

Active Transportation Urban Demonstration Project: Inner North and Northeast Portland

Description of Demonstration Project

Introduction

This proposal for an *active transportation urban demonstration project* is to saturate one urban travel shed in Portland, Oregon with the types of active transportation infrastructure that are found in the world's best bicycling and pedestrian cities. The intent is to demonstrate how a dense network of world-class cycling facilities, in conjunction with targeted encouragement programs, can reduce driving and increase bicycling to rival levels seen in the world's best cycling cities. This \$40 million, four-year project will boost bicycle use in this area of 100,000 residents from its current estimated level at 15% of trips to more than 35% of trips.

This demonstration project will show how to take bicycle transportation in America to the "next level." By insistently implementing bikeway improvements, and assertively encouraging their use, Portland has achieved an enviable bicycle mode split (for an American city). However, the difference in quality between the bicycle systems in Portland compared to those found in the best bicycling cities of Europe remains large. By implementing world-class designs in a concentrated manner, we intend to replicate the same conditions that result in the bicycle being the primary means of personal mobility in cities around the world.

This demonstration project will:

- demonstrate the "art of the possible" in achieving world-class levels of non-motorized mode splits in an American city, and
- provide a proving ground for the full development of those world-class designs in an American context.

Project Specifics: Area

The area proposed for this demonstration project is inner N/NE Portland, bounded roughly by the Willamette River/I-5 to the west, Sullivan's Gulch to the south, the North-South Fifties Bikeway to the east and Columbia Boulevard to the north. The demonstration area extends to Willamette Boulevard to improve the connection between St. Johns and the Lloyd District. The project area encompasses 13 mi² and has more than 100,000 residents¹. Within this area are 23 schools in the Portland Public School system, two colleges, four high schools, five schools with religious affiliations and 12 other schools, including pre-schools and training centers. All told there are 42 schools and more than 30 parks in the project area. More than 80,000 residents in the project area are within 3 miles (18 minute bicycle ride) of the Lloyd District, which is one of the region's densest commercial areas. A slightly higher number of residents are also within three miles of the Hollywood Town Center. There are 3 supermarkets within this area and another 6 groceries. In addition to the commercial concentrations in the Lloyd District and Hollywood, there are also commercial corridors on Fremont, Alberta, Killingsworth and Williams.

Project Specifics: Bicycle Infrastructure. This project will expand the miles of developed bikeways in the area from the current 23 miles to more than 77 miles. There are three principal bicycle infrastructure elements to this proposal: residential bicycle boulevards, commercial corridor cycle tracks and new and/or improved bicycle lanes on collector streets. This project will build a dense network of bicycle boulevards in this area. The 46 miles of new bicycle boulevards and 9 miles of

¹ Source: 2000 Census

retrofit existing boulevards will be built to the highest standards and will be designed to provide clear priority to bicycle transportation on such streets. All arterial crossings will be clearly treated to create easy, safe and comfortable conditions. All available tools will be used to minimize automotive speeds and volumes on the boulevard routes. The bicycle boulevards will be developed such that a resident in this area will generally never be more than 750 feet (3 blocks) from a world-class bikeway running both north-south and east-west.

To provide safe, comfortable and prioritized mobility for cyclists and excellent access to commercial destinations the project will convert eight miles of existing bicycle lanes on Broadway-Weidler and Vancouver-Williams to cycle tracks. The project will add more than 6 miles of bicycle lanes to other important corridors in the area, most notably Knott Street as well as on the crossings of major barriers (I-5 and the Banfield).

As provisional elements to this project we propose to extend the cycle track treatment on NE Broadway east from 24th Avenue to the Hollywood Town Center and to develop a cycle track on Killingsworth between NE 9th and Interstate. The businesses on the commercial-rich Broadway corridor would benefit from the increased flow of bicycle traffic. Those riding bicycles in this there would benefit from direct access to those businesses as well as from having this direct and fast connection between Lloyd District and Hollywood. Similarly, the Killingsworth Corridor is a burgeoning commercial district with opportunity to develop cycle tracks. Killingsworth also provides a direct connection across I-5 and connects directly to light rail on Interstate Avenue.

These facilities are currently considered a “provisional” element of the proposal due to the difficulty the city might have in implementing these designs. In both cases they will require significant loss of parking. However, if we’re to truly build a world-class network of bikeways, then these connections and the mobility and access they provide will be necessary elements. Overall, the project will provide for 20 miles of separated-in-roadway facilities.

