impact on our sense of self, our sense of safety, the kind of work we get done, the ways we interact with other people, even our ability to function as citizens in a democracy. In short the places where we spend our time affect the people we are and can become." [31]

Livability of Places: Literature Review

Over the last three decades, during which time concerns about livability have grown, there has emerged a new understanding of how people experience and perceive places in their communities. This literature also focuses on specific measures that can be taken to improve the livability of important places in communities: streets and sidewalks, parks, plazas, and the public environment. Much thought has also been given to the role of communities in making their public environments work more effectively.

An early such observer was Jane Jacobs, who, in 1961, wrote the remarkable *The Death and Life of Great American Cities*. Her works opened people's eyes to the complexity of their surroundings, and the fact that environment does influence how we think about and use our communities. Until her book, most descriptions about cities lamented their ills and evils: density, poverty, crime. Urban planners were often more interested in how to tear it down through redevelopment, rather than build it up. Ms. Jacobs was interested in celebrating the city and studying "how cities work in real life, because this is the only way to learn what principles of planning and what practices in rebuilding can promote social and economic vitality in cities, and what practices and principles will deaden these attributes." [32]

Ms. Jacobs explained what many, if not most, people who lived in cities already knew: that cities were a place of great melting pots of social interaction, and that they were largely safe and supportive places to live. She did not achieve this argument, however, in great sweeping generalizations, but in startling detail based simply on seeing how all types of public spaces and places actually work for people. For example, she wrote about the sidewalk: "A good city street neighborhood achieves a marvel of balance between its people's determination to have essential privacy and their simultaneous wishes for differing degrees of contact, enjoyment or help from the people around. This balance is largely made up of small, sensitively managed details, practiced and accepted so casually that they are normally taken for granted." [33]

Other journalists, urban analysts, and researchers—many without formal training—have further contributed to the understanding of the livability of communities and those "taken for granted" influences of which Jane Jacobs wrote. Many, like James Kunstler lament the loss of sense of place caused by suburban sprawl. Others discuss more broadly the value of public places: "Cities were invented to facilitate exchange of information, friendship, material goods, culture, knowledge, insight, skills and also the exchange of emotional, psychological and spiritual support . . . if we are to grow into our fullest potential, we need what other people can give us . . . mutual enrichment . . ." [34]

Still others, like William H. Whyte, have focused on what makes places in cities work and offer suggestions for how they can be better designed or managed to be more effective places for people. Mr. Whyte, an early pioneer of studying how people use public spaces, quantified many of Ms. Jacobs' observations and developed criteria for creating successful, well-used public spaces. He pioneered the use of time lapse filming and systematic observations, and his contribution was to describe how the design of

public spaces actually determines whether people will use a space or not. Mr. Whyte is highly critical of architects who design spaces to be seen but not used. He has said that it is difficult to design a public space that will not be used by people, but what is remarkable is how often this has been accomplished. [35] Mr. Whyte's books go on to elaborate on the successful ingredients for a public space that works for people: amenities, shade, activity generators like food service, visible access to the street, and so on.

The need for communities to define their own problems and priorities in terms of improving livability clearly makes it essential that the community be actively involved. Indeed, the livability literature stresses the importance of involving communities in a step-by-step process of renewal of places and spaces—a process where "micro" changes cumulatively add up to "macro" results in their improvement and development. Roberta Gratz, in *The Living City*, goes beyond the concept of the importance of public space to community life to discuss the process of change that has worked to rebuild places as hearts of community. She writes that change should begin with the community itself, often in small steps and writes about "urbanism" as the art of understanding the city. Urbanists, who "understand and practice that art . . . learn how a city works through intimate contact with it. Experience, observation, common sense, and human values are fundamental to an urbanist's view of city issues. *Urbanists focus on the micro before wrestling with the macro and understand that, in reality, the macro only changes for the better in micro steps. . . .* Innovation and ingenuity are the prevailing characteristics. Perseverance in the face of naysayers and determination in the face of obstacles are prerequisites. Step by step, essential and natural growth follows and spreads until larger areas prosper over time. Any look, therefore, at rebirth of cities inevitably spotlights areas rebuilt from the bottom up by citizen activists, urbanists whether residents, business people, design professionals, or small developers who understand what makes a real place work, who are the ones actively involved and getting things done." [36]

