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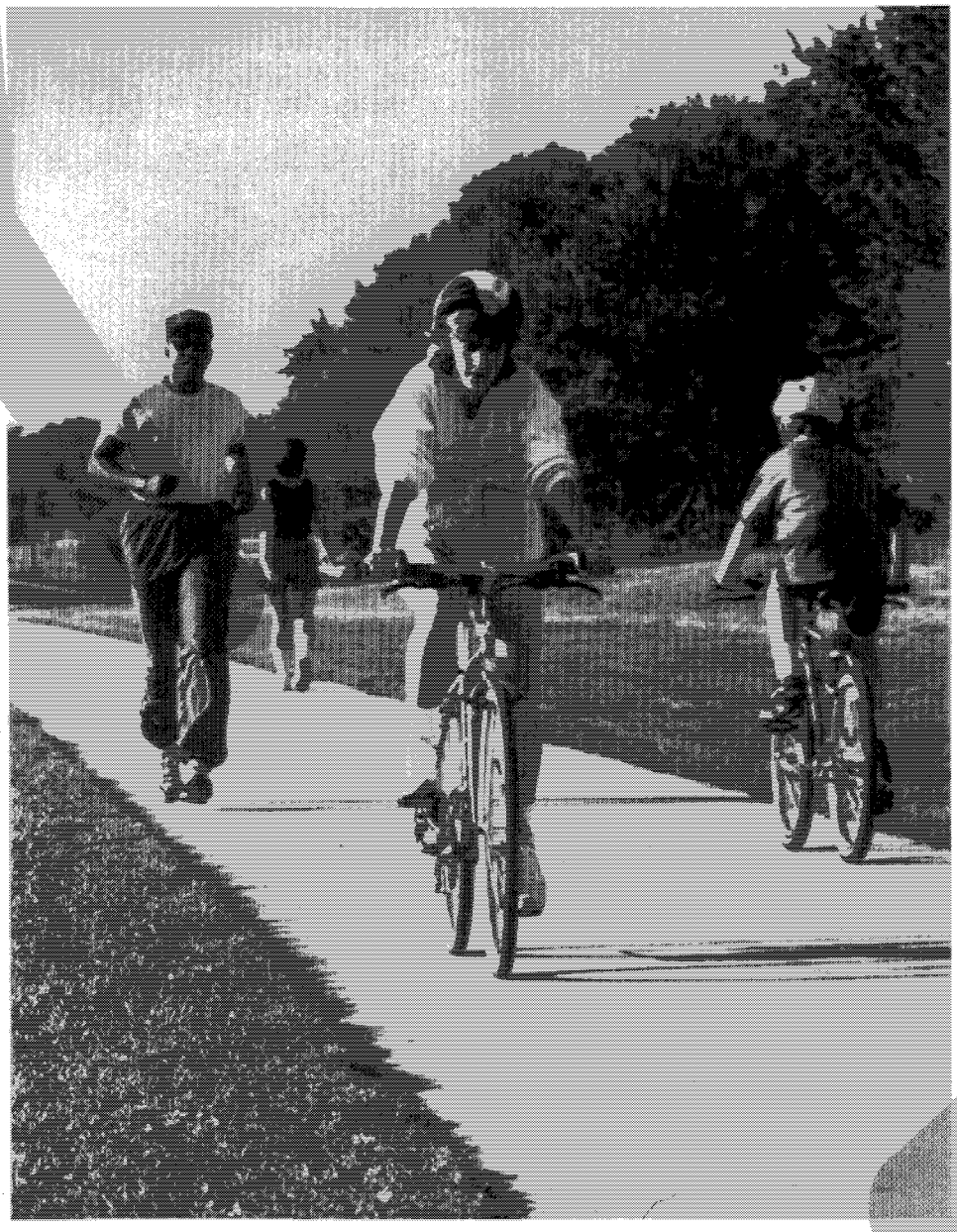

Case Study No. 22

The Role of State Bicycle/ Pedestrian Coordinators

National Bicycling And Walking Study

U.S. Department of Transportation
Federal Highway Administration

Foreword

This case study was prepared under contract for the Federal Highway Administration by John Williams and Kathleen McLaughlin of Bikecentennial, Inc. Additional assistance was provided by Andy Clarke of the Bicycle Federation of America.

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National Bicycling and Walking Study
FHWA Case Study No. 22

The Role of State Bicycle/ Pedestrian Coordinators

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Executive Summary

State bicycle and bicycle/pedestrian programs have existed for approximately 20 years in the United States. For the most part, they have been and continue to be small one- to four-person offices in large transportation agencies. The small size of such programs and limited resources devoted to them makes it imperative that staff give their attention to those tasks that do the most to further bicycling and walking. The most important of those tasks is to help institutionalize the positive treatment of bicycle and pedestrian considerations within all relevant parts of State Government. The philosophy of the program should embrace the "4-E" concept: that success requires a combination of engineering and planning, enforcement, education, and encouragement.

Successful State programs combine a motivated and skilled staff with a clear sense of direction and purpose, a positive mandate, support from inside and outside the agency, and projects that further the purpose. The best programs have been able to work out a balance between tasks that are best handled "in-house" and those that should be spread to other divisions and State agencies.

An important part of program management is the creation and implementation of a meaningful and measurable set of goals and objectives. Such an approach can help staff set priorities and determine whether proposed projects are likely to further the basic purpose of the program. Further, this approach allows staff to follow through with evaluation of results.

Recently, more States have begun adding pedestrian considerations to existing bicycle programs. Because bicyclists and pedestrians share some interests but not others, it is important that program staff understand the differences between bicyclists and pedestrians in order to make combined programs work.

In order to facilitate dealing with the needs of both modes, the authors suggest a program structure that includes an overall program manager, a bicycle coordinator, and a pedestrian coordinator.

1. Introduction

Purpose

The purpose of this case study is to discuss the role of State bicycle/pedestrian coordinators. One particular focus is on how coordinators should structure the mix of pedestrian and bike duties in their programs. New Federal transportation legislation (i.e., The Intermodal Surface Transportation Efficiency Act of 1991) has led to the creation of new State-level bicycle/pedestrian programs and to the modification of existing bicycle programs, adding pedestrian elements where none existed before. For this reason, the potential conflicts and synergies of a combined bicycle/pedestrian program are worthy of attention.

Because bicycle/pedestrian programs tend to be small and staff limited, we have also attempted to offer a means of prioritizing tasks that might easily be considered for inclusion in the duties of the bicycle/pedestrian coordinator.

Finally, because many States are now in the process of starting bicycle/pedestrian programs and are hiring staff, we offer sample job descriptions, as well as examples from various States.

Scope

This case study presents the results of structured interviews with nine State bicycle or bicycle/pedestrian coordinators from the States of California, Colorado, Florida, Minnesota, New Jersey, North Carolina, Ohio, Oregon, and Texas. It is based on information culled from these interviews, along with the authors' experiences in working with such programs over the past 20 years, and an extensive literature review.

The scope of this case study, however, does not allow for original research, although several topics for further study are identified in the Conclusion section.

2. A Brief History of Program Efforts

Bicycling and walking are the least energy-intensive, least polluting, most healthy, and most often neglected forms of transportation available. Neglect, however, has begun to disappear as agency officials come to appreciate the benefits of encouraging these modes.

The Earliest Days

The first modern "bike boom" began in the late 1960s and early 1970s. Spurred by growing concern for the environment and the gas shortage, by 1973, bicycles began outselling cars. Whereas in the years leading up to this boom, the majority of bicycle users were children, and new bicyclists were primarily adults. According to figures from the Bicycle Institute of America, 58 percent of all bicycles sold in 1970 in the United States were child-sized bikes; by 1974 only about 20 percent were child-sized.

As more adults began using the bicycle for recreation and transportation and became more directly involved in the planning and design of facilities, agencies began responding to the growing demand for programs that addressed their needs and desires.

These early programs operated at the local level. However, as local impacts grew, State governments began to see a potential role for themselves in encouraging bicycle transportation.

The Growth of State Bicycle/Pedestrian Programs

Some of the earliest State programs began in the States of California, North Carolina, Minnesota, and Oregon. These programs were based in the departments of transportation, although they each had different mandates, different approaches, and different mixes of program elements. They were almost without exception small one- or two-person operations, particularly in the early days.

In some cases, the program's mission was to serve primarily as a vehicle for funding and developing various kinds of bikeway networks in the State. This was particularly true in the earliest phases of bicycle/pedestrian program work. Some programs provided technical assistance, created design standards, and administered bikeway funding programs for local

agencies wanting to develop community-wide bikeway systems in their communities. Some State programs developed bicycle lane and path projects in conjunction with highway projects.

The Oregon Bikeway Program, for example, put much of its effort into administering the State's bikeway fund. Beginning in 1971, State law required that the highway department spend at least 1 percent of its highway revenues on bikeways in the public right-of-way. As a consequence, the State has built many miles of striped bike lanes and paved shoulders over the years.

California's program also involved management of a bikeway fund; each year, their "bicycle lane account" disperses approximately $360,000 to local agencies for bicycle-related roadway improvements.

Both Oregon and California developed early bicycle facility design manuals. In 1972, for example, California funded the development of the *Bikeway Planning Criteria and Guidelines,* produced by UCLA's Institute of Transportation & Traffic Engineering.

In some cases, State programs included encouragement projects to promote increased bicycling and safety efforts to reduce the incidence of bicycle crashes and injuries. Some distributed printed materials, conducted media campaigns, and sponsored safety conferences and workshops.

For instance, the North Carolina Bicycle Program put early emphasis on safety awareness and mapping. One project involved creating sets of long-distance bicycle touring maps that showed bicyclists low-volume routes across the State. Another early project involved creating a series of safety messages for radio, television, and the print media.

In the early years, Minnesota was also well known for its mapping efforts. They created a series of bicycling "suitability" maps that rated State routes in each region. These ratings formed the basis for statewide shoulder construction and roadway improvements for bicyclists.

Maryland, for its part, helped develop some of the research upon which the bicycle facility field is based. Their *ABCD's of Bikeways* (FHWA, 1977) and *Evaluation of Wide-Curb Lanes as Shared Lane Bicycle Facilities* (MSHA, 1984) reports are still used today.

Some programs took on such wide-ranging duties primarily because staff perceived a void in those areas, a void that no other State agency was moving to fill. It has been relatively common for bicycle programs to have moved beyond narrowly defined program objectives to deal with broader issues. North Carolina DOT's program, for example, worked to develop bicyclist education programs and awareness campaigns, tasks that were not being dealt with by other agencies.

For the most part, these early pioneering programs are still active. California is the one exception, having lost its bicycle program in the 1980s. However, in the past several years, the

program has been reinstated and the staff recently got approval for the creation of a State bicycle advisory committee.

In the intervening years, numerous other States have become active in the bicycle and pedestrian fields. Some of these States have contributed significantly to the development of bicycle/pedestrian program work.

For example, in 1982, New Jersey DOT's program produced its *Bicycle-Compatible Roadways: Planning & Design Guidelines,* a manual that shows how minor roadway modifications can help bicyclists and motorists share the roads. They also produced a series of State policies to guide consideration of bicyclists in road projects.

Florida, beginning in 1980, has put together a well-funded program with a wide range of elements. Their program has helped local Metropolitan Planning Organizations fund bicycle/pedestrian programs in many areas of the State. They have also worked extensively with school districts to introduce bicyclist training programs in the elementary grades. And they were among the first to add the pedestrian mode to their program.

Few States have put as much emphasis on pedestrian issues as on bicycling program work. What work has been done often focuses on safety and crash causation and involves safety education or awareness campaigns like the "Wise Walker" program from the National Highway Traffic Safety Administration (NHTSA). Programs that encourage walking as a mode of transportation are just beginning to develop, partly as a result of being combined with existing bicycle encouragement programs.

Federal Initiatives

In recent years, a shift in policy at the Federal level has led to greater interest in the bicycle and pedestrian areas. For example, according to *Bicycle and Pedestrian Facilities in the Federal-Aid Highway Program* (Publication No. FHWA-ED-90-020, Sept. 1990), "Federal transportation policy is to promote increased use of bicycling and encourage planners and engineers to accommodate bicycle and pedestrian needs in designing transportation facilities for urban and suburban areas." The brochure also states that the Federal Highway Administration (FHWA) "encourages State transportation agencies, local jurisdictions, and metropolitan planning organizations to plan for bicycle and pedestrian facilities in their transportation programs." They further suggest that "planning for these facilities can be financed through the State transportation agencies with Federal-aid highway funds." And the NHTSA and the FHWA recently added bicycle and pedestrian safety to its list of priority areas for spending Section 402 highway safety funds (*Federal Register,* October 4, 1991).

In addition, the recently passed Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) is helping to promote increased attention to nonmotorized modes by requiring States to promote and facilitate the "increased use of nonmotorized modes of transportation, including

developing facilities for the use of pedestrians and bicyclists and public education, promotional, and safety programs for using such facilities" (Section 217(d) of Title 23, United States Code). Bicycle and pedestrian projects are eligible expenditures under numerous categories of spending outlined in ISTEA.

In fact, spurred by ISTEA, some of the programs that have been most active in the bicycle field over the years (in Oregon, Minnesota, and North Carolina, for example) are now in the process of adding the pedestrian mode to their mandates. It is an exciting time to be involved in the field.

Summary

In summary, since the early 1970s, State bicycle and bicycle/pedestrian programs have produced innovations and brought increased attention to modes of travel that have been generally ignored. They have done this with relatively small budgets and often with staffs of one to four people.

3. Bicycle/Pedestrian Programs Today

A model bicycle/pedestrian program is led by a knowledgeable, respected, and creative coordinator. It has clear goals and objectives and achieves those goals and objectives within a supportive environment.

Models and Reality

In writing this case study, a State bicycle/pedestrian program model was developed based on personal experience and a review of the literature. We then interviewed coordinators from nine active State bicycle and bicycle/pedestrian programs; we were particularly concerned with how the proposed model compared with reality. States selected include California, Colorado, Florida, Minnesota, New Jersey, North Carolina, Ohio, Oregon, and Texas.

While some programs investigated are relatively new, others have been around for nearly two decades. The older ones tend to be more comprehensive and have a larger staff—at least at agency headquarters. For example, North Carolina's program started in 1974 and has a staff of six employees. By contrast, Texas' new bicycle program has one staff member in its Austin office; their pedestrian program has one as well. They do, however, have bicycle contacts in each district office.

The Elements of a Successful Program

A model bicycle/pedestrian program combines four important elements. In brief, they are as follows. The rest of this report adds the details to this picture.

- *A favorable context:* All appropriate agencies and divisions of State Government should support the purpose of the bicycle/pedestrian program; citizen input should help guide the effort.

- *The right operation:* Program staff should combine enthusiasm and knowledge; the budget should be sufficient to the program's mandate.

