

## Background

- Transportation and recreation/tourism are intimately linked. Visitors to parks and outdoor recreation areas must travel to, from, and around these areas. Moreover, transportation is often a form of recreation, as in driving for pleasure and biking. Research is needed to help guide transportation planning and management in the context of recreation/tourism.

## Goal

- Guide planning and management of transportation to serve the needs of sustainable recreation/tourism

## Objectives

- Develop indicators and standards of quality for transportation in the context of recreation/tourism
- Incorporate indicators and standards of quality into an expanded Levels of Service (LOS) framework used in conventional transportation management
- Apply this work to a spectrum of transportation modes and contexts

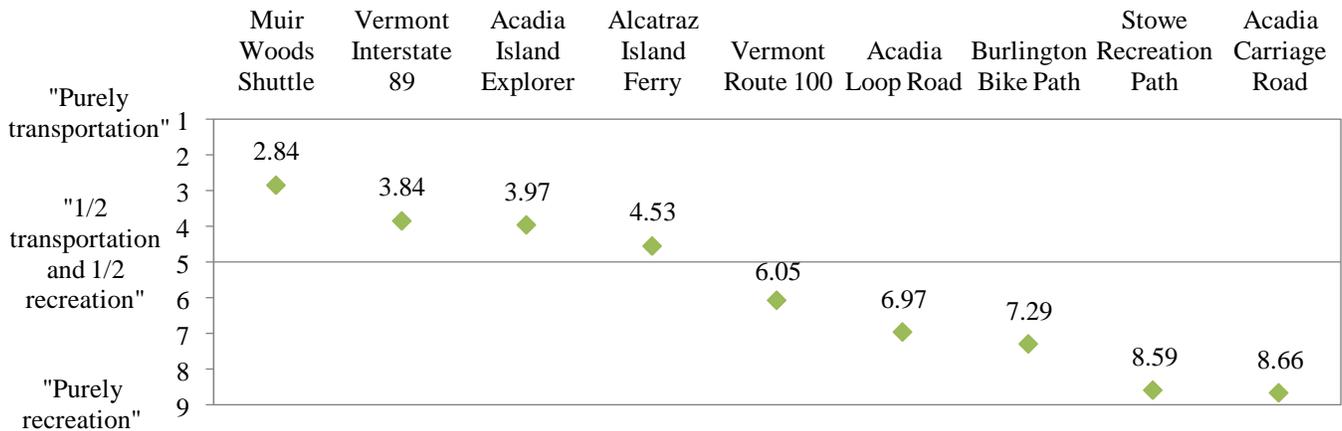
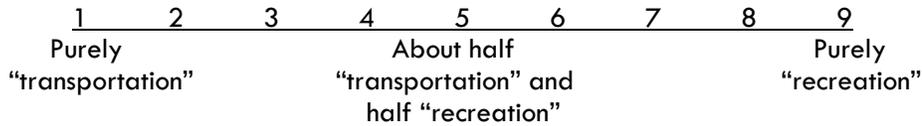
## Methods

- Surveys of transportation users employing open and close-ended questions, normative theory and methods, and visual simulations administered during summer 2009. Study contexts included 1) a spectrum of recreation sites ranging from low to high levels of use and development and 2) multiple modes of transportation. Surveys were conducted in the following locations:
  - Roads
    - Acadia National Park Loop Road (N=247; Response Rate = 87%)
    - Vermont Route 100 (N=311; Response Rate = 69%)
    - Interstate 89 (N=242; Response Rate = 77%)
  - Greenways
    - Acadia National Park Carriage Roads (N=246; Response Rate = 94%)
    - Stowe Recreation Path (N=270; Response Rate = 94%)
    - Burlington Bike Path (N=272; Response Rate = 88%)
  - Public transit
    - Acadia National Park Island Explorer (N=255; Response Rate = 79%)
    - Muir Woods Shuttle Bus (N=236; Response Rate = 44%)
    - Alcatraz Island Ferry (N=200; Response Rate = 95%)

## Select Findings

### Transportation – Recreation Scale

The purpose of using [the Acadia National Park Loop Road] can range from purely “transportation” (for example, to get from one place to another) to purely “recreation” (e.g., to enjoy the journey), or it can be some combination of these purposes. Using the scale below, please indicate the purpose of your use of [the Acadia National Park Loop Road] today.