In addition to research and publications that focus on the design process and design elements of places, there has been, over the past decade, a new understanding of the value of management of public spaces as a tool for changing public perceptions. PPS's own work, *Managing Downtown Public Spaces*, was developed for downtown organizations to take on a larger role in terms of maintenance, security, public events, marketing and promotion, and public-space amenities. The development of management districts, funded by special taxes that are agreed to by property owners, has flourished across the country in both large cities and small towns as more and more local organizations take responsibility for making sure their commercial districts are safe, attractive, clean, active, and comfortable. Many of these districts, like the Grand Central Partnership around Grand Central Terminal in New York City, include important transit and transportation facilities.

There are many, many more examples of livability of place research: Donald Appleyard's seminal work on creating livable residential streets; Christopher Alexander's innovative "patterns" for making more humane environments; Mark Francis' and Clare Cooper Marcus' guidelines for all kinds of urban open spaces; Anton Nelessen's "visual preference" methods to help communities decide what character and design elements they want in their public environment; Anne Vernez Moudon, Allan Jacobs, and Raquel Ramati's separate books on achieving great commercial streets. All of these writers—as well as other researchers in the field of environment and behavior—essentially support the same conclusion: that our public environment and spaces greatly influence how we use our communities and perceive them—the extent to which we socialize, are economically successful, and even work together on shared actions and activities.

Project for Public Spaces Research on Places

Project for Public Spaces, founded in 1975, has also conducted a great deal of the work in this field to reveal the perceptions and interactions of people in the public places they customarily use. An outgrowth of Mr. Whyte's "Street Life Project," PPS has studied how people use public spaces and what they need in order to feel comfortable in public environments in more than 500 communities throughout the United States and abroad. PPS accomplishes this by gathering information through time-lapse filming, systematic behavioral observations, customized interviews, and user-oriented surveys.

With these tools, PPS examines people's uses and activities, experiences and opinions of the small-scale, site-specific places intrinsic to the fabric of urban neighborhoods, such as plazas, street corners and transit stops, as well as impressions of whole neighborhoods, such as downtowns, residential, and commercial districts. The comments elicited in surveys and interviews not only help PPS determine the kinds of improvements people require and want in these places, but they also provide important clues to what people consider essential for making their communities livable.

Attitudes about what makes an area livable may vary from place to place in response to divergent conditions like climate, as when in Corpus Christi, Texas, 84% of people surveyed at a bus stop cited shade as important for a new bus transfer center. Nonetheless, PPS has found that many "wish lists" are surprisingly similar in hundreds of questionnaires answered by diverse communities. For example, food stores and services appear to be highly desirable to community residents: 69% indicated they shop in the Greenmarket at a plaza on 9th Avenue and West 57th Street in Manhattan, and 96% of people surveyed at the Corpus Christi bus stop wanted a place to buy snacks and drinks. Of those surveyed in Pittsfield, Massachusetts, the following were either desirable or very desirable downtown: 55% said more butchers, bakeries, and other food stores, 57% said more ethnic food restaurants, and 81% said more moderately priced restaurants. In Tucson, Arizona, 23.4% thought that food (eat-in and take-out) businesses were needed downtown.