- *Well-conceived goals and objectives:* The goals of the program should be both worthy of State action and achievable.

- *An appropriate mix of program elements:* Tasks should further program goals and help institutionalize bicycle and pedestrian considerations within all relevant agencies of State Government.

4. Context for the Program

A bicycle/pedestrian program cannot and will not succeed in a vacuum. It must exist within a supportive environment.

Agency Location

No matter what particular elements a bicycle/pedestrian program may contain, it must be located somewhere in Government. This obvious statement leads to an important corollary: the location of the bicycle/pedestrian program has a significant effect on both short-term success and long-term impact. A program that has no access to the agency's policymaking level, that sits buried at the bottom of a long chain of command will likely have little impact.

Years of experience have shown that, while there are certain locations that should be avoided, the optimal location depends on the way the agency is organized and upon the program's mandate. In general, however, the best location will be close to the office of the Secretary of Transportation, perhaps in a planning or programming division. The location should be high enough and central enough to assure cooperation from a wide variety of divisions (e.g., policy, budget, roadway design, structures, maintenance, and statistics). It should also be in a division that routinely works cooperatively with other State agencies.

In reality, some programs do have ready access to the highest levels of the transportation agency. Other programs, however, are located deep within the agency. As a rule, those programs closer to the decisionmakers tend to have a larger effect than those located farther down the chain of command. On the other hand, we found several examples of programs whose effectiveness seemed to come from the abilities of the coordinators to achieve results despite what appears to outsiders to be an unsupportive context.

Clearly, there are numerous ways to accomplish an end. The wide variety of successful programs reviewed demonstrated this fact. In some cases, for example, bicycle/pedestrian programs were able to implement widespread education programs despite their locations in departments of transportation.

We did find an interesting contrast between bicycle programs and bicycle/pedestrian programs on the one hand, and pedestrian programs on the other. While bicycle and bicycle/pedestrian programs tended to be located within the departments of transportation,

separate pedestrian programs are typically found in the State's office of traffic safety and, as a result, such programs tend to focus primarily on safety. We did not find any examples of pedestrian-only programs that focused on encouraging people to walk.

In general, State bicycle and bicycle/pedestrian programs are located in planning or program sections of the State's department of transportation. Here are the locations for the programs we investigated:

- The **California** Department of Transportation (CALTRANS) Office of Bicycle Projects is located in the Division of Highways. The coordinator's position is a transportation planning position.

- The Bicycle/Pedestrian Program Manager for the **Colorado** Department of Transportation is in the Division of Transportation Development, assigned to the Statewide Planning Unit. The bike/ped manager is head of a unit, a level of responsibility shared by managers of other modes (e.g., rail and mass transit).

- After spending 11 years in the **Florida** DOT's Office of Planning, then moving to the Secretary of Transportation's office, the Bicycle/Pedestrian Program is now in the Safety Division of the State Transportation Engineer's office. The bike/ped coordinator reports to the State Safety Engineer.

- In the **Minnesota** DOT, the Bicycle Program is in the Program Management Division, which performs long-range planning for intermodal programs.

- In the **New Jersey** DOT, the Bike-Ped Advocate is now in the Bureau of Suburban Mobility of the Division of Transportation Assistance of the Office of Policy and Planning.

- In **North Carolina,** the Office of Bicycle and Pedestrian Transportation is a modal unit, along with aviation, public transportation/rail, and the ferry division. The bike/ped program is in the Assistant Secretary for Planning & Programs' office, which is in the Secretary of Transportation's office.

- Transportation is a division, along with Rail, Water, and Public Transportation and Aviation, in the office of the Assistant Director for Modes in the **Ohio** DOT. This is one of three structural units in the Ohio DOT.

- The **Oregon** Bikeway/Pedestrian Program is in the Roadway Design Section of the Technical Services Branch of the DOT. The Oregon DOT is currently in the process of a functional reorganization, and there will no longer be divisions such as the Highway Division. The Technical Services Branch will now carry out many of the functions formerly assigned to the Highway Division (information from the Oregon Bicycle Plan, 3/23/92). Oregon's Traffic Safety Commission

also has had a bicycle safety person who has created helmet campaigns and educational material.

- In the **Texas** DOT, both the Bicycle Program and Pedestrian Program are in the Maintenance and Operation Division. The Bicycle Coordinator reports directly to the State Traffic Engineer.

State-Level Citizens' Committees

A State bicycle/pedestrian coordinator, even with a supporting staff, needs input from the public and local agencies. One mechanism for collecting this input is to assemble a statewide bicycle/pedestrian committee. Such a group may include members from all major regions of the State as well as from a variety of interest groups. Members should come from bicycling and walking clubs, environmental and community groups, as well as local agencies, and should have political standing.

There are several primary reasons that a program needs such input. First, there is often significant disagreement about what bicycle- and pedestrian-related policies and actions are appropriate for a State to take on and how it should be done. A committee can provide a forum for working out compromises and solving problems.

Second, citizen input will give the bicycle/pedestrian program greater legitimacy by broadening its constituency. A bicycle/pedestrian program may come under fire from those who do not share a belief in nonmotorized transportation. A State committee can help counter such beliefs.

Third, a committee can lend continuity to a program over time; when program staff leave a position, the resulting upheaval can be lessened through the collective memory of the committee. In addition, its records can provide invaluable background for a new coordinator.

The committee's mandate for action should come from high in the State structure (e.g., the Governor's office) and should include the following:

- Assist in the development of the State's bicycle- and pedestrian-related policies.
- Give general direction to the State's bicycle/pedestrian program.

The committee should be attached to either the Governor's office or the office of the Secretary of Transportation. The advantage of the former is that it may allow more direct access to all relevant State agencies. The advantage of the latter is that it may be less likely to experience disruption with changes in administration.

Examples of State Committees

Whether a bicycle/pedestrian program works with a related committee varies from State to State. Some coordinators suggested that a committee is not necessary if the program and its coordinator are effective; some said that, while they had a committee, it did not make much of a difference. Some were particularly skeptical of the value of a citizens' committee. Others, however, suggested that a good committee was integral to the program's success. The authors share the latter view.

How the committee is composed varies widely, however. In some States, for example, the committee includes only citizen members, chosen to represent different areas of the State. In other States, the committee includes representatives from various State agencies as well. In others, the committee is composed only of agency representatives.

In Oregon, for example, the Oregon Bicycle Advisory Committee (OBAC) holds its quarterly meetings in different parts of the State. Beyond the usual business, the Board requires reports from the city and county in which the meeting is taking place on how the 1 percent gas tax funds are allocated locally for bicycle projects. This local accountability has the effect, according to the Bike/Ped Program Manager, of galvanizing local bike advocates. Cities and towns across the State often vie for the opportunity to host an OBAC meeting. To date meetings have been scheduled 2 years in advance. According to the Bicycle/Pedestrian Program Manager, a State program must be accessible to the public to be credible. This includes, he believes, locating the quarterly committee meetings around the State.

The Minnesota Bicycle Advisory Board consists of 12 citizens and eight representatives from State agencies. With such a relatively large committee, five working subcommittees were created. They are: Facilities, Promotion and Public Information, Safety Education and Enforcement, Legislative, and Conference Planning. Having the representatives from State agencies is very effective in heightening their awareness of bicycling.

North Carolina has separate citizens' advisory and in-house technical committees. The seven-member citizens committee, which is appointed by the Secretary of Transportation, approves all the projects proposed by the bicycle program. The committee also sponsors efforts such as bike month and the State's recent helmet campaign. Members represent all geographic areas across the State.

In March 1992, the Director of CALTRANS created the California Bicycle Advisory Committee. There are nine members, plus the Chief of the Division of Highways. Members represent city and county interests, the highway patrol, and private bicycle and automobile associations. The committee's mandate is to advise CALTRANS on bicycle projects and issues such as design standards and "departmental policies related to bicycle transportation." The Chief of the Office of Bicycle Facilities believes this external body will be able to effect change and influence departmental policies related to bicycle transportation.

Conferences and Workshops

Some State bicycle/pedestrian programs participate in or help sponsor meetings and workshops. This can be a particularly important aspect of the State's efforts to promote bicycling and walking; in addition, such conferences attract participants from nearby States and enhance the State's reputation in the field. Statewide conferences like Minnesota's annual bicycle conference and Florida's Liveable Cities Conference, for example, provide an opportunity for advocates and professionals from around the State to meet and discuss important issues.

Workshops devoted to special topics can also help extend the reach of a bicycle/ pedestrian program. For example, the Washington Department of Transportation sponsors a 2-day bicycle facility design workshop for State and local agency employees, as well as bicycle advocates. The States of Wisconsin, Colorado, and North Carolina also sponsor 2-day training programs for elementary-level teachers who plan to teach bicycle education.

Other State Agencies

Another key to success is establishing a cooperative working relationship with other State agencies. The necessity of such a cooperative approach is hinted at in the language of the Intermodal Surface Transportation Efficiency Act of 1991. The Act encourages States to promote and facilitate "the increased use of nonmotorized modes of transportation, including developing facilities for the use of pedestrians and bicyclists and public education, promotion, and safety programs for using such facilities" (p. 1976, ISTEA).

Because such bicycle and pedestrian issues and programs often cross departmental lines, the appropriate response to a particular problem may come from an agency other than the department of transportation. In the event that those agencies are already working on the problem, the bicycle/pedestrian program should learn the details of their efforts and determine how to work together and avoid either duplicating efforts or working at cross purposes. In the event the other agencies are not working on the problem, the bicycle/pedestrian program should have the ability to work with them to get a project underway.

In Minnesota, a conservation group began an effort to have mountain bikes banned from State parks. To advocate for mountain biking, the President of the Bicycle Advisory Board wrote a letter to the Commissioner of the Department of Natural Resources. The letter emphasized the popularity and health and tourism benefits of mountain biking. The results were that 15 State parks highlighted mountain bike trails by including them in park brochures and promotional materials.

Similarly, important bicycle- or pedestrian-related data may be available elsewhere. For example, certain demographic data may be available from a department of community affairs; or crash statistics may be available from the State's law enforcement agency. It is important that the bicycle/pedestrian program have access to such information.

For these reasons, the bicycle/pedestrian program must establish a good working relationship with key personnel in other agencies. To some extent this can be the result of personal outreach on the part of the bicycle/pedestrian program staff. However, success should not be based solely on the personality of a coordinator. Integrating bicycle and pedestrian considerations into the process is a more important aspect.

Including key agency staff on a State's bicycle/pedestrian advisory board can help cement important relationships and get other agencies involved. As mentioned earlier, the advisory committees of both California and Minnesota include members from State agencies.

A list of agencies with potential bicycle and pedestrian interests would include the following, along with their possible areas of concern:

- **Transportation:** facility design and funding; developing design guides; offering training for engineers and planners.
- **Highway Safety:** funding local bicycle and pedestrian safety projects; maintaining crash statistics; developing statewide safety campaigns and materials; offering training for local safety advocates.
- **Law Enforcement:** training police officers and cadets.
- **Community Affairs:** promoting bicycle- and pedestrian-friendly land use and zoning policies.
- **Natural Resources:** funding local trail systems; developing trail networks in parks and natural areas.
- **Education:** purchasing, producing, and distributing educational materials and curricula; funding local pilot programs; offering training for teachers.
- **Economic Development:** promoting nonmotorized tourism; market research.

Other Divisions Within the Agency

In order to respond more fully to the challenges offered by the bicycling and walking public, a department of transportation must do more than employ a bicycle/pedestrian coordinator and give him or her a telephone and secretarial services. A State's bicycle/pedestrian program needs to work closely with staff in other divisions within the transportation agency in order to integrate appropriate bicycle and pedestrian tasks into a variety of the department's operations.

After all, many divisions currently produce results that impact bicyclists and pedestrians—positively or negatively—and those divisions must assume their parts of the overall

bicycle/pedestrian responsibilities. As a result, a model bicycle/pedestrian program would enlist the assistance of specialists from throughout the department in performing tasks that require their expertise. Such an approach, while perhaps challenging, has several important benefits.

First, a bicycle/pedestrian program would be hard pressed to hire the wide variety of expertise needed to accomplish its intended purpose. It is also questionable whether adding staff in such a manner would be fiscally responsible. Second, by enlisting technical assistance from the appropriate external staff, the bicycle/pedestrian program can begin to build cooperative relationships with key departments and staff. Third, personnel who have played a part in developing solutions to bicycle- and pedestrian-related problems will have both an investment in those solutions and the beginnings of nonmotorized transportation expertise.

One obviously important aspect of working with other departments is that they must be willing to cooperate. Two primary factors influence their willingness. First, the program must be supported by the coordinator's supervisor. And that supervisor must be in a position to influence other divisions. Second, the coordinator must be willing and able to work with others who do not share a commitment to bicycle and pedestrian issues. Further, he or she must come across as a reasonable person who is willing to listen as well as express opinions.

One successful approach has been adopted by the Ohio bicycle program. They have a task force of advisors from various DOT bureaus and modes, including traffic engineers, planners, the Assistant Director of Transportation Modes, and representatives of rail and public transit modes. The committee provides advice to the bicycle coordinator on how to get projects implemented and who can help with that implementation.

The North Carolina Bicycle Program has a similar task force, an in-house technical committee chaired by the Bicycle Program Director. With members from the bicycle program, it also includes members from the highway division. These members are appointed by the Highway Administrator and include specialists in highway design and planning and traffic engineering, and also landscape architects. This committee reviews every facility proposed by the bicycle program. The North Carolina Bicycle Program will also be forming a similar technical group to assist its new pedestrian division.

In Minnesota, a bicyclist wrote to the Commissioner of DOT with the idea that off-road bicycle trails be included on the State highway map. The Commissioner delegated the project to the bicycle coordinator, who then developed a support rationale for this idea. He then presented this proposal to the Chief of Cartography. The cartographer agreed, and now the trails are included on the Minnesota State highway map.

The following list contains some of the main tasks for departments found in most transportation agencies. The list is not complete but should provide a starting point.

- **Public Transportation:** encouraging local agencies to develop better bicycle and pedestrian connections with rail, bus, and ferry transit, including bike parking at transit stations and bicycles-on-transit programs.

- **Roadway Design:** developing bicycle- and pedestrian-safe designs for roadways of all classifications.

- **Structures Design:** developing bicycle- and pedestrian-safe designs for interchanges, as well as bridge geometrics, rails, approaches, and decking on both separate bicycle/pedestrian bridges and integrated traffic bridges.

- **Maintenance:** developing bicycle- and pedestrian-responsive methods for improved highway maintenance (e.g., improved intersection sweeping or pothole patching policies).

- **Construction:** improving bicycle and pedestrian provisions in work zone delineation, particularly in urban areas.

- **Traffic Engineering:** improving the way traffic signal and signing systems deal with bicycle and pedestrian traffic (e.g., promoting bicycle-sensitive loop designs).