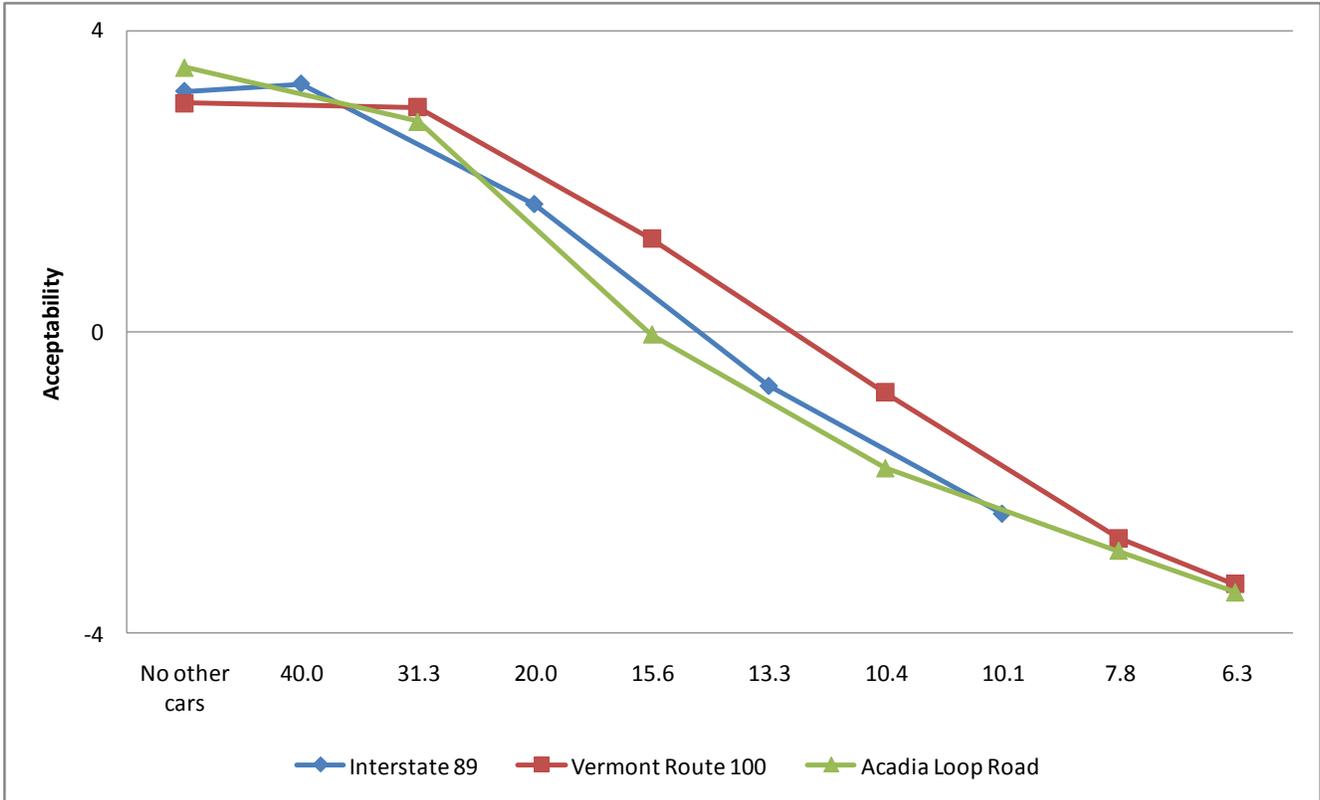
### Most Desirable Attributes Across Contexts and Settings

Attribute	Mean* (Rank)	Mean (Rank)	Mean (Rank)
	<u>Vermont Interstate 89</u>	<u>Vermont Route 100</u>	<u>Acadia Loop Road</u>
Scenic views.....	1.74 (1)	1.62 (1)	1.85 (1)
Lack of litter.....	1.62 (2)	1.44 (3)	1.79 (3)
Lack of graffiti.....	1.61 (3)	1.46 (2)	1.83 (2)
	<u>Burlington Bike Path</u>	<u>Stowe Recreation Path</u>	<u>Acadia Carriage Roads</u>
Scenic views.....	1.81 (1)	1.81 (2)	1.88 (3)
Participating in a healthy form of transportation/recreation.....	1.76 (2)	1.82 (1)	1.91 (1)
Participating in a form of transportation/recreation that is integrated into a natural setting.....	1.72 (3)	1.81 (3)	--
Being away from motorized transportation.....	--	--	1.90 (2)
	<u>Alcatraz Island Ferry</u>	<u>Muir Woods Shuttle</u>	<u>Acadia Island Explorer</u>
Scenic views.....	1.73 (1)	1.21 (2)	--
Photographic opportunities.....	1.50 (2)	--	--
Able to move around freely within....	1.49 (3)	--	--
Minimizing impacts of travel.....	--	1.36 (1)	1.72 (1)
Riders act in a courteous manner toward each other.....	--	1.12 (3)	--
Access to recreation.....	--	--	1.59 (2)
Access to park highlights.....	--	--	1.51 (3)

