

Workshop Room Copy - Don't Remove!

# SOUTHEAST CLINTON STREET BICYCLE AND PEDESTRIAN CONNECTIONS

---

AN ANALYSIS OF PATHWAY ALTERNATIVES  
CONNECTING SE CLINTON TO THE EASTBANK ESPLANADE



Winter 2003

PORTLAND STATE UNIVERSITY  
PLANNING WORKSHOP

Shannon Axtell 🚲 Evan Mackenzie 🚲 Brady Smith 🚲 Allison Wildman

## SE CLINTON BICYCLE AND PEDESTRIAN CONNECTIONS

---

*The Master of Urban and Regional Planning program at Portland State University provides practicing and aspiring planners with knowledge of history, practice, methodology and consideration of ethical responsibility surrounding the planning profession. The Planning Workshop is the culmination of the Masters Program and it allows students the opportunity to put their knowledge and skills into practice.*







## CONTACT NUMBERS

---

### WORKSHOP STUDENTS

	<u>Phone 1</u>	<u>Phone 2</u>	<u>Email</u>
<b>Shannon Axtell</b>	(503) 228-1604	N/A	shannonaxtell@yahoo.com
<b>Evan Mackenzie</b>	(503) 936-1915	(503) 292-6911	evanmackenzie@aol.com
<b>Brady Smith</b>	(503) 645-4684	(503) 235-0055	brady_smith@netzero.net
<b>Allison Wildman</b>	(503) 643-8914	(503) 230-9862	wildman@pdx.edu

### PORTLAND DEPARTMENT OF TRANSPORTATION BICYCLE AND PEDESTRIAN PROGRAM MANAGER

	<u>Phone 1</u>	<u>Phone 2</u>	<u>Email</u>
<b>Roger Geller</b>	(503) 823-7671	(503) 823-7576	Roger.Geller@pdxtrans.org

## TABLE OF CONTENTS

---

1. PROJECT OVERVIEW	6
1.1 CONTEXT AND REGIONAL SIGNIFICANCE	8
1.2 PROBLEM STATEMENT	13
1.3 SCOPE	15
2. METHODOLOGY	16
3. PRODUCT	17
4. WORK PLAN	18
4.1 GOAL, OBJECTIVES AND TASKS	18
5. BUDGET	22
6. TEAM ORGANIZATION	23
6.1 ROLES AND RESPONSIBILITIES	23
6.2 PROCESS FOR DECISION-MAKING	25
6.3 CHANNELS OF COMMUNICATION	25
7. RELATIONSHIP WITH CLIENT	26
7.1 ROLES AND RESPONSIBILITIES OF THE CLIENT	26
7.2 ROLES AND RESPONSIBILITIES OF THE GROUP	26
8. APPENDIX A	27
APPENDIX B	28

## PROJECT OVERVIEW

---

### 1. PROJECT OVERVIEW

In the last ten years, promoting bicycling and walking have become public policy objectives for transportation and land use planning, environmental, and public health departments in metropolitan areas. The reasons are numerous: increasing levels of congestion, vehicle miles traveled, and automobile ownership; deteriorating infrastructure; poor air and water quality; fragmented habitat; and significant changes in human respiratory health, obesity and type-II diabetes rates. Bicycling and walking are non-polluting, efficient, and inexpensive modes of transportation. Since many trips made by US households are within comfortable bicycling distance, agencies and advocacy groups are encouraging people to walk or bicycle for those trips instead of driving. 49% of all trips are shorter than 3 miles, 40% are shorter than 2 miles, and 28% are shorter than one mile (Pucher and Dijkstra, 2001). Moreover, both activities are excellent ways to improve cardiovascular health and prevent chronic diseases associated with excessive body weight.

Unfortunately, bicycling and walking in many metropolitan regions in the US is difficult due to the absence of quality facilities, inefficient and segregated land uses, and poor sidewalk and street connectivity. Portland has emerged as one of the best places for bicycling and walking in the US. By employing progressive statewide transportation and land use policies, Portland has slowed suburbanization rates, kept the metropolitan region relatively compact, and focused development around regional Town/Employment Centers, transit corridors, and the Central City. Portland's compact urban form has allowed the City to develop a comprehensive bike and pedestrian network that facilitates bicycling and walking throughout the region. However, there are still a number of short, but dangerous, gaps in the network that inhibit local and regional access. One of these critical gaps, between SE Clinton Street and the Eastbank Esplanade, is the focus of this Planning Workshop project.

Assessing the potential connections between SE Clinton and the Eastbank Esplanade is timely and appropriate because it provides a direct connection to two newly opened regional trails (*Map 1*): the OMSI – Springwater Corridor Trail (2002) and the Eastbank Esplanade (2001). The team will identify all of the possible route alternatives in the project area and conduct an analysis of those routes. A direct connection





Map 1. Project area and the two points that need to be connected: SE Clinton/SE 12th and SE Caruthers/SE 4th.

## CONTEXT AND REGIONAL SIGNIFICANCE

---

from SE Clinton to the Eastbank Esplanade would serve residents in the Clinton and Hosford-Abernethy neighborhoods, as well as the communities to the east and south currently with little or no access to the regional trail network.

The Planning Workshop team's responsibilities are two part: (1) to execute and document an alternatives analysis of at least three different routes connecting SE Clinton to the Eastbank Esplanade, and (2) to assess latent demand in the defined study area for the connection. To conduct these technical assessments, the team will employ a variety of methods including primary and secondary data collection, latent demand modeling, a review of professional documents regarding bike and pedestrian retrofit designs and applications, field work, photo documentation, and a general cost estimate.

The following document provides the context, regional significance, and scope of the project. It also provides a review of the methodologies, work plan, product, timeline and roles, responsibilities, and qualifications of each team member.