- **Transportation Planning:** integrating bicycle and pedestrian considerations into the transportation planning process, including developing forecasting methods and data collection procedures.

- **Policy:** considering bicycle and pedestrians in general transportation department policies.

5. Bicycle/Pedestrian Program Management

In a small program, success or failure is often determined by how well staff can juggle an overwhelming plethora of competing needs.

Introduction

Managing a small program can be an enjoyable and rewarding process, or it can be one fraught with frustrations. One of the key factors that determines success or failure is one's ability to manage time and resources and to keep on track. In some cases, program specialists spend far too much time on tasks with little potential payoff, in terms of achieving the program's goals. In other cases, however, coordinators have been able to accomplish large and potentially crucial tasks with relatively little effort.

Managing Time and Resources

The general approach recommended here is for the bicycle/pedestrian program staff to focus on integrating bicycle and pedestrian considerations into the State's routines and to spend most of their time on tasks directly related to the program's goals and objectives.

The program staff must keep this principle in mind when choosing specific tasks. They must form the habit of asking what is the most efficient way to accomplish a particular task, whether someone else is better suited to dealing with it, and just how important that task is to the program's overall mission. The resource limitations of a small program make it imperative that staff spend most of their time on tasks that give the greatest return on the investment of effort.

For example, several coordinators we interviewed mentioned the danger of making participation in local bicycling or walking events or manning booths at safety fairs an integral part of the program. While these tasks are important, they are more appropriate for local police officers or safety group members.

As a corollary of this principle, to the extent possible each task should have a multiplier effect. For example, it is more effective for a coordinator to publish safety advice than to talk

to individual safety advocates about safety. Further, it makes more sense to arrange for someone else to fill requests. The following are specific strategies.

Specific Strategies

In following the above-described approach, it is useful to use certain techniques to minimize the effort and maximize the results. Here are some basic ideas:

1. **Set Priorities and Stick to Them.** Priorities, based on the program's goals and objectives, give staff a means of selecting or rejecting specific tasks. High priority projects include those that help critically important agencies or divisions more effectively include bicycle and pedestrian considerations in their work. For example, modifying the data collection techniques of the department's statistics bureau can lead to the routine gathering of bicycling and walking data.

   The lowest priority tasks include those that put the program in the position of providing a long-term low payoff service. For example, many coordinators get requests for information on buying a bicycle. Personally answering these requests is unlikely to further the goals of the program.

2. **Develop a Support Network.** A support network is essential to the success of a program. It allows a small program to expand its influence and draw on a wide range of resources. The network can be broken into two primary parts: agency support and outside support.

   Sources for agency support include supportive staff in other divisions, secretarial services, printing services, graphic design, public information specialists, and mail services. One coordinator, for example, pointed out how important it was to cultivate a good relationship with the agency's in-house print shop. By treating them well over the years, she has been able to get better performance on her jobs than other people routinely do.

   Outside support can come from bicycle and community-oriented organizations, supportive staff in other agencies, influential citizens, and local agency personnel. In California and Texas, for example, the California Association of Bicycle Organizations and the Texas Bicycle Coalition have helped further those States' bicycling agendas.

3. **Delegate Tasks and Responsibilities.** Coordinators are often tempted to personally perform tasks for quality control reasons. Yet such an approach means getting relatively little done. Support staff should be given the responsibility to carry tasks to their conclusion. While occasionally something may not be done to the coordinator's satisfaction, over time effective delegation results in improved program performance.

Another approach is to rely on consultants and production specialists to handle special tasks. The need to oversee contracts, however, must be considered when deciding on this approach. Contract management can take more time than doing the task oneself. Further, the program must have the resources to pay for the project.

4. **Streamline Public Information Processes.** Handling of those questions and requests that are most common should be streamlined; sending out copies of special topic flyers is easier and less expensive than spending an hour on the phone. For the most part, it is better to make information available to organizations, publications, libraries, and other sources, so that they can answer the questions. A bicycle/pedestrian program that spends too much of its time answering individual requests will not get much of anything else accomplished.

5. **Pass on Phone Requests to Appropriate People.** Sometimes, department telephone operators send along any and all bike or pedestrian phone calls to the program, regardless of whether that is the call's appropriate destination.. The bicycle/pedestrian program should make clear which phone calls are appropriate and which are not. In dealing with this problem, the bicycle/pedestrian program coordinators of Colorado and Minnesota, for example, have put messages on their answering machines directing bike map requests to the tourism departments.

   In addition, the coordinator should work with the operators to get those calls to the proper person in the first place.

6. **Be Careful Where the Program Is Listed.** Some authors and magazines list State bicycle coordinators as sources of general bicycling information, whether the program serves that function or not. Staff should be wary of such listings because of their potential for bringing too much inappropriate mail. Further, whenever program staff finds such a listing, they should consider asking to have it removed from future editions.

Bicycle/Pedestrian Program Staff Levels

Staffing the bicycle/pedestrian program must be looked at in terms of the agency's purpose in establishing such a program. The extent to which the bicycle/pedestrian program has the cooperation of other departments also plays a large part in determining the necessary staff size.

If the agency wants the program to take on all pedestrian- and bicycle-related duties (e.g., designing or reviewing facilities and plans, providing detailed technical advice to local agencies, single-handedly developing State design manuals, and producing safety materials), a small one- to three-person program will not be sufficient. Clearly, no one would expect a few people to perform such functions for the motorized modes.

On the other hand, if the agency sees the program as a coordination unit helping other departments and divisions improve their bicycle and pedestrian practices, a small but effective staff can suffice. For this to work, however, the program must have a high-level mandate.

The authors recommend this approach. It is our view that a small program, with perhaps one, possibly two, but preferably three staff members, can handle such coordination duties effectively. However, without support, the program will have difficulty integrating bicycle and pedestrian considerations into agency practice no matter how many staff it has. The model suggested here includes three personnel: one is the overall program manager, the second is the bicycle coordinator, and the third is the pedestrian coordinator.

There are three primary reasons for suggesting such an approach to staffing the program. First, both the bicycle and pedestrian fields are moving ahead at a fast pace. It would be difficult, if not impossible, for one person to keep up with the latest bicycle and pedestrian research and developments. This is particularly true if the person is expected to be the department's primary information resource for the nonmotorized modes.

Second, as is discussed in the last section of this report, bicycling and walking interests only partly coincide. There are important areas of conflict and it would be difficult for one person to be an effective advocate for both modes. Further, an overall nonmotorized mode coordinator is proposed in order to assure continuity and coordination of program goals and efforts and balance between the modes.

Third, while the nonmotorized modes do have important differences, there are equally important commonalities that give a combined and coordinated program an efficiency advantage. For example, travel data is equally unavailable for both bicycling and walking. Surveys that gauge the extent to which the public walks or rides can give valuable data on both modes at a reduced cost.

Job Descriptions

The following brief job descriptions are based on a review of those from a number of States, particularly Minnesota, North Carolina, and Colorado. It is expected that particular States would need to modify these examples in order to suit their own personnel policies and practices. For further information on how a variety of States have configured bicycle and pedestrian program staff positions, see the sample descriptions given in Appendix 2 of this report.

The Nonmotorized Transportation Program Manager

The State nonmotorized transportation program manager will be responsible for encouraging increased and safe nonmotorized transportation statewide. The primary focus of the position is to institutionalize nonmotorized mode considerations throughout the department of transportation and other relevant State agencies. The manager will be assigned to the statewide

planning unit (or equivalent) and will coordinate and integrate all nonmotorized transportation activities with ongoing statewide planning efforts.

Primary Responsibilities:

- To manage the nonmotorized transportation program through the development of an appropriate set of measurable stated nonmotorized transportation goals and objectives and monitor progress.
- To aggressively promote and develop cooperative inter- and intra-agency efforts that encourage increased levels of nonmotorized travel.

Accountability: The State nonmotorized transportation program manager is accountable to the director of program management.

The State Pedestrian Coordinator

The State pedestrian coordinator will be responsible for encouraging safe pedestrian transportation statewide. The primary focus of the position is to institutionalize pedestrian considerations throughout the department of transportation and other relevant State agencies. The coordinator will be assigned to the Nonmotorized Transportation Program and will coordinate and integrate all pedestrian-related activities with ongoing statewide planning efforts.

Primary Responsibilities:

- To develop and implement appropriate projects through which the program's pedestrian-related goals and objectives may be met.
- To review all relevant State policies and practices regarding pedestrian travel and to suggest changes where appropriate.
- To work with personnel in other departments and divisions of State Government to further specific pedestrian-related objectives.
- To direct the development of the pedestrian element of the State Transportation Plan.
- To serve as pedestrian staff to the State Bicycle/Pedestrian Advisory Board.

Accountability: The State pedestrian coordinator is accountable to the nonmotorized transportation program manager.

The State Bicycle Coordinator

The State bicycle coordinator will be responsible for encouraging safe bicycle transportation statewide. The primary focus of the position is to institutionalize bicycle considerations throughout the department of transportation and other relevant State agencies. The coordinator will be assigned to the Nonmotorized Transportation Program and will coordinate and integrate all bicycle-related activities with ongoing statewide planning efforts.

Primary Responsibilities:

- To develop and implement appropriate projects through which the program's bicycle-related goals and objectives may be met.
- To review all relevant State policies and practices regarding bicycle travel and to suggest changes where appropriate.
- To work with personnel in other departments and divisions of State Government to further specific bicycle related objectives.
- To direct the development of the bicycle element of the State Transportation Plan.
- To serve as bicycle staff to the State Bicycle/Pedestrian Advisory Board.

Accountability: The State bicycle coordinator is accountable to the nonmotorized transportation program manager.

Personnel Considerations

In hiring bicycle/pedestrian program staff, it is important to consider a number of factors. First, the people involved should have, or be willing to acquire, a significant amount of knowledge of bicycle and pedestrian subjects. In a very real sense, they will be acting as resources for the entire department and must know what they are talking about.

Second, the staff must be highly motivated and able to work with a wide range of other people, as well as to work alone without supervision. Employees must exhibit enthusiasm and resourcefulness in overcoming the many obstacles they will face; they must be self-starters and must be able to carry through on projects.

Third, the staff must be able to work among people who may not recognize the value of their work. Some transportation agency personnel may remain unconvinced that their duties extend beyond satisfying the needs of motorized travelers. This attitude sometimes results in a lack of appreciation for the needs of the bicycle/pedestrian program staff. As a result, staff must possess a degree of self-confidence not required in many positions.

Fourth, the staff should have sufficient background in transportation and knowledge of department operations to be able to work effectively with other agency professionals. Ideally, this would mean possession of engineering and planning credentials. Because many current bicycle/pedestrian coordinators lack these credentials, their successes have often been hard-won. With these factors in mind, it becomes clear that the salary range and civil service classification for bicycle/pedestrian staff should be considered carefully. Set too low, it will not attract qualified individuals, unless they decide the importance of serving the bicycling and walking public is greater than the satisfaction of receiving professional-level compensation.

However, even if a qualified individual takes the position despite the personal costs, a low salary will tell other department employees that the program is not important and that it does not take much background. This will diminish the program's effectiveness.

Program Operating Budgets

Depending on how funds are allocated within an agency, the bicycle/pedestrian program may need a separate budget to provide for staff salaries and benefits, in addition to printing, telephone, office supplies, and equipment. This budget need not be large, although salaries should be in line with those of positions with similar qualification requirements. And the Intermodal Surface Transportation Efficiency Act of 1991 specifically allows funding of bicycle/pedestrian coordinator positions through use of Surface Transportation Program monies.

Among the programs reviewed, most smaller offices were, to some extent, able to use office supplies and equipment provided by the bureau or division in which the program was located. The California Office of Bicycle Projects, for example, has no operating budget except for the salaries of its two staff members. Similarly, the New Jersey bicycle advocacy program has an operating budget only for the half-time position.

The Ohio DOT program has an annual operating budget of $4,000 for smaller office supplies and $1,500 for larger equipment. A "large" program, the North Carolina Bicycle/Pedestrian Program with seven staff members, has an annual office operating budget of around $16,000 (not including salaries).

The operating budget for the Minnesota Bicycle/Pedestrian Program is approximately $50,000 a year, not including salaries. This figure includes money for surveys, the annual State bike conference, mileage reimbursement, and sending the coordinator to conferences and workshops.

Sources of Funding for Special Projects

Funding larger projects, like the creation of a design manual or production of an education program, or the implementation of bikeway projects, is an important consideration in

developing a bicycle/pedestrian program and goes beyond the resources of a typical office operating budget. Such projects tend to be funded through grants administered by the program or special categories of expenditure created through legislation.

Clearly, the recently passed Intermodal Surface Transportation Efficiency Act of 1991 presents an excellent opportunity to fund bicycling and walking projects. The law makes it clear that bicycling and walking projects are eligible for funds from the Surface Transportation Program, Congestion Mitigation & Air Quality, National Highway System, Federal Land Highway Program, and National Recreational Trails Program.

In addition, bicycle and pedestrian safety projects have recently been added to the priority areas for funding under NHTSA's and FHWA's Section 402 programs.

Several program coordinators mentioned that costs of projects—both budgets and staff time—with bicycle components, were often integral to the functions of other agencies. Thus bicycles were considered incidental parts of broader programs, with the result that amounts spent specifically for bicycles were difficult to differentiate. North Carolina, for example, has used NHTSA's Section 402 Highway Safety funds to sponsor enforcement workshops around the State. This money funds mini-grants for local enforcement projects. They have also used Section 217 FHWA funds to support a variety of projects.

The Oregon Bikeway/Pedestrian Program receives dedicated funds annually from one percent of the State's gasoline tax. These bicycle funds are not eligible for education or enforcement activities. Recently, the State Transportation Commission delegated additional spending authority, up to $100,000 annually, to the bikeways program. This allows the program to respond quickly to small-scale facilities' needs. For example, the program can widen shoulders for a few blocks, place bike signs, or resign a bike route, often in response to requests from the public. The shorter turnaround time heightens the program's credibility with the public.

Florida's bicycle/pedestrian program has used Exxon oil overcharge monies to fund many nonmotorized projects statewide. These funds were available for a short period in the 1980s.

The Minnesota DOT Transportation Study Board provided the following mandate in 1990: "In view of the desirability and growing popularity of bicycling, and the vulnerability of bicyclists as reflected by fatality and injury rates, the Transportation Study Board supports the increased use of public funds to make bicycling as safe and attractive as possible." Funding sources for bicycle projects are those that have the greatest applicability to individual programs. Thus the Department of Natural Resources will contribute funds for recreational bikeways. The Department of Public Safety has, as part of its staffing budget, the function of tabulating crash facts and disseminating information to the public, and the State patrol provides safety education. All include bicycling as part of their functions. The bicycle program also has funding offsets, which include revenues from the statewide bicycle registration system, sales tax revenues from bicycle and related equipment sales, and sales of the State bikeway map.