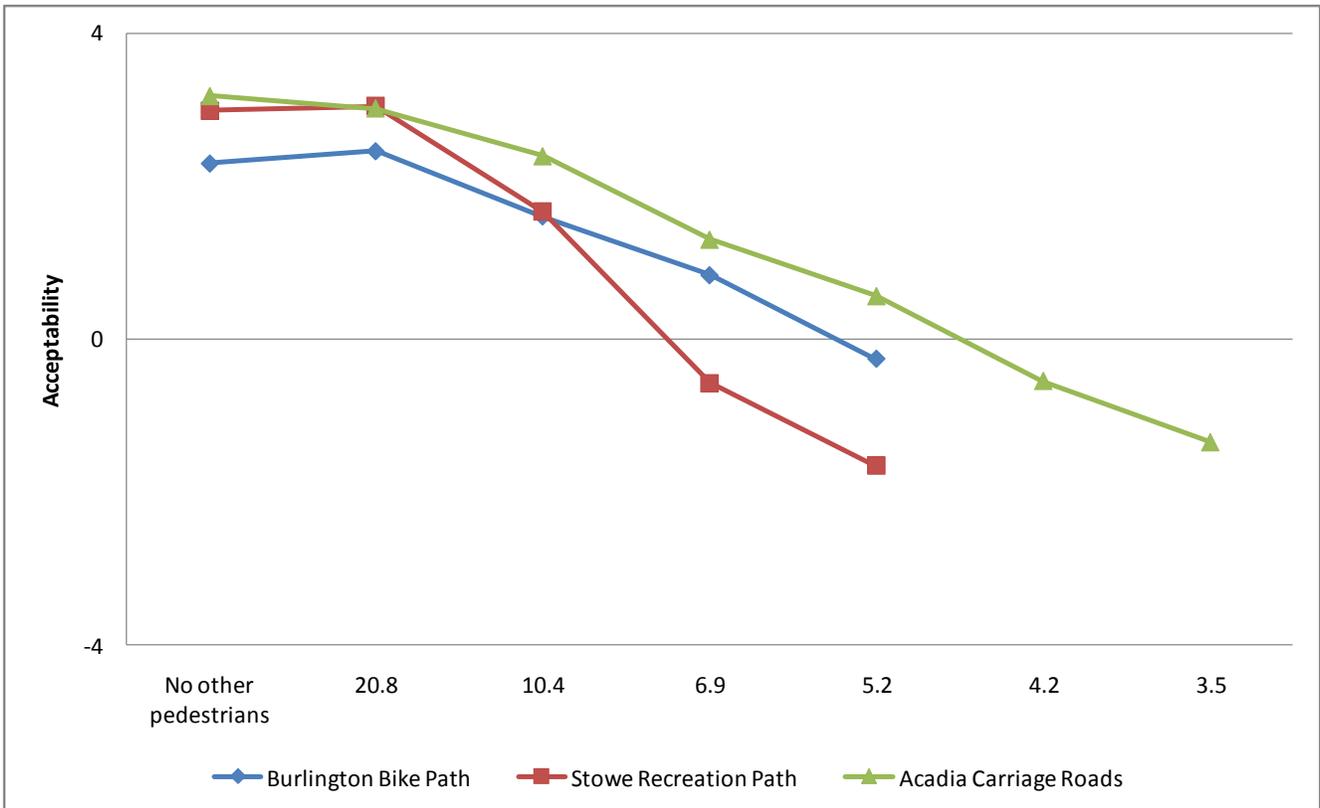
\*Mean values based on 5-point scale from -2 = “very undesirable” to +2 = “very desirable”

