

Report to the Legislature

## **REVIEW OF TRANSIT, BICYCLE AND PEDESTRIAN MEASURES**

As required by Chapter 367, Section 103(8), Laws of 2011  
(2011-13 Transportation Budget)

Office of Financial Management  
November 15, 2011



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### Background

Chapter 367, Section 103(8), Laws of 2011 (transportation budget bill) directs that “The office of financial management shall study the available data regarding statewide transit, bicycle, and pedestrian trips and recommend additional performance measures that will effectively measure the state's performance in increasing transit ridership and bicycle and pedestrian trips. The office of financial management shall report its findings and recommendations to the transportation committees of the legislature by November 15, 2011, and integrate the new performance measures into the report prepared by the office of financial management pursuant to RCW 47.04.280 regarding progress towards achieving Washington state's transportation system policy goals.”

The Office of Financial Management (OFM) began compiling the existing statewide data on transit, bicycle, and pedestrian trips in August 2011. Utilizing various sources – including the Washington State Department of Transportation Gray Notebook, Washington State Summary of Public Transportation, and Washington State Bicycle Facilities and Pedestrian Walkways Plan – more than 79 measures currently being reported and tracked were identified. These measures were evaluated against a set of criteria identified later in the report.

Staff from OFM, the House and Senate Transportation Committees, and Washington State Department of Transportation (Highways & Local Programs and Public Transportation offices) worked together to determine which measures would best meet the intent of the proviso.

This report is a step in the process of creating the 2012 Attainment Report. It is intended to facilitate further dialog with the Legislature and experts in the transit, bicycle, and pedestrian fields.

### Findings

The Legislature indicated its interest in increasing transit, pedestrian and bicycle trips and directed OFM to identify performance indicators for inclusion in the Attainment Report that will inform both legislators and the general public whether such trips are increasing, declining, or staying level. There is an abundance of financial, safety, environmental, and performance data collected in Washington state regarding transit, pedestrian and bicycle usage, but few existing high-level indicators succinctly capture trends in these modal areas. After scouring existing state data, the following measures are deemed the best high-level indicators for evaluating increased usage:

- Percentage change in transit passenger trips
- Percentage change in biking trips
- Percentage change in walking trips.

Although the Legislature only required inclusion of indicators that measure ridership, we recommend two additional transit, bicycle, and pedestrian measures relating to safety and mobility:

- Annual bicycle/pedestrian traffic crashes
- Percentage of people in Washington living within a walkable or bikable distance to goods and services (percent of population within two miles of goods and services).

### Attainment Report

In 2007, the Legislature directed OFM to produce a biennial Attainment Report to provide a high-level assessment of the state's progress in achieving its transportation goals using key performance measures and data. It established the following five statewide transportation policy goals (not necessarily in priority order) to guide the planning, operation, performance of, and investment in the state's transportation system:

- **Safety:** To provide for and improve the safety and security of transportation customers and the transportation system.
- **Preservation:** To maintain, preserve and extend the life and utility of prior investments in transportation systems and services.
- **Mobility (addressing congestion):** To improve the predictable movement of goods and people throughout Washington state.
- **Environment:** To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities and protect the environment.
- **Stewardship:** To continuously improve the quality, effectiveness and efficiency of the transportation system.

In 2010, the Legislature added a sixth goal:

- **Economic vitality:** To promote and develop transportation systems that stimulate, support and enhance the movement of people and goods to ensure a prosperous economy.

Although the Legislature expressed interest in increasing transit, bicycle, and pedestrian trips, it did not indicate the overarching goal. Is it to improve health through walking or biking? Improve air quality by reducing automobile pollution? Improve safety by reducing bicycle or pedestrian accidents? Or improve mobility by removing highway trips and replacing them with bicycle, transit or pedestrian trips?

The Attainment Report is not organized by mode, but by goal, measure, objective, status, progress, and five-year trend. For the Safety goal, for example, there are only two high-level indicators: (1) the number and rate of traffic fatalities per 100 million vehicle miles traveled, and (2) the number of collisions and percentage resulting in serious or fatal injuries.

For the Preservation goal, there are only three high-level indicators: (1) the percentage of state highway pavement in fair or better condition, (2) the percentage of state bridges rated structurally deficient, and (3) the percentage of state ferry terminals in fair or better condition.

There are no explicit transit, bicycle, or pedestrian measures used to gauge our progress in attaining the Safety, Preservation, Mobility, Environment, Stewardship, or Economic Vitality goals. The closest proxies are two measures found under Mobility:

- (1) Annual hours of delay avoided through operational or public transportation enhancements, and
- (2) Percentage of commute trips taken while driving alone.

There is also one measure under the Environment goal that may be applicable, although difficult to gauge: Tons of greenhouse gases produced statewide.

## Review of Transit, Bicycle, and Pedestrian Measures

Measures of transit, bicycle and pedestrian safety might include things like reduction in bicycle or pedestrian accidents on state, city, or county roads. Preservation measures might include things like average age of buses or condition of transit-only facilities. Mobility measures could potentially include on-time performance either system-wide or statewide. Environment measures related to transit, bicycle, and pedestrian transportation could include reduction in greenhouse gases or possibly information on alternative fuel vehicles already in use by some transit agencies. Stewardship performance measures could include construction of new assets specifically for transit, and bicycle and pedestrian use. Finally, Economic Vitality measures could include the economic growth of areas surrounding transit facilities.