In California, the Office of Bicycle Facilities manages State funds for the construction of commuter bicycle facilities. Proposition 116 established the Clean Air and Transportation Improvement Fund, which allocates $20 million to local agencies for bicycle commuter projects. Revenue from the excise tax on motor vehicle fuel goes, in part, to the bicycle lane account.

Longevity

Bicycle-pedestrian programs are not necessarily welcome additions to a State's agency landscape. Whether the program comes into being as the result of legislative mandate or at the request of an agency head, there are likely to be those who resent its existence.

It may seem like a tautology but one of the best ways for a program to stay around is to stay around. Early in a program's existence, most agency staff will be able to remember the time before the bicycle/pedestrian program began. Some will question its reason for being. However, if the program continues to exist, the number of people who remember the agency before it came into being will continually shrink.

Eventually, the majority may not know there was ever such a time. For them, the bicycle/pedestrian program is simply part of the agency, rather than a newly-added function. Others who still remember will know the program by its track record and will, to a large extent, come to accept its existence.

Several coordinators told us how difficult it was to win small victories in the early years and how much easier it got to win big as the years went by. Part of this is certainly the product of growing understanding of the elements of success. But another part is simply the fact of continued existence. Just how long it takes to become established is hard to say. However, 10 years appears to be an important milestone.

6. Setting Program Goals and Objectives

Determining where one wants to go and how to know when one has arrived are important prerequisites for successfully getting there.

Introduction

The importance of setting goals and objectives, measuring progress, and revising direction is, perhaps, even greater for a bicycle/pedestrian program than for other programs for two reasons. First, bicycle/pedestrian programs are often extremely small (sometimes consisting of one person) and face many significant, and often competing, demands. In such a situation, deciding how to allocate resources is an important task fraught with potential risks. It is possible for staff members to lose sight of the program's overall purpose, getting caught up in small tasks that do little to advance the larger objectives.

Second, showing measurable results can be a crucial factor in the continued existence of a bicycle/pedestrian program, particularly in the early years. Such programs are often among the most closely scrutinized during fiscal crises; being able to document results is an important element of program success and continuity.

Actual Program Approaches to Goal Setting

State bicycle and bicycle/pedestrian programs are often managed through the development of a statement of goals, the elucidation of related objectives, and the specification of concrete strategies to accomplish the goals. Oregon and Minnesota, for example, set forth their purposes in State bicycle plans.

The Oregon Bikeway/Pedestrian Program has established a series of goals and objectives intended "to serve the needs of bicyclists within the State by supporting bicycling as a form of transportation and recreation that enhances the livability of Oregon." The Oregon Transportation Commission, upon recommendation from the State bicycle advisory committee, adopted three primary goals and several related objectives. The three goals "drive" each chapter in the Oregon Bicycle Plan.

For example, one goal, to "provide and maintain a safe, convenient, and pleasurable bicycling environment," has five relevant objectives. They include the State's role in establishing expenditure priorities for facilities, providing facilities that consider the needs for all bicycling interests, adopting design standards and policies, providing uniform signing and marking of all bikeways, and adopting maintenance practices.

Objectives relating to bikeway design and operation recommend AASHTO's **Guide for the Development of Bicycle Facilities 1992** and the **Manual on Uniform Traffic Control Devices** (MUTCD). Other goal-driven chapters include criteria on signing and striping and operation and maintenance.

To move bicycling onto the public agenda, the Minnesota Bicycling/Pedestrian Program sought to create a cohesive vision with a "common language" that would be useful and provide a bicycling rationale for transportation, education, and recreational professionals. The program then developed quantifiable performance measures. Using FHWA's statistical measures as a model, the program was able to directly compare statistics for bicycles and automobiles both statewide and nationally. These measures included [Minnesota figures in brackets]:

- bicycle miles traveled (BMT) [291 million];
- fatalities per 100 million BMT [3.4 times motor vehicles];
- injuries per 100 million BMT [5000 injuries per 100 million BMT or 41 times motor vehicles];
- bicycle safety/education contact, by intensity level [in 1987, approximately 50 percent of elementary school students received at most a school assembly presentation]; and
- percent of roadway system suitable for bicycling, by functional classification and jurisdiction [rated good/fair for biking: 73 percent of rural roadways; 47 percent of nonarterial urban roadways; 24 percent of urban arterials].

These measures were then used to establish three overall program objectives for 1999:

- for bicycle miles traveled to reach a growth rate of 10 percent per year;
- for the bicycle fatality and injury rates per mile traveled to be reduced by 50 percent from the 1985 rates; and
- for 100 percent of all bicycles in Minnesota to be registered by 1999, and for 50 percent of all bicycles in Minnesota to be registered by 1995.

Each program area has measurable objectives as well. In the bicycle facilities area there are two objectives: to add or improve 500 miles of suitable roadways and other bikeways in each of the three categories of urban arterials, other rated urban roads, and rural roads. Safety education and enforcement has two program objectives: one for all Minnesota bicyclists to be aware of the need for safe and legal bicycle driving, and of the benefits of helmet use.

Objective 2 is for Minnesotans to receive three bike safety education contacts by sixth grade. The program has outlined different levels of contact ranging from Level 1, distribution of brochures to individuals with little or no instruction, to Level 5, which is basically a complete bicycle education curriculum.

Objective 3 relates to enforcement and says "for all Minnesota police departments to conduct enforcement officer training in bicycle enforcement." Setting objectives is a comparative process. For example, comparing bicycle fatality rates with automobile fatality rates provides a graphic example that can be used to develop support for the program and to gain momentum to correct those conditions.

Subsequent program recommendations broaden the scope of the program's goals and objectives. These recommendations identify implementing agencies, the legislative authorities relevant to each recommendation and agency, and anticipated fiscal scope. Each agency, legislative authority, and proposed budget is included with specific actions and plans in the areas of utilitarian and recreation facilities, safety education and enforcement, promotion and social support, and planning and administration.

One example of the program's coordinating role is compiling statistics in the area of planning and administration. The program recommendation states that "statistics on bicycle use and accident rates per mile traveled be maintained in such a way that they are comparable with those for motor vehicles, and are integral parts of transportation information systems." The DOT and Department of Public Safety are identified as the implementing State agencies, with an anticipated fiscal scope of $25,000 per year through 1999.

The fiscal summary identifies three sources to reach this figure: Federal transportation funds, State highway user distribution tax funds, and Department of Public Safety funds. To further institutionalize this program recommendation, there are three policy recommendations for implementing agencies and units of Government to adopt. They are:

- **Right to Transportation/Mobility:** that people have an inherent right to safe, nonmotorized transportation.

- **Integration:** that bicycle considerations be integrated into existing governmental structures, policies, procedures, and programs, with governmental roles being defined according to significance levels and clientele served.

- **Public-private partnerships:** that an appropriate level of program and promotional support be made available to private and nonprofit bicycling education and activity organizations.

The Colorado Bicycling Advisory Board, in its "1991 Annual Report to the Governor," requested a report back from each of the agencies that discusses measures they will take to implement the following recommendations. These recommendations include the following goals:

- For the Colorado DOT to "institutionalize cycling into all aspects of transportation planning, design, construction, maintenance, education, and funding."

  Other goals for the DOT include promoting cycling as a form of transportation; developing a statewide bicycle transportation master plan, including funding of a bicycle transportation system; developing educational programs for students, adults, planners and engineers, legislators, and the public; collecting and analyzing data; and producing a State bike route map.

- For the Tourism Board and the State Trails Program to study the fiscal impacts of recreational bicycling and promote bicycle tourism.

- For the State Patrol and other enforcement agencies to enforce bicyclists' rights and responsibilities.

However, some of the other programs we reviewed put less emphasis on setting achievable goals and measurable objectives.

While some do have stated goals, there may be no explicit relationship between those goals and the program activities undertaken. In some cases, the goals appear too large to reach in the given amount of time; and there were no intermediate milestones or objectives that would help one measure progress.

Other programs do not seem to use goals and objectives at all. This is not to suggest that these programs are aimless; simply that goals are seen more as principles that infuse program practices than as concrete tools for setting direction and measuring success. One coordinator, for example, explained he didn't set goals because his program was more "action oriented."

Clearly, one can have a successful and growing bicycle or bicycle/pedestrian program without using measurable goals or objectives to guide one's efforts. However, a goals/objectives orientation, combined with an evaluation process, is beneficial to bicycle/pedestrian programs, for reasons stated in the introduction to this section.

Suggested General Program Goals and Objectives

Within the structure of a State-level approach to "promoting and facilitating the increased uses of nonmotorized modes," the following goals and objectives are offered as a starting point for consideration. The goals and objectives are written in terms of what needs to be accomplished. Clearly, accomplishing these aims involves more than the bicycle/pedestrian program can do alone. However, it is expected that the role of the bicycle/pedestrian program will be to coordinate the State's effort in this regard. That is in keeping with the language contained in ISTEA.

It is expected that any specific program's set of goals and objectives will differ somewhat according to the particular conditions found within the State. However, the authors of this report suggest that a model bicycle/pedestrian program would initially develop such a set of overall goals and related objectives and milestones with which to guide program activities. At regular intervals, program staff would evaluate progress towards these aims and revise accordingly.

I. Goal: To increase the use of nonmotorized modes of transportation.

A. Objective: Set up an ongoing system for measuring the extent and characteristics of current nonmotorized travel and recreational uses within the State.

<u>State-level measurements</u>

1. Determine which agency departments have travel measurement duties.

2. Determine which measures of bicycle and pedestrian travel give the most accurate picture at a reasonable cost.

3. Add those bicycle- and pedestrian-related measures to the existing measurement duties.

4. Report the resulting data on at least an annual basis.

<u>Local-level measurements</u>

1. Identify local planning and design functions which need bicycle and pedestrian use data.

2. Identify State means for assuring that collecting and analyzing such data is part of the process and implement necessary procedures.

B. Objective: Identify major barriers to increased bicycle and pedestrian travel within the State.

1. Design and implement user and nonuser surveys to measure the effects of barriers on nonmotorized travel.

2. Determine which barriers are most serious in their effects.

3. Determine which of the most serious barriers can be addressed through State action, either directly or indirectly.

C. Objective: Design and implement a set of procedures for eliminating those barriers.

1. Determine which agencies can affect the barriers identified.

2. Determine which agency policies and procedures can affect the barriers.

3. Design and implement a strategy of procedures for barrier removal.

D. Objective: Monitor the effectiveness of those procedures and revise as necessary.

1. Review progress towards implementation of the strategy identified above.

2. Review nonmotorized travel data.

3. Based on results, implement any necessary changes to the strategy.

II. Goal: To increase the safety of nonmotorized modes of transportation.

A. Objective: Set up an effective ongoing system for reporting bicycle and pedestrian crashes.

1. Review current procedures and determine the accuracy of the information they present regarding the bicycle and pedestrian crash problems, both in terms of magnitude and causation.

2. Add bicycle- and pedestrian-related crash measures to existing department procedures where needed.

3. Implement procedures for collecting additional data from the following sources as needed.

Hospital emergency rooms and police departments

1. Special topic studies (e.g., non-mv-related crash surveys).

2. Report the resulting data on at least an annual basis.

B. Objective: Determine the most serious bicycle and pedestrian crash problems.

1. Based on the reporting system described above, rank bicycle and pedestrian crash problems according to frequency and severity.

2. Do this on at least an annual basis.

C. Objective: Design and implement a system of countermeasures for dealing with the most serious bicycle and pedestrian crash problems.

1. Determine the appropriate mix of engineering, education, public awareness, and enforcement measures to solve the problems identified.

2. Determine a strategy for implementing that mix.

3. Develop and implement public awareness countermeasures directed at the problems.

4. Develop and implement appropriate engineering countermeasures.

5. Encourage the law enforcement agency to develop and implement enforcement programs that deal with the most serious crash problems.

6. Encourage the public instruction agency to develop and implement instructional programs that deal with the most serious crash problems.

D. Objective: Monitor the effectiveness of the countermeasures and revise as necessary.

1. Review the reports mentioned in objective (A), parts (2) and (3) above.

2. Conduct special studies to augment the information gathered during routine procedures.

3. Use focus groups to evaluate the effectiveness of particular measures.

4. Use phone and mail surveys to determine the extent of a countermeasure's reach.

5. Based on the results, implement any necessary changes to the countermeasure approaches being used.

Program Evaluation

Integral to a "goals & objectives" approach is the concept of evaluation. While it can certainly be argued that evaluation is difficult to perform and that few programs have the resources to fully evaluate every project, proper evaluation of results can enhance effectiveness. Coordinators who look closely at their program's effect can build upon successes and learn from mistakes.

Overall program evaluation should be based on the program's goals and objectives. Many of the general objectives suggested in the previous section are intended to help provide the basis for evaluation. For example, Objective A ("Set up an effective ongoing system for reporting bicycle and pedestrian crashes") under Goal II ("To increase the safety of nonmotorized modes of transportation") is intended to provide the basic data required to evaluate progress towards that goal.

At the specific project level, evaluation can also provide important information, and by considering evaluation in project design, program staff can make evaluation relatively easy. North Carolina's new bicyclist education program was designed in this way. At the same time the project team from the Bicycle Federation of America was creating the program, another group from the Highway Safety Research Center was working on the evaluation. By sharing information throughout the process, they were able to make both the program and the evaluation more successful.

It is, unfortunately, all too easy to believe one's program is having one result while it is actually having another. One coordinator, for example, mentioned a large heavily-funded bicycle helmet campaign that featured a popular disc jockey as its spokesperson. While the spokesperson was popular with the target age group, he was not seen as a credible expert on bicycling and, as a result, the program was less than successful. Knowing this enabled program staff to modify their future efforts and encouraged them to pay more attention to the need for making evaluation an integral part of their process.

7. Program Components

A bicycle/pedestrian program workplan includes those tasks best handled within the bicycle/pedestrian programs. It also includes encouragement and coordination aspects of tasks best handled elsewhere.

Introduction

In considering specific tasks and program elements, a balance must be struck between the need for a comprehensive approach to solving bicycling and walking problems and the need to keep the bicycle/pedestrian program efforts manageable. The following are typical projects that can help further the goals of a program. Each is provided with a recommended approach that both involves others and helps ease the load on the program.

Engineering

Training Facility Designers and Planners

- **Importance:** Few engineers and planners receive training in dealing with bicycle and pedestrian concerns. Training sessions can help address that need.

- **Recommended Approach:** The program should arrange for designers and planners to be taught how to include bicycle and pedestrian considerations in their work.