## Density of Use

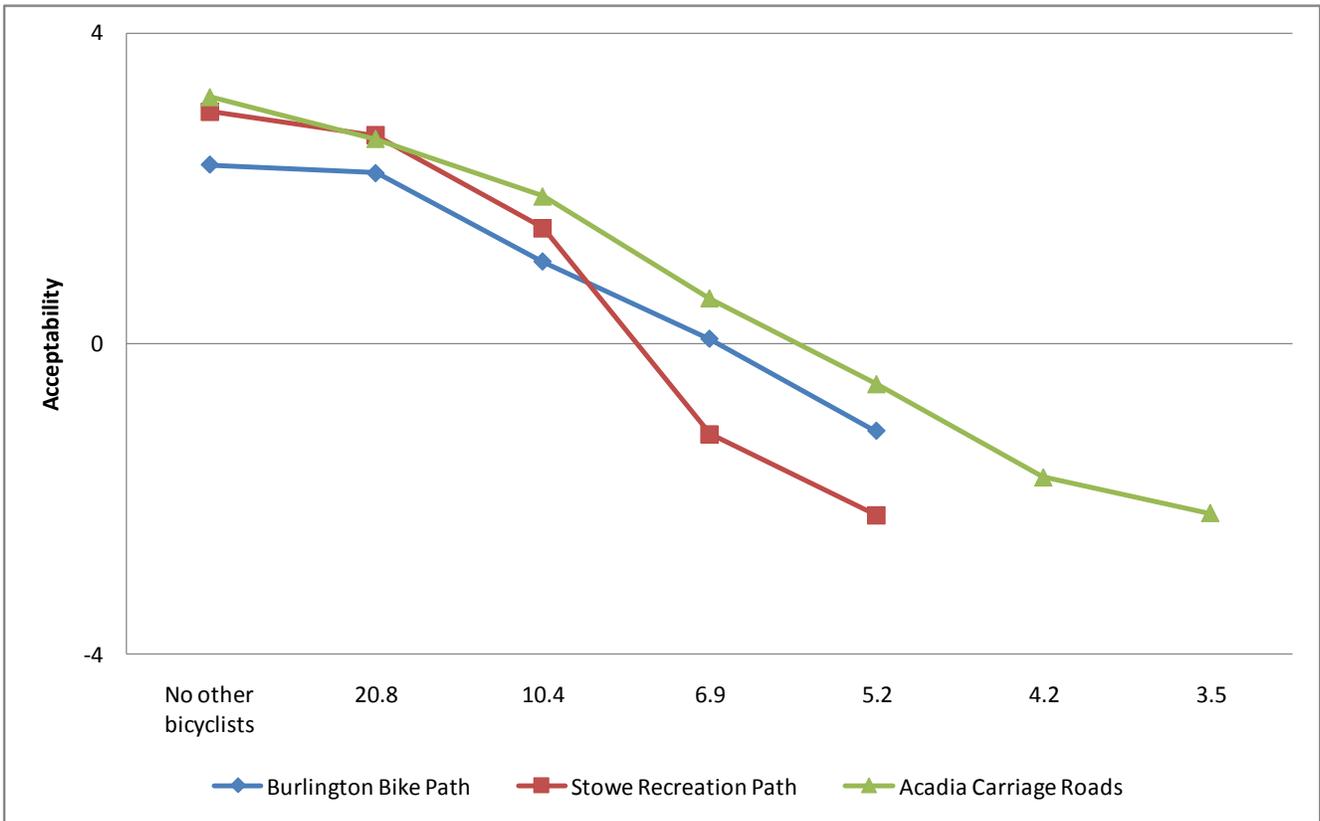
### Social Norm Curves for Number of Cars on Roads (Meters/Car)



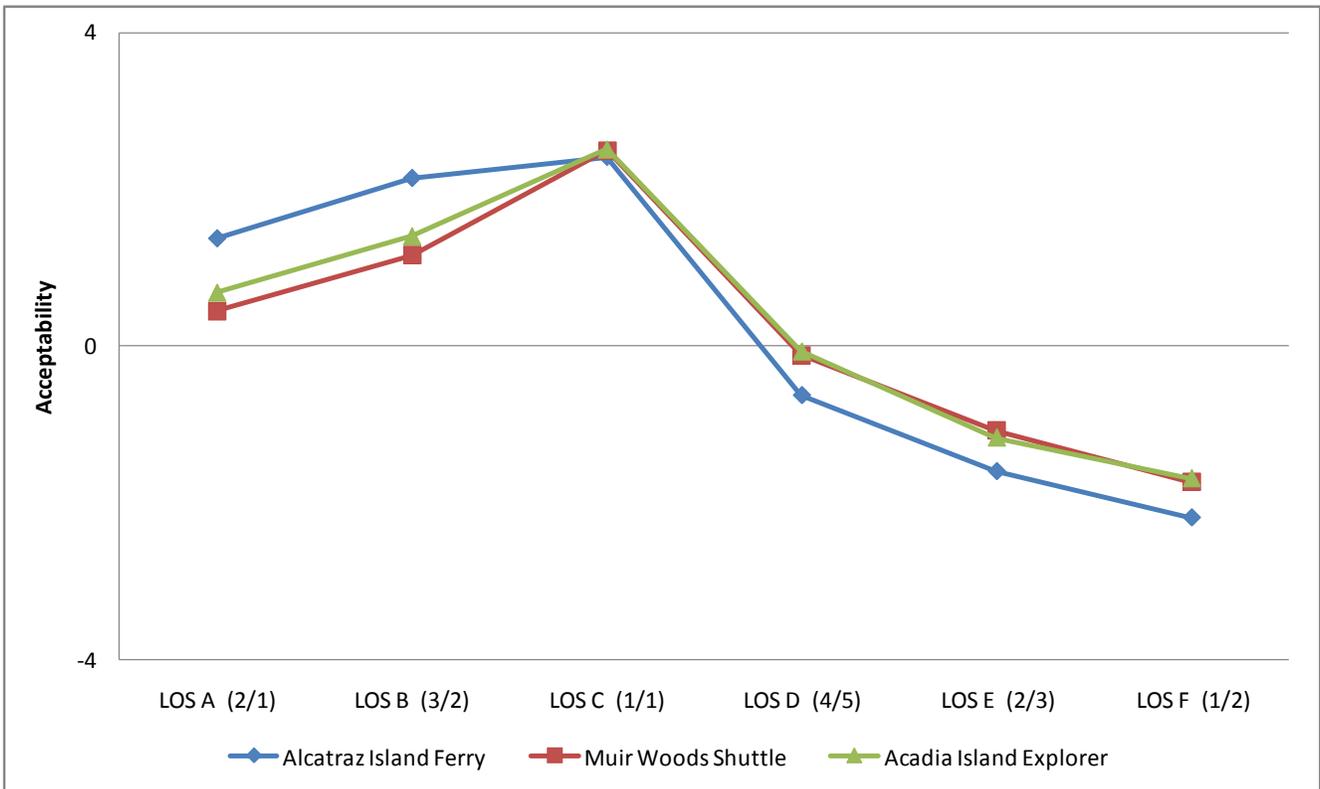
### Social Norm Curves for Number of Pedestrians on Greenways (Meters/Pedestrian)



