



PROGRAM ON THE ENVIRONMENT

UNIVERSITY *of* WASHINGTON

INTEGRATED IS BEST: HOW LIGHT RAIL AND BUSES WORKING IN CONJUNCTION WILL INCREASE THE USABILITY OF SEATTLE'S TRANSIT SYSTEM

Session Day 2, In-Person

Jordan Priest

Program on the Environment, University of Washington

Site Supervisor: Arthur Bachus, Seattle Subway Foundation

Faculty Advisor(s): Lyle Bicknell, University of Washington

Public transportation plays a crucial role in urban cities, bridging the wealth gap, improving accessibility, and reducing carbon emissions from car pollution. Seattle, known for its traffic congestion, has recognized the importance of investing in public transportation, including the integration of light rail. There is currently one light rail line in operation in the city of Seattle, widely referred to as the "1-Line". There are ongoing advocacy efforts in the city to expand the reach of Seattle's currently lackluster public transportation network, yet advocates are often in disagreement about the best mode of transportation to invest in. Some argue that light rail is the most efficient way to move riders, while others claim that light rail stations harm vulnerable communities and that buses are more practical. As a result, many public transportation proposals have been blocked or stalled. The purpose of this study was to find out which public transportation mode (bus or light rail) is the most effective and sustainable for the city of Seattle. To accomplish this task I conducted an extensive literature review, interviewed experts in the field, and performed site surveys of local light rail stations and bus lines. Through my literature review and interviews I investigated indicators of a successful system, including network density, service level, and reliability, for both buses and light rail. Findings show that success indicators are the greatest in areas where light rail and buses work in conjunction and where both modes are running with frequency, consistency, and long hours.