The project will also focus infrastructure improvements on gateways to the project area, especially from the south where the crossings of the Banfield on both 12th and 21st are significantly substandard.

Project Specifics: Pedestrian Infrastructure. Another major infrastructural element will be pedestrian improvements. Most notable of these will be a “pedestrianized” street on NE Holladay between the Rose Quarter and Holladay Park. This will also serve as a pedestrian and bicycle connection between the Lloyd District and Rose Quarter. It may also serve as the last link in the Sullivan’s Gulch Trail. Other pedestrian improvements will focus on streets where current facilities are substandard, especially those that provide direct access to transit and commercial uses.

With these elements the proposal will introduce three key elements used throughout Europe to create supportive conditions for active transportation: low-volume, traffic-calmed streets where the movement of bicycles is given priority; separated bikeways on major commercial arteries and car-free roadways in a commercial district.

Project Specifics: Encouragement Programs. The project will couple Portland’s award-winning SmartTrips encouragement program with the infrastructure improvements. Using an individualized

marketing approach, the encouragement program will alert area residents to the new and improved mobility options available to them following completion of the infrastructure improvements.

An Important Project for the Region

Though on a scale not previously envisioned for the region, this project, by proposing a myriad of improvements that offer substantial benefits, is still a good example of going after “low-hanging fruit”. First among the benefits is the potential to achieve dramatic shifts in mode split toward active means of transportation. That potential is perhaps greater in this area than in any other part of Portland or the region. The reasons for this include: the density of residential neighborhoods in close proximity to dense commercial development, an existing well-connected roadway grid, relatively high existing bicycle use and awareness of the bicycle as a legitimate option for transportation and the relative lack of bicycle infrastructure in the area. Given these attributes, and given the experience of bicycle-friendly cities around the world, where it is recognized and has been demonstrated that high quality bicycle facilities attract high ridership, there appears no reason why implementation of this proposal would not achieve a bicycling mode split on a par with that found in the best cycling cities of the world.

Because of the above, this project will provide the region an opportunity to determine how to best build and promote a world-class urban bikeway system that begins to realize the full potential for active transportation. It is in these types of dense, mixed-use environments—the types of mixed-use urban areas that underpin the region’s 2040 Regional Growth Concept—where the bicycle can easily be more attractive than driving for the types of short trips characteristic of these areas. This project will demonstrate not only how, but what can be achieved in urban areas throughout the region. This project will develop three types of facilities that will ultimately prove crucial to moving the region toward a more sustainable means of transportation: high quality bicycle boulevards, advisory bicycle lanes and cycle tracks. This project will provide professional staff, local residents, business owners and other interested parties the opportunity to develop, improve and assess how these types of facilities—successfully employed in cities around the world—can be designed in a U.S. context.

The success of this project is like to have ramifications far beyond demonstrating the “art of the possible.” Because much of the Lloyd District’s land area is currently occupied by surface parking lots (approximately 48 acres, or almost one-quarter the area of all tax lots) it is one of the region’s largest remaining “blank slates” for urban development. A positive response to the implementation of this proposal’s infrastructure and programs could dramatically alter the landscape in the area. This project may well influence thinking about the form that future development in the District will take. With results that approach world-class active transportation mode splits, developers and lenders may more strongly consider an urban design for a future Lloyd District that more closely resembled a dense urban “car-light” district than the quasi-suburban district it now resembles.

One of the provisional project elements is especially significant: the proposed cycle track on NE Broadway connecting the Lloyd District to Hollywood. Ultimately, Portland as a world-class cycling city would have a protected bikeway connection that would provide a direct link along Broadway (SW, NW, N and NE) between Portland State University, the Downtown, the Broadway Bridge, the Lloyd District and Hollywood. While the difficulties of achieving that quality of connection are significant, the logic of the connection and the strength of the connection for active transportation can not be denied.

The current commute mode split² in this area is likely close to 15% bicycle, 20% transit, 5% walking and 60% automobile. Post-implementation commute mode splits could more closely resemble what is found in the most bicycle-friendly Dutch, Danish or German cities. It would not be unreasonable to expect mode splits in this 13 mi² area to become 35% bicycle, 25% transit, 5% walking and 35% driving.³ This project, as proposed, would create conditions under which schoolchildren could safely and comfortably bike and walk to school, workers could safely and comfortably bicycle and walk to work, and all residents of the area could safely, comfortably and conveniently access all commercial, recreational and institutional destinations within the project area using active transportation.