**Social Norm Curves for Number of Bicyclists on Greenways (Meters/Bicyclist)**

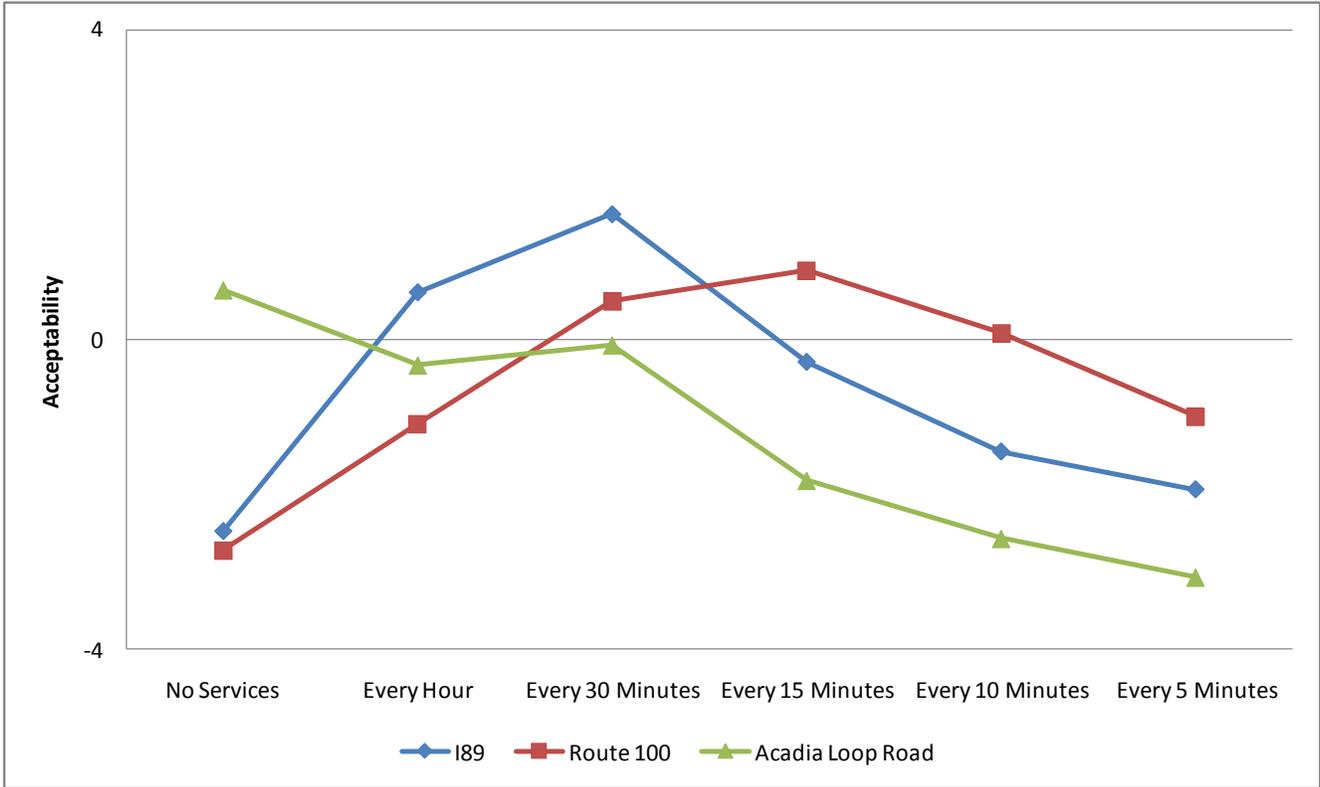


**Social Norm Curves for Number of People on Public Transit (Seats/Rider)**