### 1.1 CONTEXT AND REGIONAL SIGNIFICANCE

Since the 1970s, Portland and the state of Oregon have been increasingly recognized as having progressive policies and legislation that facilitate supportive urban pedestrian and bicycle environments. Oregon's transportation and land use legislation (e.g. Senate Bill 100, ORS 366.514 ("The Bike Bill"), and the Transportation Planning Rule), federal funding opportunities through the Intermodal Surface Transportation Efficiency Act (ISTEA) and the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), and strong political and citizen support have enabled Portland to develop an extensive bikeway network in the last 20 years. Portland has been recognized twice as the "Best Bicycling City in North America" (Bicycling Magazine, 1995 and 2001) and is often studied as a model for urban bicycle facility planning and design. Portland is also frequently mentioned in scholarly literature and professional transportation publications for its bicycle policy, innovative facility construction, and application of



## European bicycle treatments.

A residents' task force and the Portland Department of Transportation (PDOT) developed Portland's first Bicycle Plan in 1979. This planning process led to the establishment of PDOT's Bicycle and Pedestrian Program and Bicycle Advisory Committee (BAC), one of the oldest in the country. Bikeway development was slow throughout the 1980s, largely due to the lack of available funding and political support. However, the introduction of ISTEA and subsequent legislation, changing political leadership, and a strong advocacy movement created a veritable bicycle boom in the 1990s. The number of bikeway miles in Portland increased over 600% in the last ten years, growing from 32 miles in 1993 to 226 miles in 2001.

The number of people bicycling in Portland has increased as well. 1990 and 2000 US Census data indicate that the percentage of people who commute to work by bicycle rose from 1.1% to 1.8% citywide (Figure 1). The Portland figures have nearly doubled during that time period from 2,453 people to 4,775 people, a rate that has greatly surpassed the rate of population growth. The percentage of people in Portland who walked to work increased in the last decade as well, up to 5.4% from 5.3%.

Comparatively, only 0.4% of people in the United States who commuted to work in 1990 and 2000 did so by bicycle. Moreover, the percentage of people who walked to work decreased from 3.9% in 1990 to 3.0% in 2000 (Figure 2). Figures from the 2000 Census Supplemental Survey indicate that at 2.6%, Portland has the third highest rate of commuting to work by bicycle among major cities (Figure 3).

Additionally, temporal bicycle counts on the bridges spanning the Willamette River show overall incremental increases and larger increases in bicycling on the Hawthorne, Steel, Broadway, and Burnside bridges, where bicycle and pedestrian improvements were made (Figure 4). The increasing number of bikeway miles and rates of bicycle use illustrate that an integrated, well-designed network of bikeways and bicycle amenities (i.e. parking, education, transit access, etc.) can contribute to

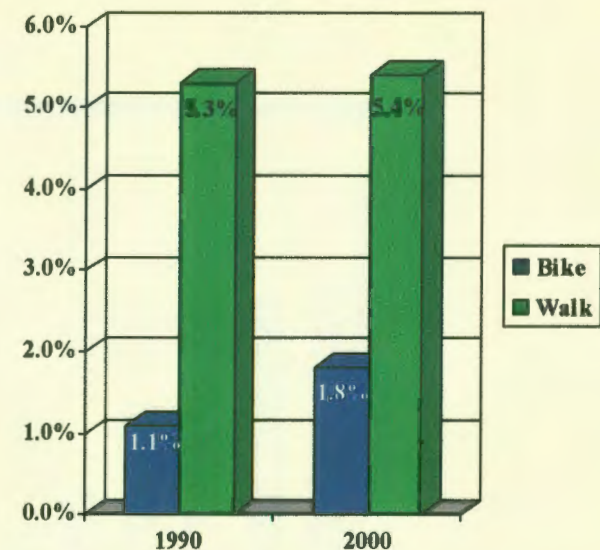


Figure 1. Portland, Oregon commute to work travel data: Bicycling and Walking, 1990 and 2000, US Census.

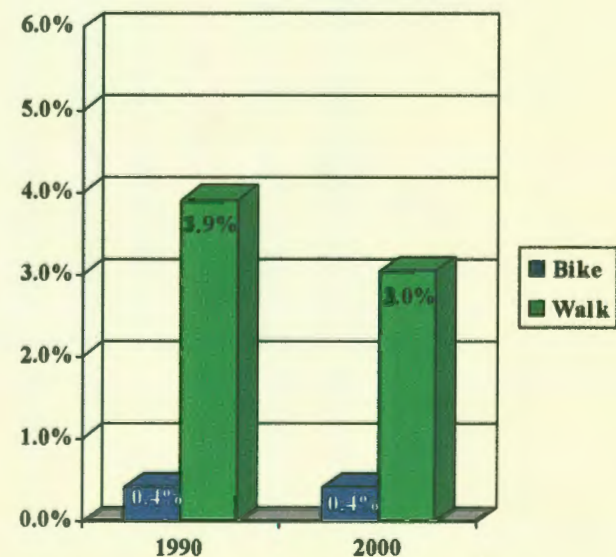


Figure 2. United States commute to work travel data: Bicycling and Walking, 1990 and 2000, US Census.