In an era of diminishing transportation resources and growing population, this project will demonstrate how, for pennies on the dollar, the region can effectively, healthfully and sustainably serve the mobility needs of our region.

Cost Estimate and General Project Timeline

This is a \$41 million project, with a significant amount of the cost required for retrofitting those six roadways with cycle tracks. Table 1 displays the rough breakout of project costs. The project is scalable. Implementing fewer or greater miles of bikeways, especially the cycle tracks, will affect the overall project cost.

The project will require public outreach for the more difficult project elements—notably the provision of cycle tracks on targeted roadways. Acceptance and support of area residents and business and property owners proximate to and along the targeted corridors will be necessary prior to implementation. We believe we will need at least one year of public process with focused attention on cycle tracks before we will be in a position to construct them. The bicycle boulevards

Table 1. Scenario Evaluation: North/Northeast Demonstration Project

	Existing Miles	Added Miles	Improved Miles	Provisional Miles	Costs per mile (millions)	Cost for New & Improved Miles	Cost for New, Improved and Provisional Miles
Path	0.3	0.7					
Boulevard	9.0	45.3			\$0.25	\$11.3	\$11.3
ABL	0.0	1.9			\$0.25	\$0.5	\$0.5
Bicycle Lanes	13.8	6.5			\$0.02	\$0.1	\$0.1
Cycle track			8	2	\$1.00	\$8.5	\$10.6
Enhanced Shared Roadway	0.0	0.1	0	0	\$0.01	\$0.0	\$0.0
					subtotal	\$20.4	\$22.6
Sidewalk s		4			\$1.00	\$4.0	\$4.0
					subtotal	\$4.0	\$4.0
					<i>Planning</i>	10%	10%
					<i>Engineering</i>	20%	20%
					<i>Overhead</i>	20%	20%
Encouragement Programs						\$1.0	\$1.0
	23	58	8	2		\$37.8	\$41.1

² Based on data from the City of Portland Auditor’s Office in their annual resident surveys. Bicycling and transit are likely overrepresented in commute mode split compared to overall mode split, while driving and walking are likely underrepresented compared to overall mode split.

offer more immediate opportunity for implementation as they tend to be less controversial. The project schedule will allow for constructing and retrofitting approximately 20 miles of boulevard per year. Thus, we expect this project to be completed within four years from funding being available.

Partnership

Many of the civil improvements that contribute to the bicycle boulevards also lend themselves to “green treatments” that would serve to detain or retain street run-off from entering the city’s sewer system. To that end, Portland’s Bureau of Transportation (PBO/T) and the city’s Bureau of Environmental Services (BES) will continue their collaboration and closely coordinate designs and locations to derive as much dual-use as possible.

Perhaps most notable with an effort like this are the partnerships that would develop or continue around evaluating this project. Currently, Portland remains the best source for national data about bicycling. Portland’s “build it and they will come” story provides some of the best support for the argument that bicycling offers not only the best return on investment in terms of transportation dollars spent, but also offers the least expensive means to address a number of the big issues that currently plague us. This project continues and can dramatically strengthen that tradition. We will work with researchers at Portland State University’s Center for Transportation Studies to both establish baseline levels of bicycling, walking and transit use and to then track changes over time.