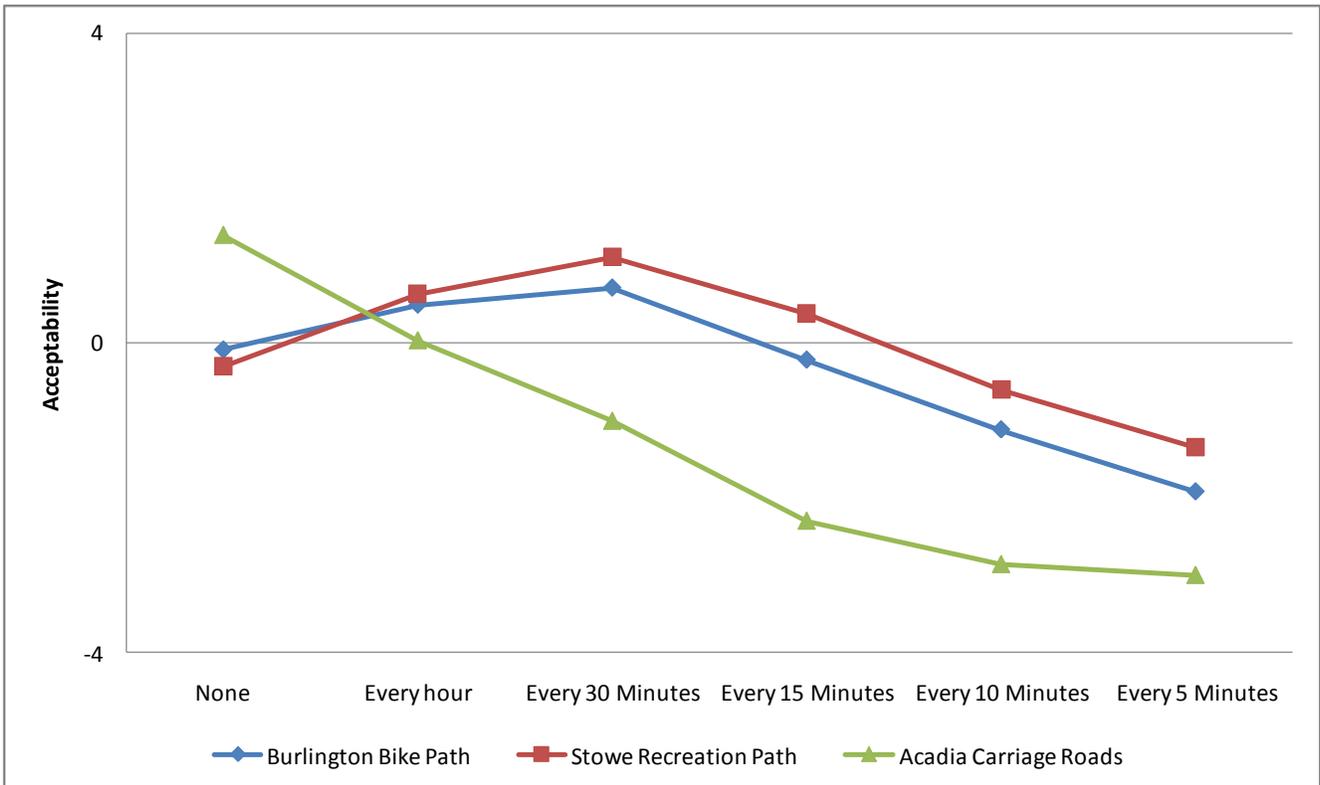


## Frequency of Commercial Services

### Social Norm Curves for Frequency of Commercial Services along Roads

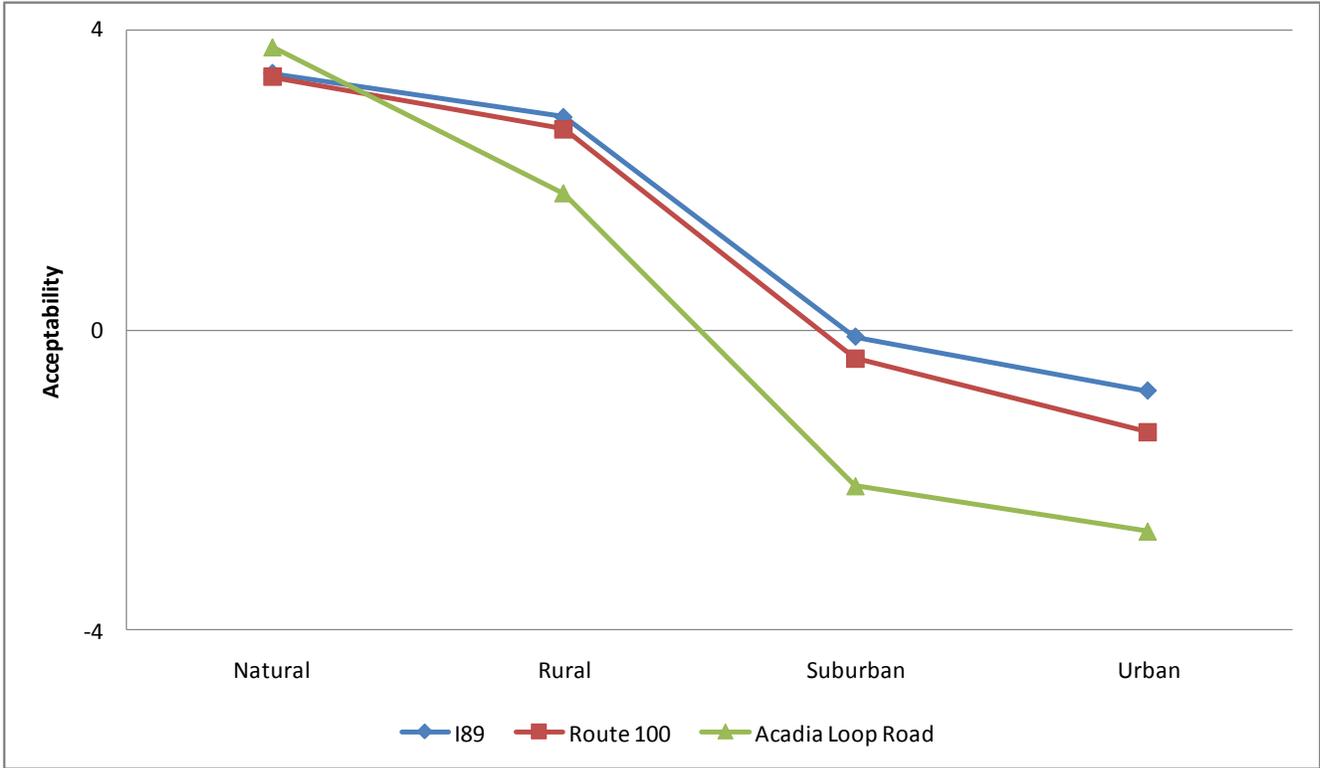