## CONTEXT AND REGIONAL SIGNIFICANCE

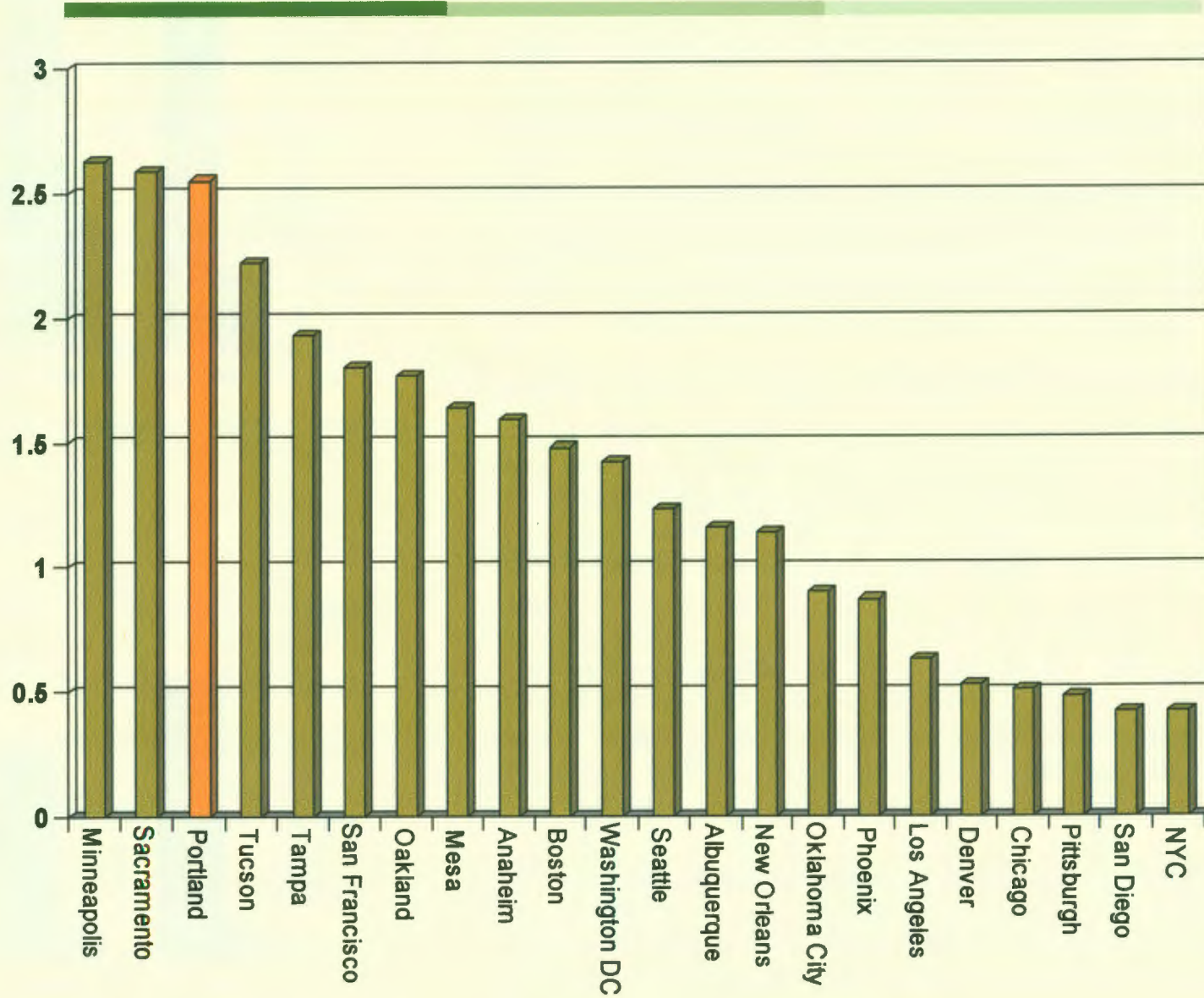
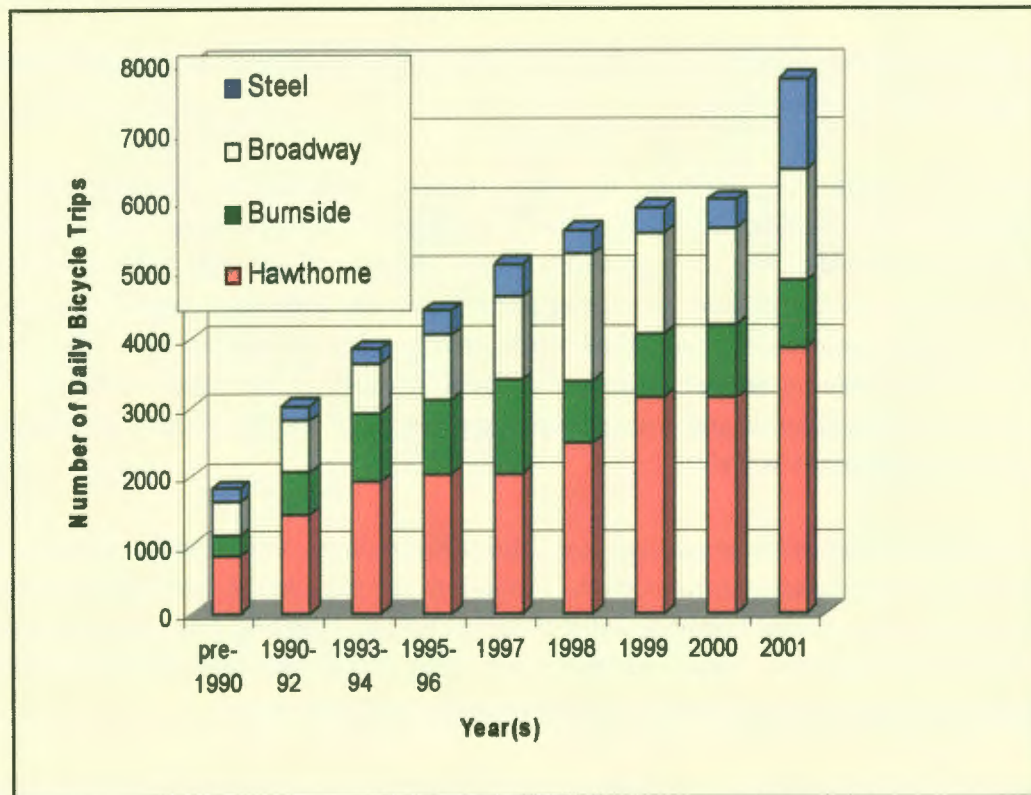


Figure 3. Percentage of people who commute to work by bicycle in major US cities. 2000 Census Supplemental Survey.