- **Examples:** The Texas pedestrian coordinator is planning a seminar on statewide pedestrian concerns that will include engineering, enforcement, and education elements and participants. The Traffic Institute at Northwestern University has taught 2-day bicycle facility courses in many States and 5-day bicycle and pedestrian facility courses for the FHWA. The Washington State DOT has a standing contract with Bikecentennial to teach a 1-day bicycle facility workshop in various parts of the State. Both Florida and North Carolina have sponsored numerous facility design workshops through the years. The Florida Bicycle/Pedestrian Program, for example, is currently sponsoring 30 courses on pedestrian facility design and encouragement. These are held in communities

throughout the State, and are attended by engineers, planners, school board members, county commissioners, and others. It should be noted that the Federal Highway Administration will be sponsoring a series of bicycle and pedestrian planning, engineering, and programming workshops around the country during the next few years.

Preparing Bicycle and Pedestrian Facilities Design Guides

- **Importance:** Design guides provide crucial criteria and guidance for people working on bicycle and pedestrian facilities.

- **Recommended Approach:** The program should help coordinate the adoption of bicycle and pedestrian facility design guides. Other divisions should be responsible for review and modification of sections related to their areas of expertise. The 1991 AASHTO Guide for the Development of Bicycle Facilities should be used as a starting point for such a process. Other manuals (e.g., those from Arizona, California, Ohio, North Carolina, and Florida) should be consulted as well.

- **Examples:** California DOT developed its manual through its statewide bicycle committee. Arizona's manual was produced by the Facilities Planning Committee of the Arizona Bicycle Task Force. The North Carolina program recently contracted for the production of its new State bicycle facility planning and design guide.

Sharing Other Design Information

- **Importance:** Manuals and guides can provide the basic information necessary for facility design and planning. However, other sources offer additional details on specific applications.

- **Recommended Approach:** Develop a set of mailing or routing lists for circulating information on important topics. Get copies or permission to "quick print" or photocopy important literature.

- **Examples:** The Florida program sends copies of its bicycle news clippings to appropriate personnel. The Colorado program sends copies of maintenance-related information to the appropriate division of DOT. Other programs also mentioned this as an important aspect of networking.

Adopting Bicycle- and Pedestrian-friendly Policies

- **Importance:** Policies guide practice. Bicycle- and pedestrian- friendly policies can have an enormous effect by making nonmotorized considerations routine.

- **Recommended Approach:** Identify important State policies and suggest potential bicycle- and pedestrian-related revisions.

- **Examples:** New Jersey's bicycle/pedestrian advocate drafted a set of bicycle policies and got them adopted by the DOT. These policies require DOT-funded projects to consider the needs of bicyclists. Minnesota's Plan B identifies numerous policies for modification to better solve bicycle and pedestrian problems.

Developing Funding Mechanisms for Local Projects

- **Importance:** The availability of money for a particular purpose tends to lead to the creation of projects. Without funding, few projects will be realized, particularly in communities without strong bicycle and pedestrian lobbies.

- **Recommended Approach:** Add bicycle and pedestrian projects to the list of appropriate uses of various types of State funds and publicize the policy.

- **Examples:** North Carolina DOT's Transportation Improvement Process (TIP) allocates $1 million per year for local bicycle-related improvements. California DOT's bicycle lane account provides approximately $300,000 per year for projects.

Bicycle and Pedestrian Project Review

- **Importance:** A routine review of potential projects can lead to the addition of important bicycle and pedestrian features and to the elimination of sub-standard facilities.

- **Recommended Approach:** Determine which offices are responsible for project review and oversight. Develop bicycle- and pedestrian- related procedures to add to existing process.

- **Examples:** The Florida DOT looks at bicycle and pedestrian aspects of their highway projects, as do Oregon and California. The Ohio DOT bicycle program routinely reviews bicycle-related aspects of highway projects. North Carolina's program also reviews all bicycle TIP requests.

Developing Bicycle and Pedestrian Elements in the State Plan

- **Importance:** The State's annual transportation plan guides action for the year to come. In order for bicycle and pedestrian elements to be considered, they should be part of the plan.

- **Recommended Approach:** Develop the outline and approach for the bicycle and pedestrian elements of the State transportation plan.

- **Examples:** Colorado DOT's State transportation plan includes both bicycle and pedestrian elements, as do the plans of New Jersey, Oregon, and Washington, among others.

Mapping

- **Importance:** Bicycle maps can help users find less stressful and more pleasant routes. When bicycle and pedestrian information is added to other types of maps (e.g., State highway maps) it may encourage motorized travelers to consider bicycling or walking side trips.

- **Recommended Approach:** Suggest that an existing mapping unit begin adding bicycle information to their existing maps and help local agencies fund bicycle maps.

- **Examples:** Illinois DOT includes the Bikecentennial TransAmerica Bicycle Route on their State map; Virginia DOT's county maps also highlight this route. Wisconsin's Department of Tourism has published the Wisconsin Bicycle Escape Guide, a set of two maps that show low-volume rural roads for bicycle touring. North Carolina has funded numerous local maps, in addition to producing a series of touring maps of their own.

Enforcement

Improving the State Vehicle Code

- **Importance:** Some State codes may include dated bicycle and pedestrian regulations or provisions that discourage bicycling and walking.

- **Recommended Approach:** Participate in the highway code review process and work to include new language where appropriate.

- **Examples:** The North Carolina and Florida programs, among others, routinely review proposed changes to the State code.

Providing Training for State and Local Officers

- **Importance:** Enlightened approaches to bicycle and pedestrian enforcement are crucial to improvements in bicycle and pedestrian safety within a community.

- **Recommended Approach:** Help the State's police academy add courses on bicycling and walking. Consider courses that emphasize such subjects as selective enforcement and mountain bike patrols.

- **Examples:** The State of Texas has developed a course in bicycle and pedestrian accident investigation for police officers. The Florida bicycle/pedestrian program helped develop a bicycle enforcement course for the Institute for Police Training & Management; the course was run numerous times through the 1980s. Seattle Police Department's Sergeant Paul Grady offers workshops to departments around the country in mountain bike patrolling. The North Carolina helmet campaign in the past 3-4 years has been one of the biggest and most productive programs for getting local advocates involved. Over 150 towns and cities have participated. The Bicycle Program sponsored a po;ice training workshop and then used Section 402 funds for mini-grants awarded to police for safety programs in their areas. Favored programs for these awards were those using the bicycle program's "Basics of Bicycling" curriculum and the helmet program.

Education

Providing Bicycle and Pedestrian Curricula

- **Importance:** Bicyclist and pedestrian education has the potential to save lives, increase the pleasure people get out of bicycling and walking, and, as a result, increase the amount of riding and walking that people do.

- **Recommended Approach:** Encourage the State department of education to add bike and pedestrian training to their list of curriculum requirements and make educational materials available to schools. Consider other options in reaching older bicyclists.

- **Examples:** The Ohio bicycle program, in conjunction with that State's education department, contracted with the Bicycle Federation of America to distribute 3100 copies of their curriculum to schools all over the State. The Florida bicycle program has been able to get many school districts to adopt their training program.

Training for Teachers and Recreation Specialists

- **Importance:** Teacher training is a key to developing enthusiasm and implementing bicyclist and pedestrian training programs. Teachers who are excited about teaching bicycling will find ways around obstacles; those who are simply handed curricula are unlikely to do much.

- **Recommended Approach:** Encourage the teaching colleges to offer courses in bicyclist and pedestrian training. Approach the teachers associations about offering workshops at their gatherings.

- **Examples:** The State of Texas has sponsored a community school zone safety course for school administrators to "enhance pedestrian and bicyclist safety to and from schools." Montana's Office of Public Instruction sponsored a series of bicycle-related teacher training workshops (with graduate course credit) in the early 1980s. The States of Wisconsin and Colorado are currently doing likewise.

Data collection

Conducting Use Surveys

- **Importance:** Without data, it is difficult to develop measurable objectives, justify projects, and track trends. With data, it is possible to more easily measure success.

- **Recommended Approach:** Work with the appropriate statistics offices to add bicycle and pedestrian questions to existing travel surveys. For special purposes, consider contracting for outside surveying services or studies.

- **Examples:** The Minnesota bicycle program was able to convince the Minnesota Department of Natural Resources to add bicycle questions to their statewide comprehensive outdoor recreation survey. As a result, they now have mileage numbers for bicycle travel.

Collecting Crash Data

- **Importance:** Accurate and detailed crash data can help a State better respond to safety problems.

- **Recommended Approach:** Work with the appropriate statistics offices to make bicycle and pedestrian accident data more accessible and informative. For special purposes, consider contracting for outside surveying services or studies.

- **Examples:** The Texas bicycle/pedestrian program has analyzed their pedestrian and bicycle crash reports and is developing a series of projects that address the needs identified. North Carolina's Highway Safety Research Center helped assemble bicycle crash data from a number of hospital emergency rooms around the State.

Publicity and Public Information

Distributing Routine News Releases

- **Importance:** Since many people enjoy walking and bicycling, letting citizens know what the State is doing in the area of nonmotorized transportation helps develop support for an active program.

- **Recommended Approach:** Work with the public information office to develop a schedule of routine news releases and in-house publication articles on important bicycle and pedestrian topics. For special subjects, develop a system for releasing information directly from the bicycle/pedestrian program. One approach might be to publish a quarterly newsletter.

- **Examples:** The Minnesota DOT recently posted bicycle statistics on their lobby bulletin board; each day, hundreds of employees see and comment on the information. The Florida bicycle/pedestrian program has sent out many news releases and, as a result, bicycle and pedestrian issues are often covered in the media within that State. North Carolina's bicycle/pedestrian program publishes a newsletter which lets people around the State know what the program is doing and what resources are available.

Distributing Pamphlets, Posters, Videos, and Booklets

- **Importance:** Safety and encouragement literature can help support educational messages and counter common myths about bicycling and walking.

- **Recommended Approach:** Review materials offered by various State agencies and offer suggestions for changes or additional materials for their distribution. Contract with outside services for the creation of specialized bicycle/pedestrian program publications.

- **Examples:** The Texas bicycle program recently worked with the Texas Bicycle coalition to print 500,000 copies of a "share the road" brochure and distributed them throughout the State through traffic safety officials in each district.

Each year, New Jersey's bicycle/pedestrian advocate distributes thousands of copies of a packet of information on touring routes, commuting, clubs, and bicycle events. Delaware's State bicycle committee convinced the Department of Motor Vehicles to distribute safety messages through their routine mailings to motorists. The North Carolina bicycle program has distributed many thousands of copies of safety materials through schools, recreation departments, and bicycle clubs. Florida's bicycle/pedestrian program contracted for the creation of ten safety brochures and sent copies of the artwork to local schools and bicycle/pedestrian programs for printing.

Other Potential Projects

Often, bicycle/pedestrian programs receive requests to handle a wide variety of tasks. Some of these fit within the purview of the program's mandate while many may not. It is important to learn how to say "no" and to suggest other ways that such needs may be fulfilled. The following are typical of the potential projects awaiting a bicycle/pedestrian program.

Event Organizing

- Offer free literature and advice to those who organize bicycling and walking events. For example, the Colorado bicycle program has published and distributed a guide to conducting "bike weeks," which explains in clear language just how to organize such an event. The North Carolina bicycle/pedestrian program has published a booklet, titled "Bicycle Events: A Community Guide," on mobilizing community resources and working with the media. In Oregon, the State Bicycle Advisory Committee has also developed such a publication, entitled "Guidelines for Administration of Bicycle Racing on Oregon Roads." The Texas bicycle coordinator is working with the Texas Bicycle Coalition to develop a Rally Ride pamphlet. In Ohio, the Department of Development has historically sponsored the Great Ohio Bike Ride, a high-visibility event for bicycling. The bicycle program has assisted with organization, although the Department of Development is the primary sponsor.

- However, it is best not to get directly involved in organizing the events themselves, for a variety of reasons, not the least of which is the potential liability. Such a task is more appropriately left to the private sector. On the other hand, helping to organize statewide conferences on advocacy or safety issues could be a valuable use of staff time.

Fund Raising

- Raising money is, in general, an inappropriate task for governmental officials. Few people willingly donate to public agencies and time spent fund raising is better spent in other pursuits.

- We found no examples of bicycle/pedestrian programs that acquired money, other than through normal budgetary means. On the other hand, working with the private sector and sharing costs on particular projects is a reasonable approach. As mentioned earlier, the Texas bicycle coordinator worked with the Texas Bicycle Coalition to print and distribute safety materials statewide.

Public Speaking

- In general, the coordinator should limit the number of presentations or talks he or she gives. A balance must be struck between being accessible to the public and learning their needs and concerns on the one hand, and being responsible for managing a program on the other. One alternative to personal appearances might be to help organize an effective speakers' bureau to deal with a wide variety of pedestrian and bicycle topics.

- Appearing on television news programs is one way some coordinators have been able to get their messages across to the public. Florida's coordinator, for example, has appeared on television numerous times.

Lobbying

- In general, public employees should be careful about lobbying for legislation. However, a coordinator can certainly offer proposed legislation, track and comment on other people's bills, and alert members of the public to potential legislative actions.

- The North Carolina, Minnesota, and Florida program staff mentioned routinely commenting on proposed legislation.

8. Combining Bicycle and Pedestrian Elements

Bicycle and pedestrian issues and interests overlap, but not perfectly. Programs that simply combine the two do neither justice.

Introduction

Over the years, some programs have begun addressing pedestrian concerns in addition to performing their bicycle duties. This trend is now accelerating, due to the recently passed Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). ISTEA requires States to consider both nonmotorized modes in their planning and to hire bicycle/pedestrian coordinators. As a result, programs that had resisted the temptation to add the pedestrian mode to their mandate are now finding themselves restructuring for that purpose.

In considering the question of whether and how the program should include both bicycle and pedestrian functions, the characteristics of those modes should be kept in mind.

Similarities Between Bicycling and Walking

Both modes use no fuel beyond the food and drink consumed by the person involved. This, of course, is one reason for encouraging the nonmotorized modes, given the nonrenewable nature of most fuels used by motor vehicles.

Neither produce significant levels of pollution. Carbon dioxide is the primary by-product of human-powered transportation. And this gas is produced through breathing in approximately the same quantities whether the person is walking, riding a bike, or driving an automobile.
Both modes are relatively compact. When compared to most motor vehicles, pedestrians and bicyclists are small and take up little room. A typical bicycle, for example, is about six feet long and two feet wide. In addition, both are considered "nonprotected" modes. Bicyclists and walkers do not carry a protective shell, unlike those who travel in cars, buses, and trucks. In this way, they are similar to motorcyclists.

Neither is particularly dangerous to other travelers. It is true that there have been cases of bicyclists knocking down and killing pedestrians and cases of motorists losing control while trying to avoid nonmotorized users. However, these cases are rare compared to the motor vehicle

fatality picture. In general, pedestrians and bicyclists are the ones who suffer most from their own and others' traffic mistakes.

