

SPR RESEARCH PROGRAM

SECOND-STAGE PROPOSAL SUMMARY

PROBLEM NUMBER AND TITLE

26-60: Implementing "bike buses" and "walk buses" in Oregon

PROBLEM SUMMARY

Walk and bike buses, or organized groups of school children, parents, and ride/walk leaders, seek to encourage biking and walking to school. As a relatively new formalized concept, limited information exists on where bike and walk buses work best, and what supportive infrastructure and policies can help to expand the concept to Oregon communities. Following the passage of Oregon House Bill 3014 in 2023, schools now have the flexibility to receive funding for bike and walk buses. As schools, Safe Routes to School (SRTS) leaders, and municipalities start to implement and test efforts to support walk and bike buses, there is a need for guidance. This research project will seek to harness knowledge from communities currently running and supporting bike and walk buses, along with outreach to a broader community of SRTS program leaders and other schools and public agencies. Using these inputs, the project team will develop a guidebook to help communities and schools launch and grow walk and bike buses.

ODOT OBJECTIVES

The primary deliverable of this project is a guidebook that helps SRTS coordinators, schools, and other people to effectively implement walk and bike buses in Oregon. The guidebook will include details on lessons learned from Oregon to better understand the successes and challenges of those working to implement walk and bike buses in Oregon currently, barriers and opportunities for communities who have yet to launch such programs, and best practices from beyond Oregon. Using case studies and best practices, the guidebook will provide step-by-step lessons for planning walk and bike bus programs, staffing and volunteer support, route planning, program messaging and outreach, partnerships between schools and transportation agencies to provide supportive infrastructure, and accessing supportive funding made possible through HB 3014. The guidebook will seek to identify challenges, barriers, and lessons for schools in various geographic contexts, from urban to suburban to small-town and rural locations. The project will also highlight what ODOT can do to support bike and walk bus implementation, including a list of outreach and program implementation materials to be developed.

BENEFITS

The benefits of the guidebook will be to help more communities implement safe and effective walk and bike buses. The guidebook will help ODOT to better serve communities and SRTS coordinators around the state. The project will help schools to get more kids to and from school without cars – which can have positive benefits related to safety, congestion, and pollution. The biggest benefit will likely accrue to communities in which more kids are being physically active, learning how to safely navigate their neighborhoods, and building social community.

SCHEDULE, BUDGET AND AGENCY SUPPORT

Estimated Project Length: 15 months.

Estimated Project Budget: \$100,000

ODOT Support: Heidi Manlove, Safe Routes to School & Pedestrian and Bicycle Safety Program Manager
Josh Roll, Active and Sustainable Transportation Research Coordinator

FOR MORE INFORMATION

For additional detail, please see the complete STAGE 2 RESEARCH PROBLEM STATEMENT online at:

SPR RESEARCH PROGRAM

SECOND-STAGE PROBLEM STATEMENT

FY 2025

<https://www.oregon.gov/odot/Programs/ResearchDocuments/26-60>

PROBLEM NUMBER AND TITLE

26-60: Implementing "bike buses" and "walk buses" in Oregon

RESEARCH PROBLEM STATEMENT

Nearly every child in Oregon makes the trip to and from school every school day. Bike and walk buses, or organized groups of school children, parents, and ride/walk leaders, seek to encourage biking and walking to school. Aside from mitigating some of the negative effects of parents driving kids to school (such as safety risk, traffic congestion in school zones, and increased air pollution, including greenhouse gases), bike and walk buses provide benefits to kids such as community building and physical activity, which has been associated with improved academics and behavior, and offers potential for learning about bicycling, traffic safety and navigating their communities, and positive social interactions.

As a relatively new formalized concept, limited information exists on where bike and walk buses work best, the potential to spread the concept beyond early adopter communities and participants, and what supportive infrastructure and policies can help to expand the concept to Oregon communities. Following the passage of Oregon House Bill 3014 in 2023, schools now have the flexibility to receive funding for bike and walk buses, and some regional and local agencies are also supporting these efforts with infrastructure and other support along walk and bike bus routes. As schools, Safe Routes to School (SRTS) leaders, and municipalities start to implement and test efforts to support walk and bike buses, there is both an opportunity and a strong need to document and evaluate the impact of these interventions and the types of additional supports that can make these a success.