## CONTEXT AND REGIONAL SIGNIFICANCE



*Figure 4. Daily bicycle trips over four Portland bridges, pre-1990 to 2001. Portland Department of Transportation.*

the increasing rates of bicycling in urban areas, especially the Portland metropolitan region.

An important and regionally significant component of the bikeway network is the development of bicycle boulevards. These bikeways are often residential streets outfitted with traffic calming treatments that parallel busy arterial or collector roadways. Bicyclists share the roadway with vehicles; pedestrians have separate facilities (i.e. sidewalk). The intent of the treatment is to encourage bicycling and walking by

## CONTEXT AND REGIONAL SIGNIFICANCE

---

reducing traffic speeds and discouraging through automobile traffic, which may use the residential street to bypass congestion on the busier roadway.

Bicycle boulevards are considered regional bikeways because they enable bicyclists to travel long continuous distances on low volume roadways, thus providing safe connections from one part of the region to another. Additionally, like a watershed system, bicycle boulevards attract bicyclists from surrounding communities and direct them to various parts of the city and other regional systems. With an extensive network of well-connected bicycle boulevards, it is possible to traverse the entire city without ever bicycling on a high volume arterial or major collector roadway. This renders bicycle boulevards suitable for bicyclists of all skill levels and makes bicycling pleasurable and convenient. Bicycle boulevards are inherently safe for pedestrians as well.

Regional bike and pedestrian ways encourage can also help reduce vehicle miles traveled and trips, pollution, and stress on the roadway infrastructure. Extending the SE Clinton bike and pedestrian way is regionally significant because it would provide a direct connection to a regional trail system and the Central City, improve regional access to an area currently underserved by the bike and pedestrian network, and provide a model for retrofit opportunities that could be duplicated in the region.

SE Clinton Street is a bicycle boulevard paralleling SE Division, a high volume arterial (*Map 1*). Speed bumps, traffic circles, and chicanes were installed between SE 12th and SE 39th in 1998 to slow through traffic speeds and to create a more pleasant walking and bicycling environment. A recent report by the Portland Department of Transportation concludes, "Traffic calming on SE Clinton has successfully reduced the average 85th percentile speed closer to the posted speed and also decreased the number of cars using the street." Other treatments include preferential intersection treatments. For example, a bicycle only crossing allows bicycles to directly cross the roadway but automobiles are physically prevented from entering the roadway entrance and must turn; and a bicycle box, which allows bicyclists to queue in front of the automobiles at a signalized intersection.



## PROBLEM STATEMENT

Map 1 (page 7) illustrates the project area and the two points that need to be connected: (1) the SE Clinton/SE 11<sup>th</sup> and SE 12<sup>th</sup> couplet intersection, and (2) the entrance to the Eastbank Esplanade and the OMSI-Springwater Trail at SE 4<sup>th</sup> and SE Caruthers. Currently, SE Clinton is blocked from direct access to the waterfront by industrial land uses and the Union Pacific rail line west of the SE 11<sup>th</sup> and SE 12<sup>th</sup> couplet. The intersection crossing of SE 11<sup>th</sup> and SE 12<sup>th</sup> is difficult for pedestrians and bicyclists due to poor sight lines, awkward roadway configuration, a railroad crossing, and high traffic volumes and speeds.

Map 2 illustrates the project's immediate area, but also the study area or "travel shed," where bicycle and pedestrian trips may originate. Currently, the Brooklyn neighborhood and other communities to the south and east have very poor access to the regional bikeway system. This project is an analysis of at least three alternative routes to improve the direct connection to the Eastbank Esplanade from SE Clinton. Designs will be recommended to make each route suitable for bicyclists and pedestrians, and latent demand will be estimated for the connection.