Both are sensitive to relatively small-scale problems. Surface irregularities, for example, that a motorist would not notice may cause a bicyclist to crash or a pedestrian to trip and fall. Both are best suited for short trips. While some bicyclists and walkers are certainly willing and able to travel long distances awheel or afoot, surveys suggest that the vast majority of nonmotorized travel is for short distances: for pedestrians, typical trip distances are less than a couple of miles; for bicyclists, distances are generally under four miles.

Historically, both modes have been largely neglected in transportation planning and engineering. In general, highway project descriptions and community-wide transportation plans have had little to say about nonmotorized modes. As a result, whether a particular stretch of road or a new residential development enhances bicycle and pedestrian travel is often more a result of coincidence than of planning.

Both involve lower inherent speeds than motorized travel. In typical traffic situations, motor vehicles are inhibited from traveling at higher speeds due more to external factors, like traffic law, roadway geometrics, and other traffic, than to internal factors. Bicyclists and walkers, by contrast, are often inhibited from traveling at higher speeds by their own inherent limitations. Most bicyclists, for example, are challenged to approach even the lowest speed limits.

Differences Between Bicycling and Walking

The Uniform Vehicle Code clearly distinguishes between walkers and bicyclists, considering the latter to be operators of vehicles. As a result, for example, pedestrians are directed to travel against vehicular traffic while using a roadway while bicyclists travel with the flow of traffic.

As has been shown in a number of accident studies, bicyclists who operate on sidewalks do so at significant risk, particularly when crossing streets and driveways. As a result, the Uniform Vehicle Code has special provisions for such operation, including language on bicyclists' rights and duties in crosswalks.

While pedestrians can stop upright and turn with little or no preparation, few bicyclists can do likewise. Because they must balance themselves on two wheels, below a certain speed (approximately 4 to 5 mph) bicyclists have difficulty steering their vehicles. In addition, changing direction on a bicycle involves first leaning in the appropriate direction and then turning the handlebars in the same direction in order to maintain balance.

The bicycle is the most energy-efficient means of transportation available to people. Bicycling uses far less energy per mile of travel than walking does. As a result, bicyclists' trip distances can easily be double or triple those of walkers.

Using various kinds of bags and racks, bicyclists can easily carry goods that would be difficult or impossible for pedestrians, particularly over more than the shortest of distances. The bicycle is able to attain and maintain speeds difficult or impossible for pedestrians. Because of the bicycle's energy efficiency, due largely to its wheels with their pneumatic tires and gearing systems, average adult riders can easily travel between 8 and 12 mph. Most pedestrians, on the other hand, travel between 2 and 4 mph; bicyclists often find themselves going between two and six times as fast as pedestrians.

While most pedestrians can go up and down steps with ease, few bicyclists can. Even if they dismount and walk, it is often difficult for average bicyclists to ascend more than a few steps in a row while manhandling their bikes.

In summary, while the similarities between bicyclists and pedestrians are worth noting, the differences are more significant, particularly insofar as they affect operational safety. Numerous design manuals (e.g., AASHTO's 1991 *Guide for the Development of Bicycle Facilities*) go to great lengths to point out the dangers of mixing bicyclists and pedestrians on paths, particularly paths adjacent to the roadway.

Because of the differences, and because many uninvolved parties immediately equate the bicycle and pedestrian modes, it is important to establish a clear distinction between bicycle-related duties and concepts and pedestrian-related duties and concepts. The task for the bicycle/pedestrian coordinator is to advocate the interests of both modes while making clear the distinctions between them.

Benefits of Mixing Bicycles and Pedestrians

Because of the additional weight of pedestrian numbers, a mixed bicycle/pedestrian program would add clout to a bicycle-only program. For example, while there are approximately 800 to 900 bicyclists killed each year in the United States, there are approximately 6500 pedestrians killed.

Similarly, many more people walk to work in a typical community than ride to work. This is true even in some of the "bicycle towns" found around the country. For example, in Missoula, Montana, where 6.8 percent of the work force bicycles to work, about 14 percent walks to work.

Most State pedestrian programs seem to focus on casualty and crash reduction with no mandate to increase the amount of walking being done. In fact, some programs give the impression that it would be preferable if fewer people walked, as a way of reducing the number of people injured or killed in pedestrian motor vehicle crashes.

Bicycle programs, on the other hand, typically have a more encouragement-oriented focus. Typically, increasing the amount of bicycling done within the State is a primary goal.

This mind-set would bring a much more positive focus to pedestrian programs than the simple casualty and crash reduction point of view. Florida's bicycle/pedestrian program, for example, has promoted a "Liveable Cities" approach to pedestrian problems by sponsoring conferences and developing model pedestrian transportation plans, rather than simply teaching pedestrian safety.

Liabilities of Mixing Bicycles & Pedestrians

Probably the biggest liability for the mixed program is the potential for confusion and blurring of the distinctions between pedestrian and bicycle interests. As mentioned previously, bicyclists and pedestrians share important commonalities but they also differ in significant ways.

In some programs, the mix of bicycle and pedestrian elements has resulted in relatively little effort being expended on pedestrian interests and the vast majority of staff resources devoted to bicycle interests. In a very real sense, some programs are "bicycle/pedestrian" in name only. In those cases, the addition of pedestrian duties seems only to enhance the clout of the bicycle program.

Dealing Successfully With the Mix of Modes

In order to accommodate both bicycling and walking in one program, it is important to clearly distinguish between those areas where the interests coincide and those where they do not. And, in those areas where the interests are different, separate projects, reports, and materials should be devoted to each.

One of the best ways to separate the modes is to create a nonmotorized program that has a pedestrian coordinator and a bicycle coordinator. This is the approach currently being considered in North Carolina and Oregon and is the approach suggested in Section V of this report. However, within the mixed program, there are opportunities for making sure the modes get equal and appropriate treatment. Some examples of ways this can be accomplished are as follows:

- Produce separate State bicycle and pedestrian elements of the State transportation plan. Make sure each mode is given equal attention.
- Develop separate design guides for each mode.
- Develop individual safety materials and messages targeted at each mode, particularly those intended for students beyond grades 2 or 3.
- Develop separate surveys for each mode or include mode-specific questions in separate sections of one survey.

- Develop separate advisory boards.

These and other similar techniques can help program staff deal with the needs of each mode.

9. Conclusions

Bicycle and bicycle/pedestrian programs have existed for more than 20 years in the United States. For the most part, they have been and continue to be small one- to four-person offices in large transportation agencies. The small size of such programs and limited resources devoted to them makes it imperative that staff give their attention to those tasks that do the most to further bicycling and walking. The most important of those tasks is to help institutionalize the positive treatment of bicycle and pedestrian considerations within State Government.

Areas for Further Research

Since most programs are just beginning to mix bicycle and pedestrian considerations, there is relatively little experience in administering a combined program. However, it is important to learn how best to make such a program work. Much needs to be done to better understand the process.

In addition, while many programs are based on goal and objective statements, evaluation of results is an area in need of much attention. Forming better connections between program goals, the actual projects undertaken, and the results of the effort is vitally important to furthering the development of the field.

Finally, the dearth of data on bicycling and walking hampers the development of programs and projects that further the nonmotorized agenda outlined in the recently passed Intermodal Surface Transportation Efficiency Act of 1991. Program staff need details on why people walk or ride, where they go, how far they go, what keeps them from walking or riding more, and other important topics.

Appendix 1: References

1. *ABCD's of Bikeways*, 1977, Federal Highway Administration.

2. *Arizona Bicycle Facilities Planning & Design Guidelines*, 1989, Arizona Department of Transportation.

3. *Bicycle and Pedestrian Facilities in the Federal-Aid Highway Program*, 1990, Federal Highway Administration.

4. *Bicycle Compatible Roadways—Planning and Design Guidelines*, 1982, New Jersey Department of Transportation.

5. *Bicycle Facilities Planning and Design Manual*, 1982, Florida Department of Transportation.

6. *Bikeway Planning and Design*, 1987, California Department of Transportation.

7. *Bikeway Planning Criteria and Guidelines*, 1972, Institute of Transportation & Traffic Engineering.

8. *Evaluation of Wide-Curb Lanes as Shared Lane Bicycle Facilities*, 1984, Maryland Department of Transportation.

9. *Feasibility of Demand Incentives for Nonmotorized Travel*, 1981, Federal Highway Administration/Office of the Secretary of Transportation.

10. *From Need to Bicycle Improvement*, undated, North Carolina Department of Transportation.

11. *Guide for the Development of Bicycle Facilities*, 1991, American Association of State Highway and Transportation Officials.

12. *Intermodal Surface Transportation Efficiency Act*, 1991, Public Law 102-240.

13. *Manual on Uniform Traffic Control Devices*, 1988, Federal Highway Administration.

14. *Plan B, The Comprehensive State Bicycle Plan*, 1992, Minnesota Department of Transportation.

15. *State of Oregon Bicycle Plan*, 1988, Oregon Department of Transportation.

16. *The Walk Alert Program Guide*, 1989, National Highway Traffic Safety Administration.

17. *Uniform Vehicle Code*, 1987, National Committee on Uniform Traffic Laws and Ordinances.

Appendix 2: Sample Coordinator Job Descriptions

CALIFORNIA

DUTY STATEMENT

SENIOR TRANSPORTATION PLANNER
CHIEF, OFFICE OF BICYCLE PROJECTS
DIVISION OF HIGHWAYS

Under the general direction of the Chief, Division of Highways (DOH), the incumbent is responsible for managing the Department's Statewide Bicycle Projects Program.

This includes:

- Representing the Department on bicycle transportation issues and proposals before the Legislature and the public.
- Maintaining effective relationships with functional managers in Headquarters and the Districts. The functional areas include Transportation Planning, Local Programs, Project Development, Traffic, Maintenance, Legislative Affairs, and Programming.
- Maintaining effective relationships with federal and other State agencies such as California Highway Patrol, Parks and Recreation, Office of Traffic Safety, and Department of Motor Vehicles.
- Ensuring that Districts maintain effective relationships with cities, counties, regional transportation planning agencies, and bicycle project advisory groups in the planning and development of bicycle projects.

In addition to the above, the incumbent is responsible for the administration, oversight, or implementation on all bicycle project funding programs, statutory requirements, and related activities. These include:

- The $20 million allocation from the Clean Air and Transportation Improvement Fund for a program of competitive grants to local agencies for bicycle projects which improve safety and convenience for bicycle commuters.

CALIFORNIA (CONT'D)

- The $360,000 minimum annual appropriation to the Department from the State Highway Account for nonmotorized transportation facilities used in conjunction with the State highway system.

- The $360,000 annual appropriation to the Bicycle Lane Account (BLA) for bicycle facilities to serve the functional needs of commuting bicyclists. The Division of Local Streets and Roads manages the program with oversight responsibility provided by the Office of Bicycle Projects.

- The use of Federal Highway Administration funds for bicycle facilities. Up to $4.5 million is available each year with no matching requirement.

- Nonmotorized annual report to the Legislature.

- Bicycle master plans developed by cities and counties. The Division of Transportation Planning reviews the plans prior to awarding of grants from the BLA fund with oversight and approval responsibility provided by the Office of Bicycle Projects.

- Legislative bills, referral letters, requests for information on design standards, facilities, routes, permits for special events, accident statistics, safety and education programs, funding, local ordinances, rules of the road, and contacts for specific activities.

- District and area bicycle maps showing freeways open to bicycle travel and containing other information important to bicyclists traveling between cities.

Supervision Received

The incumbent receives general instructions and guidance from the Chief, DOH. The incumbent is expected to act independently to carry out his/her responsibilities.

Supervision Exercised

The incumbent supervises one Associate Transportation Planner.

CALIFORNIA (CONT'D)

Consequence of Error/Responsibility for Decisions

The incumbent must be able to interact effectively within the Department and with other public agencies, the Legislature, and the public to strongly advocate for improving bicycling as a transportation mode.

Consequences of error may be highly visible to the public, local elected officials, and legislators and reflect poorly on the Bicycle Projects Program and the integrity of the Department.

COLORADO

Form PC-8 - Job Description
Rev. 3-80

Colorado State Department of Personnel

Highways — Department or Institution

40 — Position Number

Name of Employee: Vacant

Work Telephone Number: 757-9266

Current Class Title: Senior Transportation Specialist

Location of Work Site: 4201 E. Arkansas Ave., Denver, CO 80222
Street Address — City or Town

List the major duties of the position including time spent for each. Use sufficient detail to describe the work. DO NOT COPY THE CLASS SPECIFICATION.

% Time Spent	Work Performed
	The State Bicycle Coordinator will be specifically and primarily responsible for the coordination, promotion and implementation of statewide bicycle programs. This position will be assigned to the Statewide Planning Unit and will coordinate and integrate all bicycle-related activities with ongoing statewide planning efforts. This position will also serve as staff support to the Colorado Bicycling Advisory Board.
20%	Serve as a resource for those individuals, groups or agencies seeking information related to all aspects of the bicycle program. This includes responding to telephone and written requests and promptly handling all related inquiries.
3%	Provide technical assistance to the Department, as well as public and private agencies as needed. This may include written or oral presentations.
7%	Compile and process various bicycle related data and information. Review data for consistency, accuracy, and program relevance. Performance planning and operational analyses as necessary. Participate in the conduct of field data collection activities related to the update of bicycle maps and brochures. Attend meetings and training sessions as required that may relate to personal and program development.

COLORADO (CONT'D)

Job Description
Position #40
(page two)

% Time Spent	Work Performed
15%	Keep current to the state-of-the-art relative to bicycle programs. Participate in the planning and implementation of bicycle facilities and programs with State and local government, including developing of specifications or guidelines and review of plans. Develop policy directives and issue papers; review proposed bicycle legislation. Represent the Department in providing bicycle planning and design expertise to individuals and entities as needed.
5%	Conduct/attend meetings, hearings and participate in committees on public and private agencies as needed for the above programs.
15%	Identify needs and issues for inclusion in the statewide planning process to develop and implement a statewide bicycle plan consistent with any Colorado Transportation Plan.
10%	Initiate and manage State responsibilities for federal bicycle planning programs; coordinate with Federal, State, and local governmental agencies and private bicycle interests to develop agreements to facilitate effective bicycle/transportation systems planning; and administer appropriate contracts, grants and projects.
20%	Evaluate statewide long-range and near-term bicycle needs and issues and develop a comprehensive bicycle program to address them.
3%	Inform and advise the Colorado Bicycling Advisory Board on the status, progress, and development of bicycle activities in the State on a regular basis.
2%	Serve as principal contact with the media, Government agencies, citizen organizations, and individuals on matters relating to bicycling.

Travel is required.

MINNESOTA

Minnesota State Bicycle Coordinator
Job Description

The State bicycle-pedestrian coordinator will be responsible for working to encourage increased safe bicycling and walking by institutionalizing bicycle and pedestrian considerations throughout the department of transportation and other relevant State agencies. This position will be assigned to the statewide planning unit (or equivalent) and will coordinate and integrate all bicycle- and pedestrian-related activities with ongoing statewide planning efforts. This position will also serve as staff support to the State bicycling advisory committee.