Project Sponsor

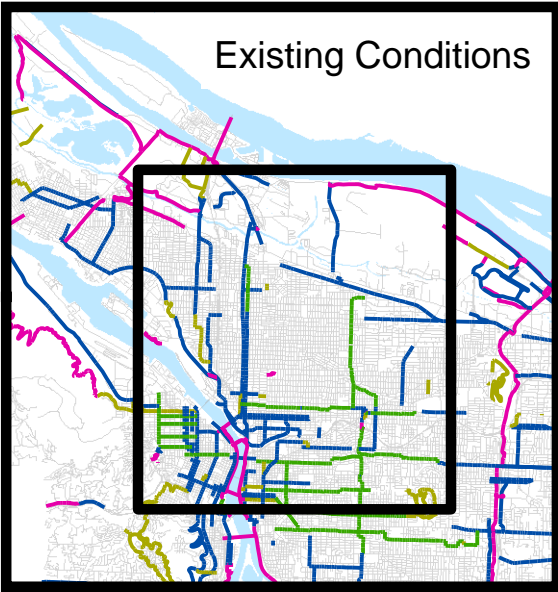
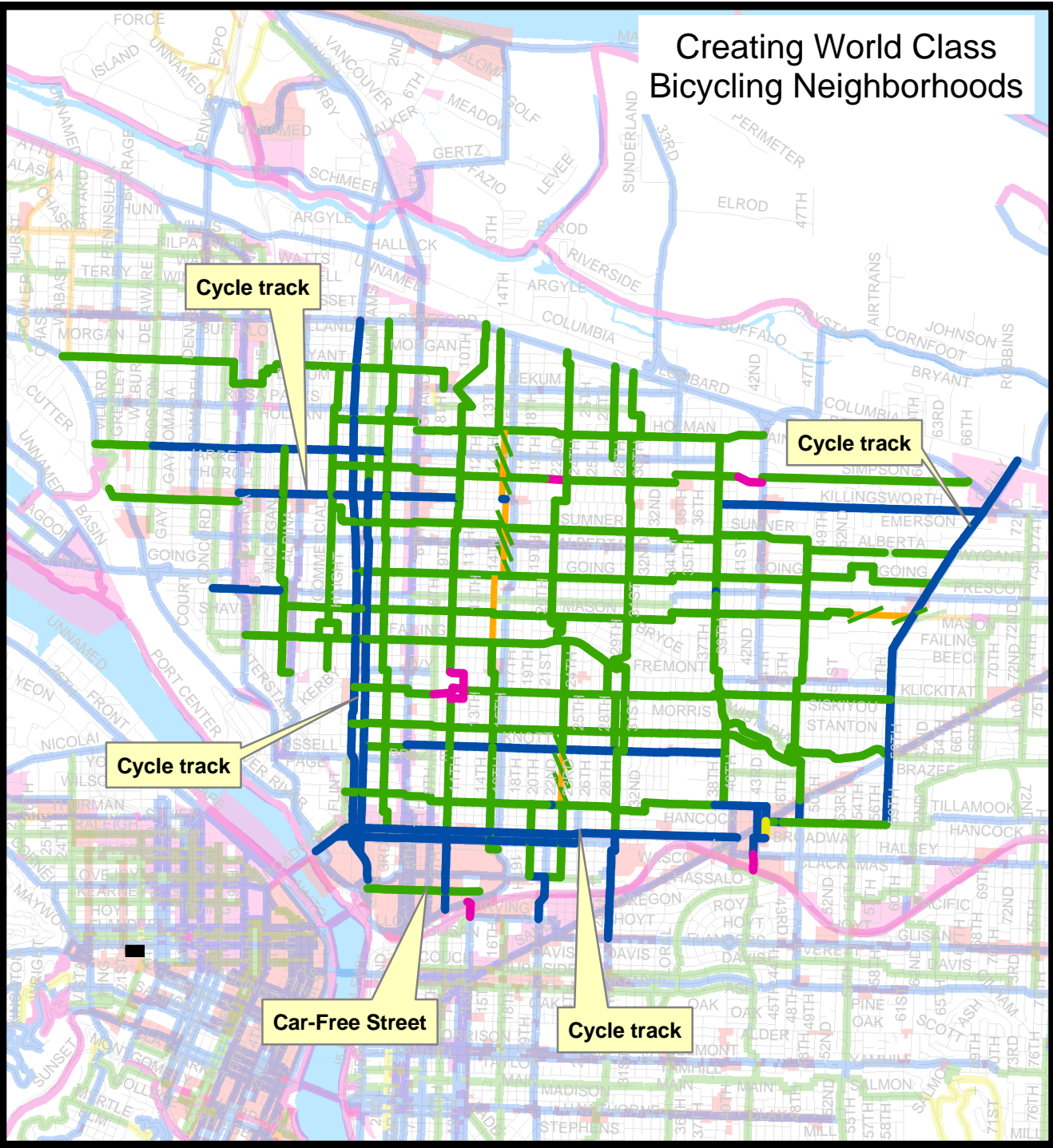
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³ We would also expect bicycling and walking to increase in overall mode split as their networks improve and their use is further encouraged.

North-Northeast Portland Active Transportation Proposal: Urban Demonstration Project

Creating World Class Bicycling Neighborhoods



54 miles of low stress shared roadways
 10 miles of cycle tracks
 10 miles of bike lanes

A world-class bikeway every 750 feet

Legend

NNE Demo

Bikeways

- Path
- Boulevard
- Separated in Roadway
- Advisory Bike Lane
- Enhanced Shared Roadway
- <Null>

Portland Zoning

Zoning

- Commercial
- Employment