The transit, bicycle and pedestrian worlds produce a large amount of data that will be useful in the future to create specific measures. The challenge will be identification, evaluation at the statewide level, and the availability of data. Data that is currently being collected is shown in the tables on the following pages.

### Considerations in Selecting High-Level Indicators

A high-level indicator is a performance measure that provides a quick assessment of progress. More detailed measures should be left to the experts in each field. High-level indicators should help policy makers gauge whether things are going in the right direction or not. The indicator should show whether or not intended results are being achieved over time. They should be outcome measures, rather than inputs, and they should capture broad results. These types of high-level indicators generally measure performance against such factors as population, total miles driven, total hours of congestion, etc.

Good performance measures are the foundation of a successful accountability system. Agreeing upon the best measures to gauge progress over time requires different people to be involved in identifying the indicators – including those who will collect the data, those who will use the data, and those who have the technical expertise to understand the strengths and limitations of specific measures. Some questions that may guide the selection of indicators are:

- Is the indicator defined in the same way over time?
- Are data for the indicator available over time?
- Are data currently being collected? If not, can cost-effective instruments for data collection be developed?
- Is this indicator useful or important to most people?
- Will this indicator provide sufficient information about a condition or result to convince both supporters and skeptics that something significant is or is not happening?
- Is the indicator quantitative?
- Does this indicator provide insight into the expected result?

### Review of Transit, Bicycle, and Pedestrian Measures

We reviewed data currently collected on transit operating and financial statistics, as well as bicycle and pedestrian data. The following tables summarize that data. We identified in bold type the measures we recommend be included in the biennial Attainment Report. Even though some data fit some of the transportation policy goals, they may be too low of a level for inclusion in the report.

## Review of Transit, Bicycle, and Pedestrian Measures

### Transit Operating Data

<b>Measure</b>	<b>Quantitative</b>	<b>Consistently Defined</b>	<b>Indicates Progress</b>	<b>Comparable Data</b>	<b>Transportation Policy Goal</b>
Revenue vehicle hours	Yes	Yes	No	Yes	N/A
Total vehicle hours	Yes	Yes	No	Yes	N/A
Revenue vehicle miles	Yes	Yes	No	Yes	N/A
Total vehicle miles	Yes	Yes	No	Yes	N/A
<b>Passenger trips *</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Mobility</b>
Operating costs	Yes	Yes	No	Yes	Stewardship
Farebox revenues	Yes	Yes	No	Yes	Stewardship
Passenger trips/revenue hour	Yes	Yes	Yes	Yes	Mobility
Passenger trips/revenue mile	Yes	Yes	Yes	Yes	Mobility
Revenue hours/FTE	Yes	Yes	No	Yes	Stewardship
Operating costs/revenue hour	Yes	Yes	No	Yes	Stewardship
Operating costs/total hour	Yes	Yes	No	Yes	Stewardship
Operating costs/passenger trip	Yes	Yes	No	Yes	Stewardship
Farebox recovery ratio	Yes	Yes	No	Yes	Stewardship
State operating revenue	Yes	Yes	No	Yes	N/A
State capital revenue	Yes	Yes	No	Yes	N/A

**\* Recommended as a high-level indicator to be included in the Attainment Report.**

## Review of Transit, Bicycle, and Pedestrian Measures

### Transit Financial Statistics

<b>Measure</b>	<b>Quantitative</b>	<b>Consistently Defined</b>	<b>Indicates Progress</b>	<b>Comparable Data</b>	<b>Transportation Policy Goal</b>
Sales or local tax revenue	Yes	Yes	No	Yes	N/A
Fare revenue	Yes	Yes	Yes	Yes	Stewardship
Vanpool revenue	Yes	Yes	Yes	Yes	Stewardship
Federal operating revenue	Yes	Yes	No	Yes	N/A
State operating revenue	Yes	Yes	No	Yes	N/A
Other operating revenue	Yes	Yes	No	Yes	N/A
Federal capital revenue	Yes	Yes	No	Yes	N/A
State capital revenue	Yes	Yes	No	Yes	N/A
Local capital revenue	Yes	Yes	No	Yes	N/A
Total revenue	Yes	Yes	No	Yes	N/A
Fixed route expenses	Yes	Yes	No	Yes	N/A
Route deviated expenses	Yes	Yes	No	Yes	N/A
Demand response expenses	Yes	Yes	No	Yes	N/A
Vanpool expenses	Yes	Yes	No	Yes	N/A
Passenger ferry expenses	Yes	Yes	No	Yes	N/A
Commuter rail expenses	Yes	Yes	No	Yes	N/A
Light rail expenses	Yes	Yes	No	Yes	N/A
Debt service	Yes	Yes	No	Yes	N/A
Depreciation	Yes	Yes	No	Yes	N/A
Other expenses	Yes	Yes	No	Yes	N/A
Capital expenses	Yes	Yes	No	Yes	N/A
Total annual expenses	Yes	Yes	No	Yes	N/A