Primary Responsibilities:

1. Percent of time: 70. To coordinate bicycle- and pedestrian-related activities statewide between State Government agencies, interest groups and the public.

   TASKS:

   a. To establish and maintain a communications network between State agencies and the public.

   b. To establish an information clearinghouse and serve as State contact regarding bicycle information.

   c. To represent bicycle concerns before public hearings and meetings so that issues are accurately and sensitively presented and governmental responsiveness to public input is conveyed.

   d. To review drafted laws and coordinate legislative requests to impact decisions on current and proposed bicycle-related programs.

   e. To assist in researching and recommending various agency budgets, work programs and schedules so that resources are effectively allocated and objectives met.

   f. To research and identify funding sources, state-of-the-art and national developments which affect bicyclists.

   g. To represent the State on bicycle-related matters at national and regional meetings and conferences.

MINNESOTA (CONT'D)

PERFORMANCE INDICATORS: An effective communications system will be developed which will include all agencies and organizations involved in bicycle programs, so that essential actions are taken, no duplication of effort occurs, and agencies and citizens can be directed to a source for information, and to voice concerns.

2. Percent of time: 25. To direct the development and implementation of a comprehensive State Bicycle Plan.

TASKS:

a. To assist in defining the focus and scope of a State Bicycle Plan which addresses and incorporates engineering, education, enforcement, legislation, registration, construction, promotion, recreation, tourism, energy, environmental and safety concerns.

b. To ensure that issues identified in the 1983 Commission on Bikeways Report to the Governor are addressed in the State Bicycle Plan.

c. To coordinate the efforts of cooperating agencies, organizations and citizens in developing a State Bicycle Plan; submit the proposed plan to the State Advisory Board and affected agencies for review; and coordinate compilation and distribution of an approved final plan.

d. To coordinate implementation of the State Bicycle Plan by State agencies.

e. To monitor progress and evaluate achievement of goals and objectives of the State Bicycle Plan by State agency programs.

PERFORMANCE INDICATORS: A comprehensive State Bicycle Plan will be developed and implemented which will clearly define the State's existing bicycle activities and programs, and outline future directions and the roles of State agencies in reaching stated goals and objectives.

3. Percentage of time: 5. To serve as liaison between State agencies and the State Bicycle Advisory Board.

TASKS:

a. To coordinate State agency response to issues addressed by the Advisory Board.

MINNESOTA (CONT'D)

b. To serve as contact person to relay recommended issues requiring attention by the Advisory Board.

c. To document and distribute minutes of proceedings of Advisory Board meetings to affected agencies and individuals.

PERFORMANCE INDICATORS: A clear line of communication and mutual assistance will be established between the State Bicycle Advisory Board and affected State agencies so that the State's bicyclists' needs are identified and met by the appropriate agency in an effective manner.

RELATIONSHIPS: The State Bicycle Coordinator is accountable to a DOT Office Director in the Program Management Division. A close working relationship must be established and maintained with management and staff from several State agencies, including Transportation, Natural Resources, Planning, Education, Energy and Economic Development, and Public Safety. In addition, the Coordinator must maintain effective communication lines with the legislative process, the Bicycle Advisory Board, and local units of Government. The Coordinator should also establish himself/herself on the national and State level as the primary contact person regarding bicycle-related activities, and should maintain a good rapport with media representatives.

KNOWLEDGE, SKILLS AND ABILITIES: This position requires considerable knowledge of bicycle transportation, planning, safety, education, enforcement, and promotion. The State Bicycle Coordinator must have a working knowledge of State and federal laws, rules, regulations and funding as they pertain to bicycling, and of the State's governmental framework and legislative process. A good working knowledge of the planning process is also essential for this position.

The Coordinator must be able to deal on a professional basis with every level, from concerned citizen to Governor. The Coordinator must have excellent communication skills, both oral and written. He/She must have persuasive abilities sufficient to mobilize support for bicycling issues. This position requires excellent organizational skills, and requires coordination of a considerable amount and variety of information.

PROBLEM SOLVING: This position requires that the Coordinator display a creative yet practical approach to solving the challenges of developing a framework for coordinating State agency efforts relating to bicycling. The Coordinator must resolve sometimes conflicting interests, and must help to identify and secure funding sources for the State's bicycling activities.

MINNESOTA (CONT'D)

FREEDOM TO ACT: This position involves considerable latitude in meeting the responsibilities outlined. The Coordinator receives general direction from the Office Director; reporting takes place orally, at staff meetings and in written progress reports.

OHIO

OHIO DEPARTMENT OF ADMINISTRATIVE SERVICES

PERSONNEL DIVISION

AGENCY: Ohio Department of Transportation
DIVISION OR INSTITUTION: Transportation Modes
UNIT OR OFFICE: Bicycle Transportation Admin.

POSITION CONTROL NUMBER: 85000.0
CLASS TITLE: Planning Administrator/Planning Supervisor
CLASS NUMBER: 30614

☒ State Agency ☐ County Agency ☐ New Position ☒ Change

COUNTY OF EMPLOYMENT: Franklin

USUAL WORKING TITLE OF POSITION: Bicycle Coordinator

POSITION NO. AND TITLE OF IMMEDIATE SUPERVISOR: 41200.0 Asst. Director for Trans. Modes

NORMAL WORKING HOURS (Explain unusual or rotating shift.) FROM: 7:30 a.m. TO: 4:30 p.m.

JOB DESCRIPTION AND WORKER CHARACTERISTICS

%	Job Duties in order of Importance	Minimum Acceptable Characteristics
25	Plans, implements & supervises activities of the office of Bicycle Transportation (e.g., reviews proposals, prepares budget & approves expenditures; develops policies, procedures & objectives; establishes priorities; formulates administrative controls; assigns & schedules projects & monitors completion); responsibly directs assigned personnel; adjusts their grievances; recommends personnel actions such as hiring, promotion, assignment or discipline, all requiring independent judgement.	Knowledge of: 1, 5, 9b, 10 (bicycle), 11a, 30k, 32q Ability to: 29 (personal computer), 30r, 32L, 32m, 32u, 34c, 34e, 34f
35	Coordinates planning activites with & provides technical assistance to departmental personnel & other federal, state or local governmental jurisdictions in planning & evaluating bicycle-related proposals and design plans; reviews & analyzes legislation for potential impact on bicyclists; represents office &/or agency in meetings with public officials, private agencies, the Ohio Bicycle Advisory Council, & the general to public.	Knowledge of: 1, 5, 9b, 10 (bicycle), 11a, 30k, 32q Ability 29 (personal computer), 30r, 32L, 32u, 34c, 34d, 34e, 34f
40	Writes & submits reports; maintains current knowledge of developments in field; reviews & prepares comments on procedural manuals & studies; researches information in responding to inquiries & requests for information; uses research findings to direct on-going modificaton of programs. Includes travel to meetings at District or local government offices, in field, and at conferences. May include out-of-state travel.	Knowledge of: 1, 5, 9b, 10 (bicycle), 11a, 30k, 32q Ability to: 29 (personal computer), 30r, 32L, 32r, 32u, 32v, 34c, 34d

List Position Numbers and Class Titles of positions directly supervised.

85020.0 Administrative Asst. 2
85040.0 Technical Writer 2
85060.0 Office Assistant 2

SIGNATURE OF AGENCY REPRESENTATIVE

DATE

GM 4137 (5/81)

An Equal Opportunity Employer

OHIO (CONT'D)

OHIO DEPARTMENT OF ADMINISTRATIVE SERVICES

PERSONNEL DIVISION

AGENCY: Department of Transportation
DIVISION OR INSTITUTION: Transportation Modes
UNIT OR OFFICE: Bicycle Transportation Admin.

☒ State Agency ☐ County Agency ☐ New Position ☒ Change

COUNTY OF EMPLOYMENT: Franklin

USUAL WORKING TITLE OF POSITION: Assistant Bicycle Coordinator

POSITION NO. AND TITLE OF IMMEDIATE SUPERVISOR: 85000.0 Planning Administrator

NORMAL WORKING HOURS (Explain unusual or rotating shift) FROM: 7:30 a.m. TO: 4:30 p.m.

POSITION CONTROL NUMBER: 85020.0

CLASS TITLE: VU Administrative Assistant 2

CLASS NUMBER: 63122

JOB DESCRIPTION AND WORKER CHARACTERISTICS

%	Job Duties in order of Importance	Minimum Acceptable Characteristics
10	Acts for administrator (e.g., independently answers complex &/or confidential correspondence); represents administrator at meetings and conferences; assumes responsibility and authority in administrator's absence.	Knowledge of: 5, 9a, 11a Ability to: 30L, 34e, 34f
40	Manages payroll and business functions of office; prepares & administers budget; oversees maintenance of fiscal controls; authorizes purchases & expenditures; administers special programs & projects; coordinates specific auxiliary functions falling under authority of supervisor (e.g. Ohio Bicycle Advisory Council).	Knowledge of: 1, 3, 5, 9a, 11a Ability to: 30L, 31d
30	Researches & analyzes bicycle programs, policies & procedures of ODOT & other states and makes recommendations; develops statewide project proposals & program plans; provides technical advice to aid administrator in decision making.	Knowledge of: 5, 29 (personal computer) Ability to: 32o, 32u, 33e
20	Performs public relations duties and routine office duties; researches & responds to inquiries & complaints; furnishes information & explains programs to public; participates in bicycle-related meetings & events; makes speeches; prepares news releases. Includes travel to Districts, meetings, project sites, and/or conferences - may include out-of-state travel.	Knowledge of: 11a Ability to: 30L, 32k, 32L, 32r, 34d, 34f

List Position Numbers and Class Titles of positions directly supervised	SIGNATURE OF AGENCY REPRESENTATIVE	DATE

ADM 4107 (5/81) An Equal Opportunity Employer

OHIO (CONT'D)

OHIO DEPARTMENT OF ADMINISTRATIVE SERVICES

PERSONNEL DIVISION

AGENCY	Ohio Department of Transportation
DIVISION OR INSTITUTION	Transportation Modes
UNIT OR OFFICE	Bicycle Transportation

POSITION CONTROL NUMBER 85040.0

CLASS TITLE Researcher 1

CLASS NUMBER 66921

[X] State Agency [ ] County Agency [ ] New Position [X] Change

COUNTY OF EMPLOYMENT: Franklin

USUAL WORKING TITLE OF POSITION: Researcher

POSITION NO. AND TITLE OF IMMEDIATE SUPERVISOR: 85020.0 Administrative Assistant 2

NORMAL WORKING HOURS (Explain unusual or rotating shift.) FROM: 7:30 a.m. TO: 4:30 p.m.

JOB DESCRIPTION AND WORKER CHARACTERISTICS

%	Job Duties in order of Importance	Minimum Acceptable Characteristics
40	Collects, organizes and analyzes data to be used in planning bicycle projects (e.g. cost estimates, design specifications, construction methods, construction costs, user statistics), in updating manuals, and in policy and program development.	Knowledge of 11B, 13B, 16, Ability to 30L, 30R, 31F(geometry), 32N, 32Q, 33E, 34B
50	Prepares records and reports related to research projects; reads, interprets and reduces field data charts from micro-computers; prepares correspondence; monitors time schedules; performs clerical tasks (e.g., types, proofs and copies reports, maintains files).	Knowledge of 11B, 13B, 25, 29 (Personal Computer*), Ability to 30R, 320, 32P, 33E, 34B
10	Assists in planning & development of research goals & projects (e.g. spot improvements, special signs); provides information and technical assistance to departmental staff and other agencies or interested parties upon request; attends meetings as assigned related to research projects.	Knowledge of 11B, 13B, 16, 25 29 (Personal Computer*), Ability to 30R, 34C, 34D
	Includes travel to Districts, to meetings at project sites, and to conferences - may include out-of-state travel.	

List Position Numbers and Class Titles of positions supervised. If more than eight, list totals only.

SIGNATURE OF AGENCY REPRESENTATIVE

DATE

OHIO (CONT'D)

OHIO DEPARTMENT OF ADMINISTRATIVE SERVICES

PERSONNEL DIVISION

AGENCY: Dept. of Transportation
DIVISION OR INSTITUTION: Transportation Modes
UNIT OR OFFICE: Bicycle Transportation

POSITION CONTROL NUMBER: 85021.0
CLASS TITLE: College Co-op
CLASS NUMBER: 99960

☒ State Agency ☐ County Agency ☐ New Position ☒ Change Update

COUNTY OF EMPLOYMENT: Franklin

USUAL WORKING TITLE OF POSITION: College Co-op/Engineer

POSITION NO. AND TITLE OF IMMEDIATE SUPERVISOR: 85020.0 Administrative Assistant 2

NORMAL WORKING HOURS (Explain unusual or rotating shift.)
FROM: 7:30 am TO: 4:30 pm

JOB DESCRIPTION AND WORKER CHARACTERISTICS

%	Job Duties in order of Importance	Minimum Acceptable Characteristics
	This is a full time temporary position involving various duties that permit exposure to the student's major field of study of civil engineering in transportation. Duties will include performance of entry level type duties in that field under close supervision. Will receive training on procedures.	
80	Collect, assemble and present data related to the administration of state programs for bicycle transportation. Individually, or as part of a team, perform studies of bicycle accidents, Metropolitan Planning Organization bicycle plans, and roadway pavement widths in preparation for revision of statewide bicycle map. Write reports containing results of these studies and/or projects.	Knowledge of: 11b, 13a, 13b* Ability to: 30i, 30L 31d, 32h, 32s, 34b
20	Participate in day to day operations of the Bicycle Transportation Administration and assist the agency in effectively meeting administrative objectives while gaining experience and knowledge in the field of public administration through a public sector internship. Other related duties as assigned.	Knowledge of: 11a, 11b, 13a, 13o* 25, 29 (computer* Ability to: 30i, 30L 31d, 32h, 32i. 32L, 32k, 32s, 33i, 34c, 34d * Developed after employment

List Position Numbers and Class Titles of positions directly supervised.	SIGNATURE OF AGENCY REPRESENTATIVE	DATE

ADM 4107 (5/31)

An Equal Opportunity Employer

OREGON

State of Oregon
EXECUTIVE DEPARTMENT
PERSONNEL AND LABOR RELATIONS DIVISION

P O S I T I O N

D E S C R I P T I O N

***** PLEASE READ INSTRUCTIONS *****
***** BEFORE COMPLETING THIS FORM *****

THIS POSITION IS:	
X Management Service-Super	
___ Management Service-Conf.	
___ Classified	
___ Unclassified	
___ Executive Service	
___ New	X Revised

SECTION 1 - POSITION INFORMATION

a. Classification Title	b. Classification No.	c. Effective Date	d. Position No.
Supervising Transportation Engineer D	$2766 to $3973 7036	1-1-90	1181045

e. Working Title	f. Work Unit	g. Agency No.
Bikeway Program Manager	Roadway Section, Bikeway Program Group	73400

h. Agency Name	i. Employee Name	j. Work Location (City-County)
ODOT-Highway Division	Richard Unrein	Salem - Marion

k. Position:	l. FSLA	m. Overtime
XX Permanent ___ Seasonal ___ Limited Duration ___ Academic Year XX Full Time ___ Part Time ___ Intermittent ___ Job Share	XX Exempt ___ Non-Exempt	___ Yes XX No

SECTION 2 - PROGRAM/POSITION INFORMATION

a. Describe the program in which this job exists. Include program purpose, who's affected, size, and scope. Include relationship to agency mission.