In one of the few academic studies on bike buses, Howington, MacArthur, and McNeil (2025) note that physical exercise and learning about traffic safety and safe bicycling skills were the most commonly cited benefits for bike bus participants. However, concerns about safe route infrastructure and challenges to institutionalizing bike buses remain barriers for schools and communities thinking about starting or growing bike and walk buses (Ibid).

This research project will seek to harness knowledge from communities currently running and supporting bike and walk buses, along with outreach to a broader community of SRTS program leaders and other schools and public agencies. Using these inputs, the project team will develop a guidebook to help communities and schools launch and grow walk and bike buses.

RESEARCH OBJECTIVES

Using case studies and best practices, the guidebook will provide step-by-step lessons for planning walk and bike bus programs, staffing and volunteer support, route planning, program messaging and outreach, partnerships between schools and transportation agencies to provide supportive infrastructure, and accessing supportive funding made possible through HB 3014. The guidebook will seek to identify challenges, barriers, and lessons for schools in various geographic contexts, from urban to suburban to small-town and rural locations.

The project will leverage work being done by the Portland Bureau of Transportation (PBOT) to provide a range of infrastructure and programing support to bike and walk buses at select Portland elementary

schools, drawing from a menu of pavement markings and signage, lawn signs, route improvements, and programming support. Surveys of families of participating students at these schools, along with interviews of Portland SRTS staff and bike bus leaders, will help inform a case study of this effort between the transportation agency and schools to support bike buses. These surveys and interviews will seek to understand the impact of PBOT and other walk and bike bus programming on student participation and experiences, including understanding benefits, such as physical activity, traffic safety knowledge, social engagement, as well as other benefits which have been linked to SRTS activities such as health and learning impacts.

Additional outreach will be undertaken to interview staff at schools running walk buses (for example, in Beaverton) and bike buses (for example, Forest Grove) in areas outside the places typically considered stalwarts for bike and walk-friendly programs. These focused outreach efforts will be combined with broader efforts to engage SRTS coordinators around the state to understand barriers, concerns, and opportunities for walk and bike buses. This broader outreach will include communities without walk and bike buses to understand their barriers.

WORK TASKS, COST ESTIMATE AND DURATION

The key tasks for this project include:

Task 1 – Background and state of practice review. This task will involve gathering information on existing studies, documented best practices, known benefits of SRTS interventions, and potential application to walk and bike buses, etc. This task will be informed by a literature review previously conducted by the research team. Key findings will inform the outreach to SRTS coordinators and be summarized in the final guidebook deliverable.

Task 2 – National best practices search, consisting of a desktop scan, survey, and interviews of walk and bike bus program leaders. PSU currently houses a database of US bike bus programs.

Task 3 – Walk and bike bus participant survey development and implementation. In fall 2025, the project team will survey participants (families) of walk and bike buses at the Portland schools receiving innovative support for their programming and route infrastructure from PBOT. The survey findings will provide insight into what infrastructure and programmatic elements are most important to people choosing to participate in walk and bike buses, and feel safe doing so.

Task 4 – Statewide SRTS outreach consisting of a) surveys of SRTS coordinators at schools and agencies around Oregon to understand barriers, concerns, and opportunities for walk and bike buses; and b) interviews of five to ten SRTS coordinators delving deeper into these topics to better understand the types of support, information, and resources that would help to make walk and bike buses thrive in a variety of geographic locations.

Task 5 – Develop case studies of efforts to implement and institutionalize walk and bike buses in a variety of Oregon locations. Pulling from examples that the research team is already aware of, including the previously mentioned locations in Portland, Beaverton, and Forest Grove, as well as from examples that we learn about in the Task 4 outreach, we will develop a set of case studies.

Task 6 – Guidebook development.

Key Deliverables:

The primary deliverable of this project is a guidebook that helps SRTS coordinators, schools, and other people to effectively implement walk and bike buses in Oregon. The guidebook will include details on

lessons learned from Oregon to better understand the successes and challenges of those working to implement walk and bike buses in Oregon currently, barriers and opportunities for communities who have yet to launch such programs, and best practices from beyond Oregon. The project will also highlight what ODOT can do to support bike and walk bus implementation, including a list of outreach and program implementation materials to be developed.