## Review of Transit, Bicycle, and Pedestrian Measures

### Bicycle/Pedestrian Data

Measure	Quantitative	Consistently Defined	Indicates Progress	Comparable Data	Transportation Policy Goal
Washington's rank among states for bicycle and pedestrian fatalities	Yes	Yes	Yes	Yes	Safety
<b>Annual bicycle and pedestrian traffic crashes *</b>	Yes	Yes	Yes	Yes	<b>Safety</b>
Annual fatal bicycle and pedestrian crashes	Yes	Yes	Yes	Yes	Safety
Annual non-fatal bicycle and pedestrian crashes	Yes	Yes	Yes	Yes	Safety
Bicycle and pedestrian fatalities for at-risk groups	Yes	Yes	Yes	Yes	Safety
Percentage of pedestrian fatalities at crosswalks (marked and unmarked)	Yes	Yes	Yes	Yes	Safety
Cities and counties with bicycle helmet ordinances	Yes	Yes	Yes	Yes	Safety
Percentage of growth in miles of trails/on-street bicycle facilities	Yes	Yes	Yes	Yes	Mobility
Percentage of growth in miles of sidewalk per year	Yes	Yes	Yes	Yes	Mobility
Total linear miles of designated bicycle facilities	Yes	Yes	Yes	Yes	Mobility
Total linear miles of sidewalks on state highways	Yes	Yes	Yes	Yes	Mobility
Percentage of cities and counties with current bicycle/pedestrian plans	Yes	Yes	Yes	Yes	Mobility
Number of schools/students participating in Safe Routes to School program	Yes	Yes	Yes	Yes	Mobility
Number of students being transported by yellow school bus to Washington schools	Yes	Yes	Yes	Yes	Mobility
<b>Percentage of people in Washington living within walkable or bikable distance to goods and services (within two miles of goods and services) *</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Mobility</b>



## Review of Transit, Bicycle, and Pedestrian Measures

Measure	Quantitative	Consistently Defined	Indicates Progress	Comparable Data	Transportation Policy Goal
Greenhouse gas emissions reductions attributed to installation of bicycle and pedestrian facilities	Yes	Yes	Yes	Yes	Environment
Use of state and local paths and trails expenditures	Yes	Yes	No	Yes	Stewardship
Number of law enforcement officers receiving training on bicyclist/pedestrian rights	Yes	Yes	Yes	Yes	Safety
Ratio of citations issued to motorists, pedestrians, and cyclists	Yes	Yes	Yes	Yes	Safety
Percentage of students walking or bicycling to school	Yes	Yes	Yes	Yes	Mobility
Percentage of trips and miles traveled by walking or bicycling	Yes	Yes	Yes	Yes	Mobility
Bicycle/pedestrian user counts on state highways, major arterials, trails, and related bicycle miles traveled	Yes	Yes	Yes	Yes	Mobility
<b>Percentage and type of trips made by biking and walking *</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Mobility</b>
Number of school districts with walk route plans (consistent with RCW 28A.160 and WAC 392-151)	Yes	Yes	Yes	Yes	Safety
Washington metro-area rank for pedestrian fatalities	Yes	Yes	Yes	Yes	Safety
Number of cities and counties with bicycle and/or pedestrian plans	Yes	Yes	Yes	Yes	Mobility
Decrease bicycle and pedestrian collisions by 5 percent per year from 2008 through 2027	Yes	Yes	Yes	Yes	Safety
Number of unmarked vs. marked, signed, and signalized crossings within cities	Yes	Yes	Yes	Yes	Safety

**\* Recommended as a high-level indicator to be included in the Attainment Report.**

## Review of Transit, Bicycle, and Pedestrian Measures

### Conclusion

We recommend the following performance measures for inclusion in the Attainment Report:

- Percentage change in transit passenger trips
- Annual bicycle/pedestrian traffic crashes
- Percentage of people in Washington living within a walking or biking distance to goods and services (percent of population within two miles of goods and services)
- Percentage change and type of trips made by biking
- Percentage change and type of trips made by walking.

The percentage of people in Washington living within walking or biking distance to goods and services can help inform transportation investment discussions between highway mobility choices and transit service expansion. Because we are not yet able to directly measure the effects of biking and walking on greenhouse gas reduction or improved health, we believe it is necessary to use a proxy such as the percentage and type of trips made by biking and walking for the time being.

Trend data are available for all of these measures which will help policy makers determine whether or not the state is making progress towards its policy goals. The availability of historical data provides a more complete picture of a measure and allows for directional analysis. Just as important is the availability of current data and the ability to collect data in the future. The Washington State Department of Transportation currently collects data for the recommended measures on an annual basis and with enough detail that the information can be displayed in a variety of ways. An additional consideration is the ability to highlight state investment for each measure. In both transit and bicycle and pedestrian efforts, the state has made financial investments over the years.

### Next Steps

The next Attainment Report will be submitted to the Legislature with the Governor's biennial budget proposal in 2012. We look forward to working with legislators in the next few months to obtain input on the performance measures we identified for inclusion in the next report.