See Attached Sheet

b. Describe the purpose of this position, and how it functions within this program.

ORS 366.514 mandates that the Highway Division as well as local governments expend monies to provide bicycle and pedestrian facilities. This amount will not be less than 1% of monies received from the State Highway Fund. Except where exempted by statute, bike and pedestrian facilities shall be provided whenever a highway, road or street is constructed, reconstructed or relocated. Under this law the Division shall also provide technical assistance to cities and counties when requested and recommend construction and signing standards. This position manages an annual program that will ensure compliance with this statute.

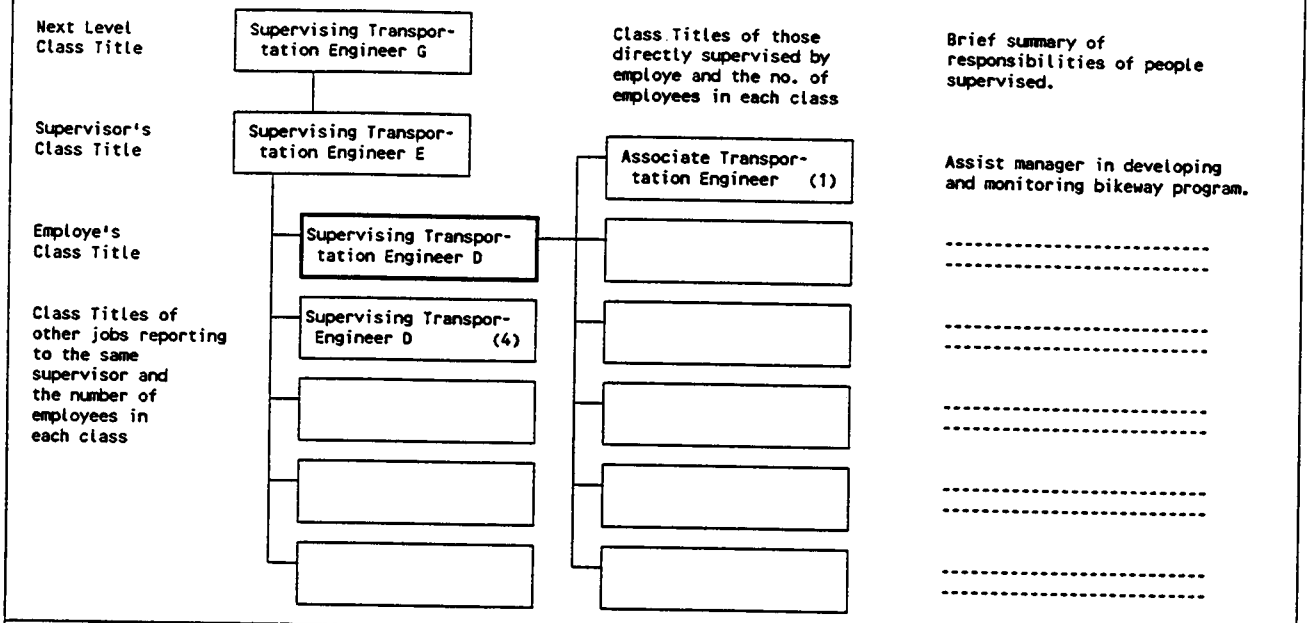
OREGON (CONT'D)

SECTION 3 - DESCRIPTION OF DUTIES
List major duties. Note percentage of time these duties are performed.
If this is an existing position, check which duties are new.

% of Time	New (X)	D U T I E S
40		Program Development and Administration: - Prepare and maintain a Bicycle Master Plan. - Identify and priortize independent bikeway projects. Provide assistance to Region Engineers, District Maintenance Supervisors and Project Managers in identifying needs and keeping within funding limitations. Recognize need for balanced geographical bikeway needs. - Identify bikeway/pedestrian facilities that are a part of highway construction projects. Check conformance to local bikeway plans. - Manage local assistance grant program. - Prepare and manage annual bikeway expenditure plan. - Monitor charges made to the program along with revenue projections to ensure compliance with statutes. - Prepare and distribute quarterly minutes of Oregon Bicycle Advisory Committee.
20		Engineering and Technical Assistance: - Develop and adopt bikeway design standards and guidelines. - Assist in bikeway project development during field location phase such as routes, minimum standards, traffic engineering considerations, signing, and structural considerations. - Approve field bikeway locations submittals. - Approve preliminary bikeway designs. - Review all construction plans for conformance with bikeway design standards and signing requirements. - Approve bikeway construction and signing plans submitted by local governments under funding assistance program.
15		Coordinate activities of Governor's Bicycle Advisory Committee. - Plan quarterly agendas and arrange for meeting locations. - Prepare reports requested by the committee. - Present project proposals and needs for committee review. - Approve committee expenses and arrange for travel and lodging needs.
15		Supervise Bikeway Program Group: - Supervise Bikeway Specialist - Assign work and projects. Review and evaluate work.
10		Miscellaneous: - Respond to all inquiries on the bikeway program. - Prepare reports and drafts in response to inquiries. - Appear before legislative committees on bike matters. - Develop maps, brochures, manuals, etc. - Prepare project justifications for staff and FHWA approval. - Provide assistance and liaison with city and county personnel to assist with the development of their bikeway programs.
100%		

OREGON (CONT'D)

SECTION 4. ORGANIZATION CHART



SECTION 5. WORKING CONDITIONS

Describe special working conditions, if any, that are a regular part of this job. Include frequency of exposure to these conditions.

Periodic bicycle riding in heavy traffic on narrow roadways.

SECTION 6. GUIDELINES

a. List any established guidelines used to do this job, such as state or federal laws or regulations, policies, manuals, or desk procedures.

OSHD Design Manual
Oregon Motor Vehicle Laws
Bicycle Related Laws
State Highway Laws
Personnel Rules
AASHTO Design Manual
AASHTO Guide for Bicycle Facilities
Federal/State Funding Policies
Collective Bargaining Contract

b. How are these guidelines used to perform the job?

To help make design/funding decisions.
To help supervise staff.

SECTION 7. WORK CONTACTS

With whom outside of co-workers in this unit must this position regularly come in contact?

WHO CONTACTED	HOW	PURPOSE	HOW OFTEN
Region Staff	In Person/Telephone/Letter	Project investigations, status, technical assistance.	Weekly
Project Managers	In Person/Telephone/Letter	Project status, design standard compliance, assure scheduling deadlines.	Weekly
Traffic Engineer	In Person/Telephone/Letter	Compliance with Traffic control device standards. Bike count assistance.	Monthly
City/County Officials	In Person/Telephone/Letter	Technical assistance. Assist in project funding applications. Review project applications.	Weekly
Bicycle Advisory Committee	In Person/Telephone/Letter	Planning agendas. Seek advice on bike issues and needs.	Monthly
General Public	In Person/Telephone/Letter	Answer questions on bike program. Touring information, adequacy of highway facilities, complaints.	Daily
Legal Council	In Person/Telephone/Letter	Ensure compliance with the bicycling statutes, funding constitutionality.	Monthly
Program Section	In Person/Telephone/Letter	Project scheduling to ensure budgeted projects are contracted in fiscal year to meet 1% requirement. To arrange Administration and Transportation Commission approval of bikeway projects.	Weekly
Highway Staff	In Person/Telephone/Letter	Seek approval of bikeway program policies and procedures.	Monthly

OREGON (CONT'D)

SECTION 8. JOB-RELATED DECISION-MAKING
Describe the kinds of decisions likely to be made by this position. Indicate affect of these decisions where possible.

- Identify and priortize independent bikeway projects: 1) ensures responsiveness to specific bikeway needs; 2) helps meet 1% statutory funding requirements.
- Decide acceptable bikeway/pedestrian facility designs on highway construction projects: ensures that facilities are adequate and protect agency liability.
- Prioritize, approve, reject project submittals from local governments for state financial assistance: 1) aids local bikeway needs and ensures local compliance to design standards; 2) helps local governments meet their statutory obligation.
- Approve bike/pedestrian facilities on all projects: assures compliance with the law.
- Establish annual bikeway expenditure plan: ensures 1% of Highway Fund is spent.

SECTION 9. REVIEW OF WORK
Who reviews the work of this position? (List classification title and position number) How often? Purpose of the review?

Supervising Transportation Engineer E, Position #1611012. Bi-weekly staff meetings, correspondence review, face-to-face discussions approximately one to two times weekly. The purpose is to inform supervisor of activities and seek necessary guidance on projects or problems.

SECTION 10. SUPERVISORY DUTIES

a. Which of the following supervisory/management activities does this job perform?

_X_ Plans Work _X_ Assigns Work _X_ Approves Work _X_ Responds to Grievances

_X_ Disciplines/Rewards _X_ Recommends Hiring _X_ Hires

____ Recommends Salary Adjustments _X_ Prepares and Signs Merit Rating

b. What percentage of time does this position perform these duties? _15_ %

c. How many employees are directly supervised by this position? _1_

Through Subordinate Supervisors? N/A

SECTION 11. ADDITIONAL JOB-RELATED INFORMATION
Any other comments that would add to an understanding of this position:

Requires field trips approximately every two weeks.
Requires knowledge of bicycling and competency as a bicyclist.

Employee Signature	Date	Supervisor Signature	Date
	2/13/90		2/13/90

THIS SECTION FOR APPOINTING AUTHORITY ONLY * * *

SPECIAL REQUIREMENTS: List any special recruiting requirements for this position:

BUDGET AUTHORITY: If this position has authority to commit agency operating money, indicate in what area, how much, (biennially) and type of funds:

Appointing Authority Signature **Date**

OREGON (CONT'D)

POSITION DESCRIPTION ATTACHMENT

Section 2a. PROGRAM/POSITION INFORMATION

The Highway Division is responsible for the construction, improvement, maintenance and operation of the system of State highways. The Highway Division is administered through the two broad functional areas of Line and Staff. The staff functions report to the Deputy State Highway Engineer and the Line functions to the State Highway Engineer. There are approximately 3500 employees in the Highway Division.

The Line function consists of the Project Development Branch and the five Regions.

The Project Development Branch is responsible for the Project Development Program which involves: liaison with the Regions during Six-Year Program plan development and field location; right-of-way identification and purchase; design, contract plan, and specification preparation for all highway transportation facilities.

The Project Development Branch consists of: Bridge Section, Traffic Section, Roadway Section, Specification Section, Environmental Section, Right-of-Way Section, and an Administrative Unit. There are approximately 434 employees in this program with an operating budget of approximately $81 million for the biennium. The Project Development Branch is responsible and accountable for obligating the Highway Division's yearly contracting budget of approximately $230 million.

The Roadway Section is composed of four units: the Engineering Services Unit includes the Pavement Design Group, Geotechnical Group, and Engineering Geology Group; the Technical Services Unit includes the Standards Group, Value Engineering and Automation Group, Photogrammetry Group, Design Support Group, and the Temporary Protection and Direction of Traffic Crew; the Roadway Services Unit includes the Roadway Descriptions Group, Bikeway Program Group, Landscape Design Group, and two Preliminary Design Groups; the Roadway Design Unit includes four Design Teams, a Drafting Crew, and Plans and Maps Group; the Budget and Program Group includes the Preliminary Engineering and Program Crew and a Permit Coordinator.

There are approximately 155 employees in this Section. The major function of the Section is the design and production of the roadway portion of the contract plans including interchange, pavement, landscape and geotechnical designs.

Revised: 3-3-89
JS:mg

OREGON (CONT'D)

PROGRAM TECHNICIAN 2
BIKEWAY/PEDESTRIAN PROGRAM MANAGER
$2,652 - $3,537 Monthly

QUALIFICATIONS:

- Be an employee of the Department of Transportation eligible for promotion, AND HAVE
- A Bachelor's Degree involving major study in transportation, engineering, environmental, or urban planning OR equivalent experience and study AND
- At least four years of professional transportation experience, including program development, design, and planning.
- Completion of appropriate supervisory training class.

KNOWLEDGE, SKILLS, AND ABILITIES:

- Demonstrated knowledge of roadway engineering concepts and practices.
- Good public relation skills.
- Be a cycling enthusiast with cycling experience.
- Basic knowledge of personal computers, word processors, and spreadsheets.
- Demonstrated knowledge of the mission, values, goals and objectives of the Department of Transportation.
- Demonstrated knowledge of the Department's transportation system and its project development process.
- Possess good writing and presentation skills.

DUTIES AND RESPONSIBILITIES:

- Ensure that the 1% State Highway Fund revenues are spent each year as required by statute through development, monitoring, and management of an annual expenditure plan.
- Act as the leadworker in coordinating day-to-day activities of the Bikeway/Pedestrian Program Office. Assign work and projects to staff.

OREGON (CONT'D)

- Provide technical and engineering assistance within the Department of Transportation regarding bikeway and pedestrian facility design, construction, and maintenance.
- Maintain a Bicycle Plan by preparation of biennial updates.
- Promote and facilitate the increased use of bicycling and walking as modes of transportation. This includes developing conceptual designs for bicycle and pedestrian facilities.
- Develop and implement policies and guidelines for the development of bicycle and pedestrian systems and facilities throughout Oregon.
- Identify and prioritize bikeway/pedestrian projects for inclusion in the Oregon 6-yr TIP.
- Coordinate and participate in scoping and goal setting of bikeway/pedestrian projects with the region project development staffs.
- Provide a technical review of all prospectuses, field surveys, preliminary and final construction plans to ensure that appropriate bicycle and pedestrian facilities are incorporated into the project and that standards have been met.
- Develop and provide public bicycle and pedestrian safety education programs.
- Coordinate activities of the Oregon Bicycle Advisory Committee and coordinate other statewide bikeway/pedestrian planning and programming efforts.
- Provide technical bikeway/pedestrian assistance to local governments and coordinate local funding assistance for developing local facilities and bikeway plans.
- Prepare bikeway/pedestrian maps and reports.
- Respond to public inquiries about bicycle facilities, maps, materials, and information.
- Review local bike transportation plans and systems plans for consistency with statewide plan.

*U.S. G.P.O.:1993-343-273:80206

HE P-50/8-93(4M)E