Estimated Project Length: 15 months

Estimated Project Budget \$100,000

IMPLEMENTATION

The guidebook will be made available on the ODOT website, and the project team will host a meeting with SRTS coordinators and other interested parties on how to use the guidebook. Additionally, the guidebook will be disseminated by the PSU Transportation Research and Education Center (TREC), including through a webinar or transportation seminar, which will be available virtually and recorded for future viewing.

POTENTIAL BENEFITS

This proposal speaks a number ODOT Research Priorities, particularly safety, community vitality, and social equity. The benefits of the guidebook will be to help more communities implement safe and effective walk and bike buses. The guidebook will help ODOT to better serve communities and SRTS coordinators around the state. The project will help schools to get more kids to and from school without cars – which can have positive benefits related to safety, congestion, and pollution. The biggest benefit will likely accrue to communities in which more kids are being physically active, learning how to safely navigate their neighborhoods, and building social community. The project will also highlight what ODOT can do to support bike and walk bus implementation, including a list of outreach and program implementation materials to be developed in future work.

PEOPLE

ODOT champion(s):

Heidi Manlove, Safe Routes to School & Pedestrian and Bicycle Safety Program Manager

Problem Statement Contributors:

John MacArthur, TREC at Portland State University

Nathan McNeil, TREC at Portland State University

Janis McDonald, Portland Bureau of Transportation

Noel Mickelberry, Metro

Josh Roll, ODOT

REFERENCES

Howington, MacArthur and McNeil. 2025. Bike Buses: An Evaluation of an Emerging Active Transportation to School Intervention. *Transportation Research Record*. Publication Pending.

MacArthur, McNeil, and Howington. 2025. Exploring Bike Bus Programs in the United States: Draft Final Report NITC 1597: [https://nitc.trec.pdx.edu/research/project/1597/Exploring Bike Bus Programs in the United States](https://nitc.trec.pdx.edu/research/project/1597/Exploring_Bike_Bus_Programs_in_the_United_States)

STAFF REVIEW PAGE

LITERATURE CHECK

TRID&RIP

x A review of TRID & RIP databases found no existing research that answers the research question

TRID and RIP were both searched, and no research on “bike bus” or “walk bus” was identified that addressed this research need.

ODOT DECISION LENSES

Climate:

While climate is not the primary focus of this research, walk and bike buses have considerable potential to reduce driving and GHG emissions. Many students are currently driven in cars that bikeable and walkable distances to school, and many parents idle in long queues waiting to drop their children off. These alternative school travel modes take cars off the road (at a minimum for the specific trips / days on which the buses occur, but potentially for other trips as well as students and families adopt walking and biking as travel modes. Walking and biking are also resilient modes of travel, and having more families comfortable traveling via these modes can help in the event of major disruptions in other travel modes (e.g., fuel supply shortages, roadway damage, etc.).

Equity:

While the project is focused broadly at all students and how active transportation options can offered to increase participation, the research will explore equity concepts and the challenges of students of color and low-income households in walking and biking to school. The findings and the deliverables will be developed to help schools and communities that may currently not see themselves as capable of implementing walk and bike buses, including disadvantaged communities and places outside of cities.

Safety:

The development and implementation of walking and biking buses are grounded in safety by making the route safe, comfortable and inviting for participants. Part of the project will be working with the City of Portland to evaluate a suite of interventions, including education, wayfinding, and infrastructure route improvements. Safety concerns and perceptions of improvements will be collected throughout the project from coordinators, parents, and students, along with observed traffic data along routes.

TECHNOLOGY & DATA ASSESSMENT

x No Identified T&D output

☐ At the end of this project, the implementing unit(s) within ODOT will need to coordinate the adoption of new technology or data in order to realize the full potential of this research.

CROSS-AGENCY IMPACTS

- List ODOT partners or impacted units.

This research would benefit the ODOT SRTS team, local SRTS staff, and volunteers at local agencies and schools around the state. It would provide a resource and opportunity to provide better services around walk and bike buses, but should not have any negative impacts.

- Identify any issues of concern raised by ODOT partners. Note the expected mitigation that addresses these concerns.

No concerns were raised