Similarly, greenery and park environments are indicated to be in demand in communities as different as Red Hook in Brooklyn, New York, where 59% of those surveyed favored a waterfront park and 45% suggested children's playgrounds for a neighborhood pier, and Manhattan's Upper East Side Sutton Place community, where 45.9% of surveyed residents felt more trees, flowers, greenery, and children's play areas would improve the area's plazas. Again, in surveys of that same Sutton community (very urban) and the vastly different suburban Belmont Shores in Long Beach, California, vehicular traffic problems, such as congestion, noise, and vehicle speeds were rated by both as the most important area for improvement. Another need often mentioned is for entertainment, such as movies, theater, concerts, and nightclubs, in surveys of communities ranging from 81.2% in Springfield, Massachusetts, to 43.2% in Tucson, Arizona, to 51% in Montague Street in Brooklyn Heights, New York.

Not surprisingly, security comes up often, although sometimes it is not as high a priority as might be expected because people already feel safe in familiar areas. For example, in a survey of the Upper East Side Manhattan area between 59th and 96th Streets, having a secure/safe neighborhood was ranked highest in importance by 58.4% and at the Corpus Christi bus stop, 44% of those interviewed suggested a security guard for the new bus transfer center. Cleanliness also is cited frequently, like in Red Hook, Brooklyn, where it was a concern of 64% of surveyed residents, and in Pittsfield, Massachusetts, where making downtown cleaner and more attractive was the second most desirable improvement of surveyed pedestrians. Another prevalent concern is parking, for example, of those surveyed, parking was a concern to 36% in Hoboken, New Jersey, 29% in Pittsfield, Massachusetts, 25.8% in Tucson, Arizona, and 17.1% of merchants in Brooklyn Heights. [37]

Out of such suggestions and expressed needs emerges a pattern of broader livability issues, such as comfort, convenience, accessibility, social opportunities, safety, activity, and relaxation. People have a vision, in their own minds, about what a place should be; it becomes a fairly easy task for them to suggest ways that the place could change to better meet with their ideal view of it. What is amazing is that there is so much consensus within communities, despite differences in age, income, and other demographic factors.

ENDNOTES

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The Role of Transit in Creating Livable Metropolitan Communities

Concerns about livability are shared by every type of community, in inner cities, small towns, and rural areas. This handbook explores how communities are working in partnership with transit agencies on locally initiated projects and programs to create livable "places" and build transit ridership.

WHAT MAKES A LIVABLE PLACE?

USES AND ACTIVITIES

why people come to an area and what makes a place in a community special or unique.

COMFORT AND IMAGE

the subjective experiences of using a place, such as safety and cleanliness.

SOCIABILITY

the qualities that make a good place to meet people and create a sense of community.

ACCESS AND LINKAGES

Creating Places for Community Life

Transit can support the creation of places—public spaces, streets and buildings—helping to enliven their usage and making them centers for a wide range of community activities.

A Jazz Festival and Community Market are weekly events at the NJ Transit East Orange Train Station, East Orange, New Jersey.

Pioneer Square in Portland, Oregon, has become Portland's "living room" as well as the hub of the light rail and bus system.

Catalyst for Downtown and Neighborhood Renewal

Transit can serve as a key force in the revitalization of neighborhoods and center cities.

Residents work together on small projects, like tree planting and transit improvements, as part of the Los Angeles Neighborhood Initiative (LANI).

Davis Square in Somerville, Massachusetts, has undergone major revitalization since the opening of a subway station in the late 1980's and the introduction of attractive public space improvements.

Creating Opportunity for Entrepreneurship and Economic Development

Transit can help create new businesses and improve access to job opportunities.

Downtown Crossing in Boston, a central transit hub served by all major subway lines, is the heart of the downtown retail district and features a vibrant market-place with pushcart vendors.

An abandoned factory complex adjacent to the Wellston light rail station in St. Louis is getting new life as a business incubator and job training center.

on, St. Louis Post-

Improving Safety and Amenity

Transit can help make communities safer, in part by making them more comfortable and attractive.

In Portland, Oregon, transit amenities have contributed to the revitalization of downtown.

New York City has initiated a station manager program to help keep stations clean and safe, as well as improve customer service.

Making Communities Accessible and Convenient

Transit services and facilities can be tailored to meet community needs while providing a viable alternative to the private car.