### Social Norm Curves for Frequency of Commercial Services along Greenways

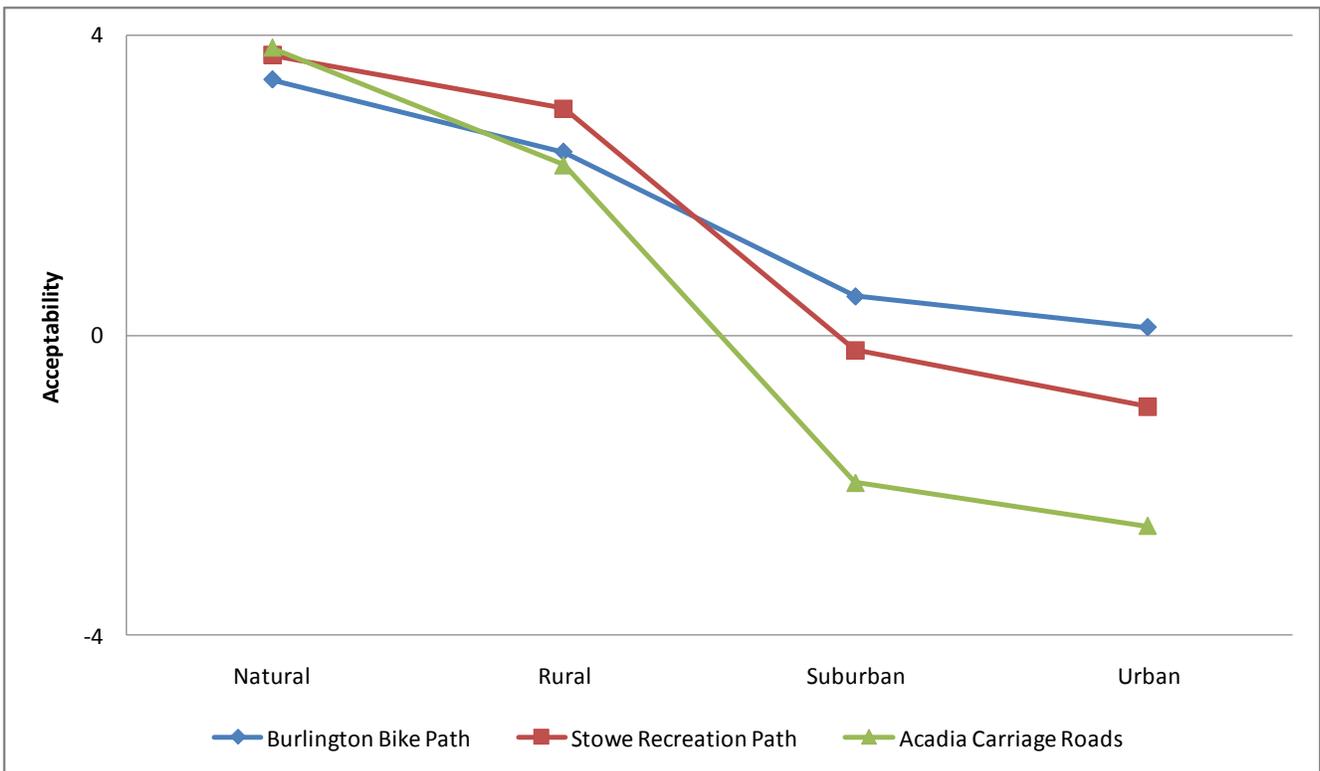


# Landscape Character

## Social Norm Curves for Landscape Character along Roads

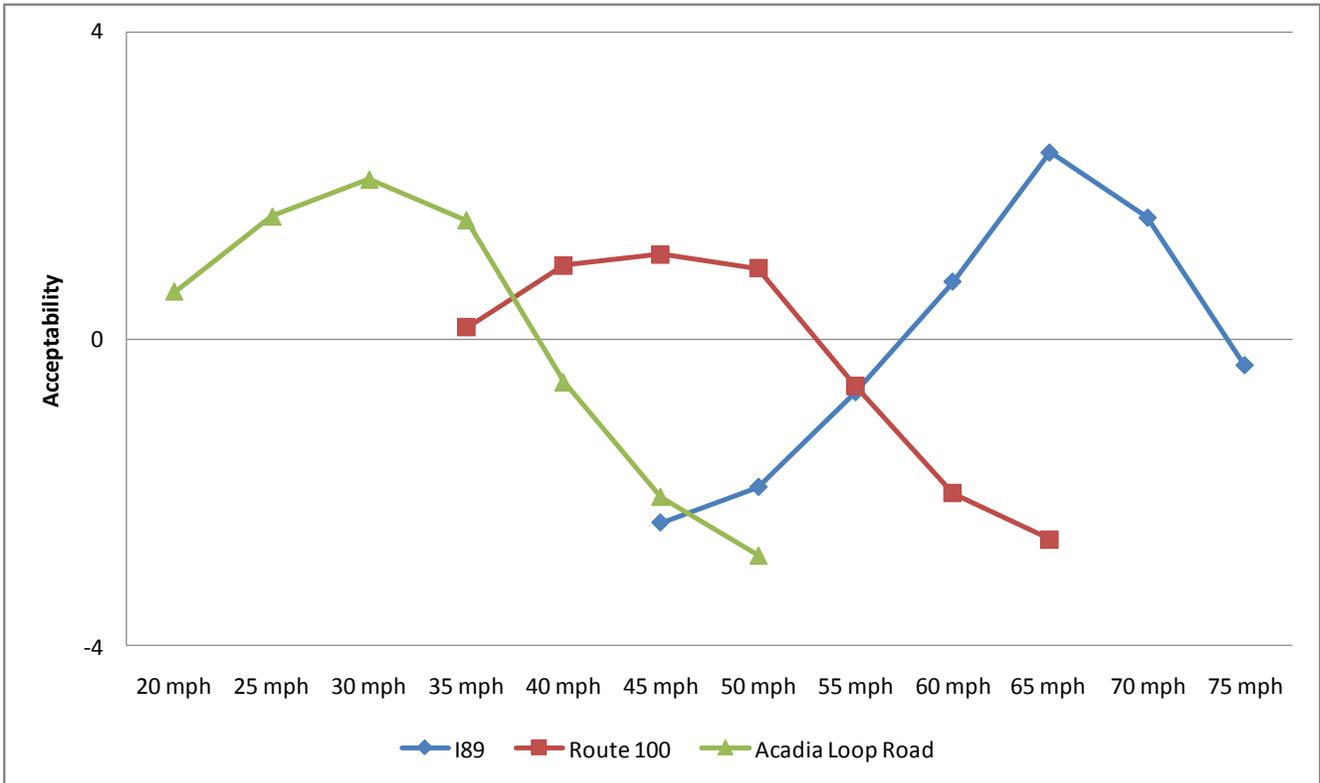


## Social Norm Curves for Landscape Character along Greenways



## Speed & Service Frequency

### Social Norm Curves for Speed Limits on Roads



### Social Norm Curves for Public Transit Waiting Times