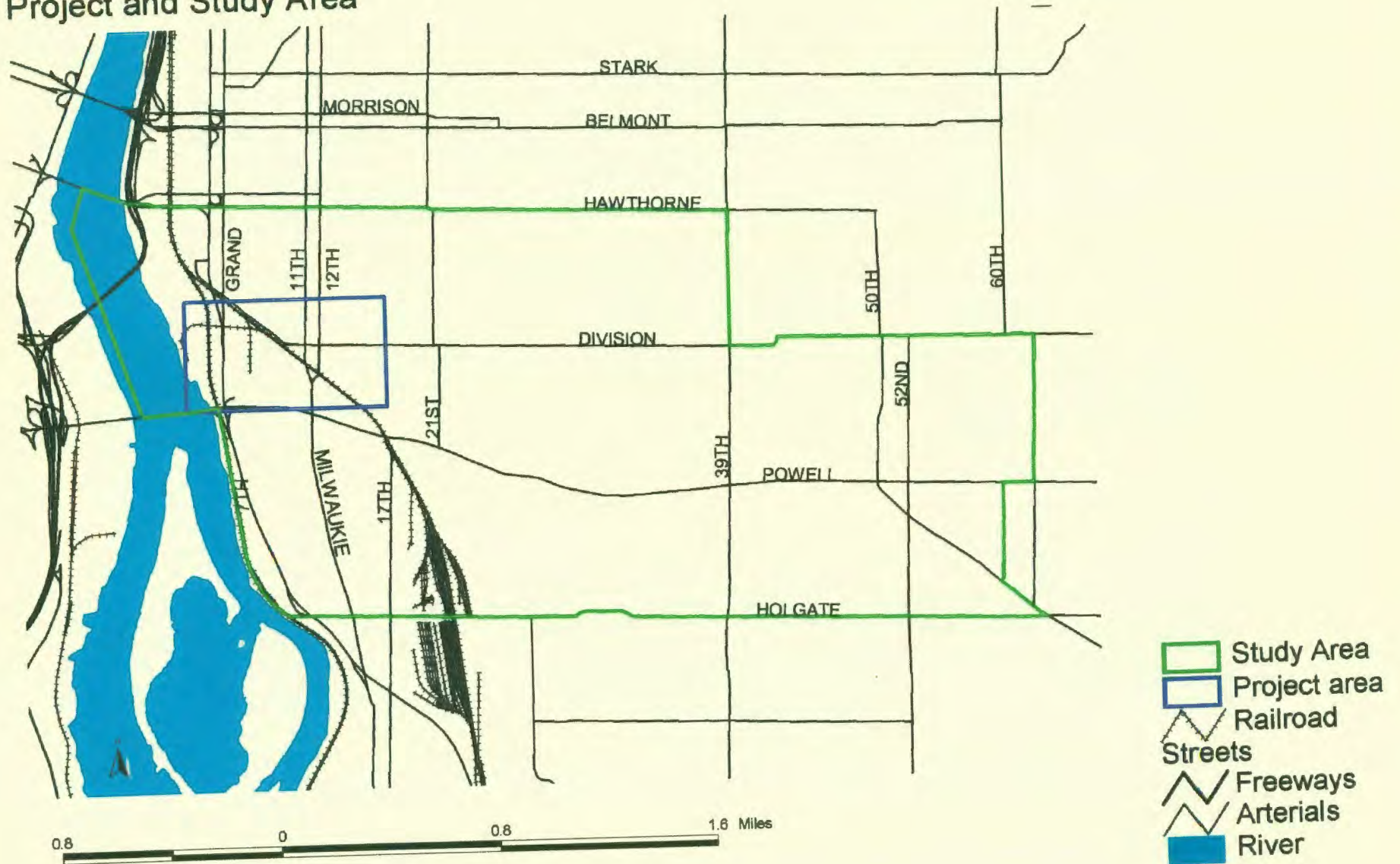
### 1.2 PROBLEM STATEMENT

Despite the increase in bikeway miles and number of people riding, Portland does not have a fully connected network of bikeways yet. There are some short, but dangerous, gaps in the system. As the numbers of bicyclists and pedestrians continue to grow, closing the gaps become critical to make the system safe and convenient. The connection from the Eastside Esplanade to the SE Clinton bike and pedestrian way is such a gap, and has become more significant due to the opening of two regional trails to the west. The team's question is: which is the best way to provide a safe and direct connection for bicyclists and pedestrians from SE Clinton to the Eastbank Esplanade?

The workshop team has posed several questions in order to understand the context of the project and formulate a course of research and analysis:

- How many ways is it possible to connect bicyclists *and* pedestrians from SE Clinton to the Eastbank Esplanade?

## Project and Study Area



Map 2. "Travel shed" study area with the project area inset.



## SCOPE

- What criteria are needed to analyze the identified routes? What criteria have been used in similar projects? Is this criteria repeatable?
- What is needed to make each route safer for bicyclists and pedestrians?
- What are the political, physical, and economic barriers of the routes?
- What can be done to improve the intersection crossings at SE 11th and SE 12th?

### 1.3 SCOPE

The team will conduct an alternatives analysis of at least three different bicycle and pedestrian links between the intersection of SE Clinton and SE 12<sup>th</sup>, and the Eastbank Esplanade at SE 4<sup>th</sup> and SE Caruthers (*Map 1*). The project area is bounded by the Willamette River to the west, SE Powell (US 26) to the south, SE 13<sup>th</sup> to the east, and SE Caruthers to the north. The team will identify all possible routes that link SE Clinton and SE 12<sup>th</sup> and the Eastbank Esplanade. For each route the opportunities and constraints and appropriate bicycle and pedestrian treatments will be identified. Details of these analyses are provided in the Work Plan and Methodology sections of this document.

This project also includes a study area encompassing the Brooklyn neighborhood to the south, Hosford-Abernethy and Clinton neighborhoods to the north and east, and the Central Eastside to the west (*Map 2*). The census tracts included in this study area are 8.01, 8.02, 9.01, 9.02, 10.00, 11.02, 12.02, and 13.02. The study area will be examined to estimate latent demand for bicycling and walking.



## METHODOLOGY

---

### 2. METHODOLOGY

The team will use primary and secondary data to identify and evaluate alternative bicycle and pedestrian routes between SE Clinton and the Eastbank Esplanade.

First, the team will review bicycle and pedestrian and trail feasibility studies to identify appropriate criteria and corresponding indicators for evaluating route alternatives. Criteria and indicators will be compiled into an evaluation matrix. Each indicator will have a score range. Criteria scores will be the product of total corresponding indicators. Each criterion will be weighted, based on interviews with PDOT staff. For example, safety may be more important than cost. Identifying criteria and indicators early on ensures that the team will collect appropriate data during research and field work.

Second, the team will collect and analyze primary and secondary data from the project area. Primary data, gathered through field work, will include intersection width, rail and road intersection angles, sidewalk and pavement quality, and estimating the time between cars on major project area roads – an indicator of bicycle and pedestrian crossing ease. Secondary data, gathered through research and interviews, will include average daily auto traffic, train frequency and speeds, and an assessment of the Union Pacific's (UP) interests and/or willingness to consider a rail-with-trail in the project area. The latter objective will be completed through discussions with company officials and research on existing rail-with-trail projects in other UP rail corridors.

Third, the team will formulate alternative bicycle and pedestrian routes connecting Clinton Street to the East Bank Esplanade, based on primary and secondary data. The team will generate alternatives through discussions based on maps, aerial photos, and other data collected through field work.