In cities ranging from Aspen, Colorado, to Seattle, Washington,

small shuttle buses are providing more flexible and convenient service to communities.

Shaping Community Growth

Transit can be a key component of efforts aimed at reducing sprawl and encouraging development of mixed use centers.

Tucson's Tohono Tadai transfer center is one of a series of facilities intended to improve amenities and safety for passengers and improve links to surrounding communities.

Photos: Carter Allen, Photography

New bus transfer centers in Corpus Christi not only improve service for customers but provide a focal point for developing stronger districts around them.

Implementation Through Partnerships

Community groups and transit agencies have found that by working in partnership, they can improve the livability of their community and increase transit ridership.

Photo: Downtown Denver Partnership

Denver celebrates the opening of its Sixteenth Street Transit Mall in 1982, built and operated by a unique public private partnership that has helped to guide the dramatic resurgence of downtown.

Volunteers initiated and largely implemented the rebuilding of the Old Pueblo Trolley in Tucson by restoring cars, laying track, and operating the carsó connecting a university to a revitalizing commercial district and developing a new tourist attraction for the city.

THE TRANSPORTATION RESEARCH BOARD is a unit of the National Research Council, which serves the National Academy of Sciences and the National Academy of Engineering. It evolved in 1974 from the Highway Research Board, which was established in 1920. The TRB incorporates all former HRB activities and also performs additional functions under a broader scope involving all modes of transportation and the interactions of transportation with society. The Board's purpose is to stimulate research concerning the nature and performance of transportation systems, to disseminate the information that the research produces, and to encourage the application of appropriate research findings. The Board's program is carried out by more than 400 committees, task forces, and panels composed of more than 4,000 administrators, engineers, social scientists, attorneys, educators, and others concerned with transportation; they serve without compensation. The program is supported by state transportation and highway departments, the modal administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

The National Academy of Sciences is a private, nonprofit, self-perpetuating society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare. Upon the authority of the charter granted to it by the Congress in 1863, the Academy has a mandate that requires it to advise the federal government on scientific and technical matters. Dr. Bruce M. Alberts is president of the National Academy of Sciences.

The National Academy of Engineering was established in 1964, under the charter of the National Academy of Sciences, as a parallel organization of outstanding engineers. It is autonomous in its administration and in the selection of its members, sharing with the National Academy of Sciences the responsibility for advising the federal government. The National Academy of Engineering also sponsors engineering programs aimed at meeting national needs, encourages education and research, and recognizes the superior achievements of engineers. Dr. William A. Wulf is president of the National Academy of Engineering.

The Institute of Medicine was established in 1970 by the National Academy of Sciences to secure the services of eminent members of appropriate professions in the examination of policy matters pertaining to the health of the public. The Institute acts under the responsibility given to the National Academy of Sciences by its congressional charter to be an adviser to the federal government and, upon its own initiative, to identify issues of medical care, research, and education. Dr. Kenneth I. Shine is president of the Institute of Medicine.

The National Research Council was organized by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy's purpose of furthering knowledge and advising the federal government. Functioning in accordance with general policies determined by the Academy, the Council has become the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in providing services to the government, the public, and the scientific and engineering communities. The Council is administered jointly by both Academies and the Institute of Medicine. Dr. Bruce M. Alberts and Dr. William A. Wulf are chairman and vice chairman, respectively, of the National Research Council.

Abbreviations used without definitions in TRB publications:

AASHO	American Association of State Highway Officials
AASHTO	American Association of State Highway and Transportation Officials
APTA	American Public Transit Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
IEEE	Institute of Electrical and Electronics Engineers
ITE	Institute of Transportation Engineers
NCHRP	National Cooperative Highway Research Program
NCTRP	National Cooperative Transit Research and Development Program
NHTSA	National Highway Traffic Safety Administration
SAE	Society of Automotive Engineers
TCRP	Transit Cooperative Research Program
TRB	Transportation Research Board
U.S.DOT	United States Department of Transportation