Fourth, for each route alternative, the team will conduct a detailed analysis to identify problem areas. For example, intersections where trains, bikes, pedestrians, and autos converge can be particularly dangerous for non-auto travel modes. The team will formulate a range of retrofit techniques - based on literature and technical documents - in order of financial cost, for each problem.

Fifth, each route alternative will be evaluated based on criteria. The team will complete an evaluation matrix for each alternative. In addition to a total score, the team will provide an in-depth evaluation of each alternative, discussing the unique merits and drawbacks of each route.



## PRODUCT

Sixth, a larger study area, surrounding the project area, will be defined based on input from PDOT staff and census tract boundaries. The study area is intended to roughly capture people who may utilize the new route for work and recreation travel. The team's analysis will seek to demonstrate the overall suitability for bicycling and walking and estimate potential demand. Demographic and land use variables that enhance walking and bicycling will be identified based on literature and other research. The team will analyze the study area to estimate the presence or level of these variables in the study area. This will be done based on the 1994-95 Household Activity Survey and US Census data. The survey indicates the respondent's mode choice for a range of activities and provides associated demographic and land use characteristics (within one-half mile) for each survey respondent. Using ArcView, survey respondents in the study area can be selected and land use and demographic characteristics analyzed. For example, high levels of intersection density and the presence of mixed land uses (e.g. retail and multi-family housing) have been shown to enhance walking and bicycling rates.

Last, the team will develop and deliver a final report and presentation to PDOT and Portland State University (PSU) faculty and students.

### 3. PRODUCT

The final product will be a technical report, providing a detailed analysis of alternate bicycle and pedestrian routes connecting SE Clinton to the Eastbank Esplanade. The document will consist of primary and secondary data analysis of the project area and route alternatives, an evaluation matrix, photos, maps, and design schematics for three routes to make them suitable for bicycle and pedestrian travel. Several "Z folded" 11" by 17" maps will be used to emphasize detail for the routes. A draft table of contents is provided in Appendix A.

#### SOURCES OF DATA AND INFORMATION

American Association of State Highway  
and Transportation Officials  
(AASHTO)

Americans with Disabilities Act

Manual on Uniform Traffic Control  
Devices (MUTCD)

Metro's Regional Land Inventory Sys-  
tem (RLIS)

Northwest Natural Gas

Oregon Department of Transportation  
(ODOT)

1994-95 Household Activity Survey  
(ODOT)

Portland Department of Transportation

Rails-to-Trails Conservancy

United States Census

Union Pacific Railroad

## WORK PLAN

### 4. WORK PLAN

A timeline outlining the project objectives and tasks is provided in Appendix B. One team member will act as a lead for each task and the group will provide support and assistance under their guidance. The task lead is indicated by the team member's initials. Further elaboration of the project goal, objectives, tasks and responsibilities follows.

#### 4.1 PROJECT GOAL, OBJECTIVES AND TASKS

**Goal:** Provide safe and direct bicycle and pedestrian access to the Willamette River and the regional trail system for residents in the West Clinton and Hosford-Abernethy neighborhoods, and communities to the south and east.

##### **Objective 1: Develop an accurate project scope and work plan.**

*Task 1:* Develop a project proposal that describes the problem and its significance, and outlines the scope of the project.

*Task 2:* Develop a project methodology that is based on other successful projects and outlined or supported in planning literature.

*Task 3:* Describe the final products of the project.

*Task 4:* Develop a team work plan that identifies specific tasks, dates for completion, benchmarks, and staff assignments.

*Task 5:* Identify project team roles and responsibilities.

*Task 6:* Describe the project team's organizational structure.

*Task 7:* Describe the project team's client relationship.

##### **Objective 2: Develop evaluation criteria.**

*Task 1:* Review other bicycle and pedestrian and trail feasibility studies.

*Task 2:* Based on this review, select criteria with indicators that can reasonably be measured (e.g.



## PROJECT GOAL, OBJECTIVES, AND TASKS

---

low semi truck traffic may be more dangerous to walkers and bicyclists than a higher level of auto traffic).

*Task 3:* Develop a matrix of selected criteria and corresponding indicators.

*Task 4:* Assign relative weights to each criteria and indicator (e.g. how important is safety relative to cost).

### **Objective 3: Analyze Project Area.**

*Task 1:* Collect area transportation, industrial, economic development and neighborhood plans.

- Identify future land uses.
- Identify future transportation connections and uses.
- Identify plans that support increased mode choice.

*Task 2:* Gather primary data to determine the project area's physical characteristics.

- Assess pavement and sidewalk quality (e.g. potholes, presence and condition of sidewalks).
- Assess intersection and roadway widths and geometries.
- Measure railroad/road intersection angles.
- Estimate the average time between each auto (gap counts) at SE 11<sup>th</sup> and SE 12<sup>th</sup> at SE Division – a measure of road crossing ease.
- Identify points of mode conflict.

*Task 3:* Gather secondary data to determine the project area's physical characteristics and current and future land uses.

- Determine railroad operations, speeds, and trains per day.
- Contact a Union Pacific representative to gather information about future rail corridor use (land use), liability issues, requirements for setback, and their amenability to a potential rail-with-trail.
- Determine average daily auto traffic for all streets.

## PROJECT GOAL, OBJECTIVES, AND TASKS

---

### **Objective 4: Formulate alternative bicycle/pedestrian routes.**

*Task 1:* As a team, formulate a list of all possible routes. A list will be generated from site visits, aerial photos, and RLIS data/maps.

### **Objective 5: Perform a detailed analysis of each route using evaluation criteria.**

*Task 1:* As a team, identify problem areas for bikes and peds on each route (e.g. wide and busy intersections, no sidewalks, and poor pavement quality).

*Task 2:* Identify potential retrofit techniques for each problem area on each route (e.g. crosswalks, pedestrian warning systems, overpasses, and bike lanes).

- Rank individual retrofit techniques based on general financial cost.

### **Objective 6: Evaluate the route alternatives based on evaluation criteria.**

*Task 1:* Complete the criteria matrix for each route.

*Task 2:* Total score for each route and rank accordingly.

*Task 3:* Compare and discuss the merits and drawbacks of alternatives.

### **Objective 7: Analyze Study Area.**

*Task 1:* Establish Study Area boundaries.

- Seek input from Client.
- To aid data collection, identify census tract boundaries surrounding project area.

*Task 2:* Identify variables that influence walking and bicycling.

- Review recent literature and professional publications.



## PROJECT GOAL, OBJECTIVES, AND TASKS

---

*Task 3:* Determine the extent to which these variables are present and to what degree.

- Based on 2001 RLIS data, use GIS analysis to measure selected variables (e.g. intersection density and land use).
- Using 2000 US Census, use GIS to measure selected variables in census tracts, such as auto ownership.

*Task 4:* Demonstrate demand for bicycling and walking in the Study Area.

- Based on Task 2 and 3 analysis, generally describe demand for walking and bicycling.

### **Objective 8: Develop the final report.**

*Task 1:* As a team, develop a table of contents.

*Task 2:* Write report sections.

*Task 3:* Prepare camera-ready maps and photos.

*Task 4:* Edit and finalize report.

*Task 5:* Print report.

### **Objective 9: Create and deliver report presentation.**

*Task 1:* Create a Power Point presentation.

*Task 2:* Deliver presentation to client, colleagues and instructors.

## BUDGET

### 5. BUDGET

Due to budgetary constraints, our client is unable to offset the cost of printing final documents. Subsequently, the costs associated with completing the project will be divided up evenly between the project members. The following is a summary of project costs based on a preliminary estimate from Kinko's. Alternative publishing methods will be explored to reduce publishing costs and duplication. Additional costs associated with communication, collection of background information, and making copies will likely occur. The team has allotted \$100 for incidental purchases and communication costs.

Printing Task	Price Per		Quantity	Total
	Page	Pages		
Double Sided Color	\$1.18	12	12	\$169.92
Double Sided Black and White	\$0.06	38	12	\$27.36
Binding with Cover and Hard Back	\$3.34	1	12	\$40.05
Total Document Costs				<b>\$237.33</b>
Price Per Copy				<b>\$19.78</b>
Price Per Project Member				<b>\$59.33</b>

Recipient	Number of Copies
Group Members	4
Instructors	5
Client	3
Total	12



## TEAM ORGANIZATION

---

### 6.1 ROLES AND RESPONSIBILITIES

**Shannon Axtell** expects to complete his Masters in Urban and Regional Planning degree in June 2003 specializing in Environment and Transportation. Shannon currently works for Portland's Bureau of Environmental Services as an intern in the Willamette Watershed Planning Group. Prior to Portland, Shannon lived in San Francisco and worked as a Research Associate in the science program at the David and Lucile Packard Foundation – where he helped to develop a program to foster research on sustainability. Shannon enjoys running, cycling, and gardening at the Adams community garden. He also has a Master's degree in Political Science and bachelors degrees in Molecular Biology and Political Science from the University of California, Santa Cruz.

*Shannon's primary roles in the project include writing and editing and modeling bicycle and transportation demand in the study area based on PDOT's 1994-95 Household Transportation Survey.*

**Evan Mackenzie** is a third year Masters in Urban Planning student who will graduate in June of 2003. Evan is working on dual emphases in Transportation and Land Use. Evan received a bachelors degree in Journalism (Advertising) from the University of Oregon in 1991. Evan's professional background includes newspaper advertising sales, managing a bike shop, and wholesale sales for a bicycle distributor. Evan's long term goal is to make cities and towns in the United States more bicycle and pedestrian-friendly.

*Evan's background and interests enable him to effectively analyze neighborhood characteristics for bicycle and pedestrian suitability. Evan also will develop site assessment methodologies based on recent literature. Additionally, Evan will help contact potential stakeholders – such as the Union Pacific Railroad and the Rails to Trails Conservancy.*



## ROLES AND RESPONSIBILITIES

---



**Brady Smith** received his undergraduate degree in Geography from Western Oregon University in 2001. During that time, and since then, his interests have been focused on natural resource planning and preservation. Brady will graduate in June 2003 with a Masters in Urban and Regional Planning specializing in Environmental Planning. Brady's recreational activities include mountain biking, jogging, and hiking. He is currently working as a Cartographic Technician for the Natural Resource Conservation Service and hopes to bring his GIS and analytical skills to the project.

*Brady's areas of expertise are demographic and geographic data analysis. Brady will gather and analyze data to characterize the study area and generate maps, charts, and graphs for the final project report and presentations.*



**Allison Wildman** will graduate with a Masters in Urban and Regional Planning in June 2003. Allison has been concentrating her studies in Transportation and Community Development, with specific emphasis on bicycle and pedestrian planning. Allison is currently employed as a Planner for Alta Planning + Design, a bicycle, pedestrian, and trail planning and design firm in Portland. Allison is the author of "The 2002 Bicycle-Friendly Communities Report Card", and the recipient of the 2002 graduate Women's Transportation Seminar academic scholarship. She graduated from PSU with a bachelors degree in Sociology in 2000.

*Allison's specific contributions to the project include writing and editing, modeling bicycle and pedestrian trips, assessing infrastructure needs and recommending retrofits, and acting as the project team's primary client contact.*



## PROCESS FOR DECISION-MAKING

---

### 6.2 PROCESS FOR DECISION-MAKING

The team has decided not to appoint a specific project manager in order to foster equal ownership in the project. The small size of the team should mitigate the degree of conflict that occurs with decision-making. The team members have previously worked with one another on a variety of successful projects and are aware of one another's strengths and weaknesses. Tasks will be assigned based on an assign and commit basis, where each member is given an opportunity to oppose assigned work and suggest a different task. Each member will have equal say in important decisions and have ample opportunity to communicate their positions. Major decisions will require a quorum. The team will refer to the *Facilitator's Guide to Participatory Decision-Making* (Kaner with Lind, Toldi, Fisk and Berger; 1996) to address some of the problems that occur in a group decision-making process, like pushing for closure and homogeneous perspectives.

### 6.3 CHANNELS OF COMMUNICATION

Team members will utilize several different methods of communication. The preferred method of contact by all members is email. Email allows thoughts and information to be quickly distributed to all team members and is easily accessible in a number of locations. The telephone will be used when an immediate response is needed or the team needs to further discuss elements of the project. All contact information is located at the front of the work plan. Additionally, the team has designated one of the weekend mornings (either Saturday or Sunday) as a work session where the host provides brunch and the team discusses any problems or issues that have arisen. Host responsibilities will rotate each week.

## RELATIONSHIP WITH CLIENT

---

### 7.1 ROLES AND RESPONSIBILITIES OF THE CLIENT

The project client is Roger Geller, the Program Manager of Portland's Office of Transportation Bicycle and Pedestrian Program. Mr. Geller is an appropriate client for this project because he is familiar with many facets of bicycle and pedestrian planning, analysis, and design, and has access to other people and divisions within the Department of Transportation. The team will provide Mr. Geller with a technical report that discusses a detailed analysis of the project area, at least three bicycle/pedestrian route alternatives with retrofit recommendations and cost estimates, and a general estimate of latent demand in the defined study area. Mr. Geller is particularly interested a route that parallels the Union Pacific railway corridor in the project area.

Mr. Geller has agreed to meet with the team approximately twice a month and is available without an appointment by telephone and email for pressing issues or problems. Mr. Geller has also agreed to provide the team with traffic data, maps, aerial photos, and other data the team may need. Mr. Geller has reviewed the project scope and agrees with the project's goal, objectives, tasks, and final product.

### 7.2 ROLES AND RESPONSIBILITIES OF THE PROJECT TEAM

The project team will conduct the work outlined in the project scope and agreed to by Roger Geller. Specifically, the team will provide a detailed analysis of the study area, present at least three bicycle and pedestrian alternatives with retrofit recommendations and cost estimates, and provide a general estimate of latent demand in the defined study area. The team will meet with Mr. Geller twice a month to provide an update, identify data and other needs, and obtain feedback to refine analysis and other recommendations.



## APPENDIX A

### DRAFT TABLE OF CONTENTS

	~# of pages
1. Introduction	
1.1 Background	2
1.2 Study purpose	1
1.3 Project Area Description	3
1.4 Methodology & Evaluation Criteria	3
1.5 Study Organization	1
2. Background Information	
2.1 City and Neighborhood Planning Documents	2
2.2 Stakeholders	3
2.3 Other Documents Reviewed	4
3. Route Assessment	
3.1 Alternative One	4
3.2 Alternative Two	4
3.3 Alternative Three	4
4. Findings and Recommendations	4
5. Forecast of Connection Usage	2
6. Conclusion	3

# APPENDIX B

		MARCH						APRIL				MAY				JUNE		
		24-Feb	3-Mar	10-Mar	17-Mar	24-Mar	31-Mar	7-Apr	14-Apr	21-Apr	28-Apr	5-May	12-May	19-May	26-May	2-Jun	9-Jun	16-Jun
<b>1</b>	<b>Objectives and Tasks</b>																	
i.	Develop work plan																	
	Problem Statement	AW																
	Context/Significance	AW																
	Scope	EM																
	Presentation	GROUP																
ii.	Methodology																	
	ID previous methods	AW																
	Develop Study methods	GROUP																
	Gather literature to support study methods	EM																
iii.	Products			GROUP														
iv.	Timelines																	
	Develop Tasks	SA	GROUP															
	Develop Benchmarks	SA	GROUP															
	Create schedule	SA																
v.	Roles and Responsibilities		SA	SA														
vi.	Maps		BS	BS														
vii.	Budget		BS	BS														
viii.	Team Organization		SA/GROUP															
ix.	Relationship with Client		SA/GROUP															
<b>2</b>	<b>Develop evaluation criteria</b>																	
i.	Collect and review similar studies		SA	GROUP														
ii.	Select criteria			GROUP														
iii.	Develop evaluation matrix			GROUP														
<b>3</b>	<b>Analyze project area</b>																	
i.	Collect/review area plans	SA	GROUP															
ii.	Gather primary data						GROUP											
iii.	Gather secondary data						EM	GROUP										
<b>4</b>	<b>Formulate alternative routes</b>				GROUP													
<b>5</b>	<b>Perform detailed analysis of each route</b>						AW	GROUP										
<b>6</b>	<b>Evaluate route alternatives</b>										GROUP							
<b>7</b>	<b>Analyze study area</b>																	
i.	Establish boundaries	BS	GROUP															
ii.	Identify variables that influence bicycling and walking	EM	GROUP															
iii.	Analyze study area using GIS and Census data					BS	GROUP											
<b>8</b>	<b>Develop final report</b>																	
i.	Develop table of contents		GROUP															
ii.	Write report sections							SA/AW	GROUP									
iii.	Prepare camera ready maps											BS						
iv.	Edit and finalize report													SA/AW	GROUP			
<b>9</b>	<b>Presentation</b>													AW	GROUP			

SA - Shannon Axtell  
EM - Evan Mackenzie  
BS - Brady Smith  
AW - Allison Wildman