

**Alaskan Way Viaduct and Seawall Replacement Project
Moving Forward Projects Construction Traffic Mitigation**

**Enhanced Transit, Transit Travel Time and Demand Management
Performance Report**

Prepared for:
WSDOT

Prepared by:
King County Department of Transportation
Metro Service Development Section

Volume 9: Jun 2012 - Sep 2012

Submitted December 27, 2012



Americans with Disabilities Act (ADA) Information

To request this publication in alternate formats, please call 206-684-1449 (TTY Relay 711).

Title VI Notice to Public

King County Metro Transit does not discriminate in the provision of service on the basis of race, color, and national origin. For more information on Metro's nondiscrimination obligations, or to file a discrimination complaint, you may call Metro's Customer Information Office at 206-553-3000. You may also contact Metro in writing at the address below.

General Manager, King County Metro Transit
201 S. Jackson St. KSC-TR-0415, Seattle, WA 98104

TABLE OF CONTENTS

Summary	5
Services and Activities: June 2012 to September 2012	6
2009 – 3 rd Quarter 2012	6
Performance Report Schedule	7
Enhanced Transit Service Report.....	9
Introduction	9
Enhanced Transit Service Report Purpose	9
Ridership Trends.....	11
Ridership Change in Jun 2012 Compared to 2009 Baseline.....	12
Performance of Enhanced Transit Service Additions	13
Transit Capacity	14
Transit Capacity Level of Service	16
Flexible Transit Service	20
Transit Travel Time Report.....	21
Travel Time Report Purpose.....	21
Travel Time Data	24
Summer 2012 Highlights	25
Service Additions Travel Time	26
Transportation Demand Management Report	27
TDM Report Purpose	27
TDM Program Timeline	28
TDM Budget and Expenditure – September 2012.....	33
Appendix A	

This page left intentionally blank

Projects Overview

SUMMARY

To keep people and goods moving during construction of the Moving Forward Projects (primarily the Holgate to King project) of the Alaskan Way Viaduct and Seawall Replacement Project, the Washington State Department of Transportation (WSDOT) provided \$31.9 million to King County Metro (Metro) to enhance transit and water taxi service, improve bus monitoring equipment, and to provide transportation demand management services. This investment in transit and demand management services is one part of the state's construction traffic mitigation investments, which total more than \$125 million. Other projects include South Spokane Street Widening, State Route 519 improvements, electronic travel time signs and intelligent transportation systems.

These efforts are governed by three contracts - GCA 5820 Enhanced Transit Services, GCA 5864 Expanded Bus Monitoring Project and GCA 5865 South End Transportation Demand Management and Downtown Transportation Demand Management. Performance reports are a requirement of each of these contracts. Therefore, in an effort to consolidate and streamline the reporting process, this single performance report has been developed to address the contractual requirement for all three agreements.

The enhanced transit and trip reduction services were strategically designed to address the most significant Moving Forward construction traffic impacts and to build upon ongoing local, state and federal investments in transit and trip reduction services. As construction-related traffic intensifies, we will continue to add bus trips to help increase transit capacity and maintain reliable schedules and will implement additional demand management programs to reduce drive-alone trips on the most congested routes.

This report is broken down into three sections:

- **Enhanced Transit Services:** This section compares the Summer 2012 service change data to the baseline 2009 data. This section will track the performance of WSDOT supported transit services that were operated during that period to mitigate construction impacts.
- **Transit Travel Time:** This section describes the changes in transit travel times in key corridors that feed into the Seattle Central Business District (CBD) and changes in travel time that occurred within the CBD during the Summer 2012 service change..
- **Transportation Demand Management (TDM) Report.** This section provides the status and impacts of education and outreach programs and marketing of travel options.

These transit and demand management performance reports will be published three times per year during the life of the construction project. The reports will be available approximately two months after each transit service change, which traditionally occur in February, June and September.

In the following chapters you will find baseline data, performance measurement methods and measured performance for state-sponsored transit and demand management services:

- Transit capacity and ridership
- Transit travel times
- Transportation demand management trip reduction
- Budget and expenditures

SERVICES AND ACTIVITIES: JUNE 2012 TO SEPTEMBER 2012

Enhanced Transit Service summary

- During this period, Metro continued the 30 peak period trips funded by WSDOT on routes 18X, 21X, 56X, 120, 121 and 358. This helped increase the combined peak period transit capacity of these routes by 55 percent, (see Table 5 on page 15).

Ridership summary

- Ridership trends of the Enhanced Transit Service pathways on the whole have exceeded system-wide ridership growth by 13 percentage points. Ridership growth exceeded the system average in each of the four pathways and was greatest in Pathway J (West Seattle), where 18 of the 30 ETS trips were added.
- Compared to the June 2009 baseline, peak period ridership increased on all six routes that received mitigation funding by 20 percent overall, resulting in 2,080 more peak period trips. The largest absolute changes in peak period ridership were observed on the two all-day routes that received added trips – Routes 120 and 358 (see table 3).

Travel Time Summary

- Travel times on pathways using SR-99 continue to be impacted by the bottleneck created by the Wosca Detour, especially in the inbound direction during the AM peak.
- Temporary closure of the eastbound off-ramp from the West Seattle Bridge to 1st Avenue S has increased inbound travel times on pathways using 1st Avenue S.
- Opening of the new WB on-ramp from 1st Avenue S to the West Seattle Bridge has relieved outbound travel times on transit pathways using 1st Avenue S; however travel times on these pathways are still higher than baseline conditions.
- Construction and lane closures related to the North Portal and Mercer projects has significantly impacted transit pathways on Dexter, Westlake, and Aurora pathways, particularly during the PM peak.
- Although travel times have increased overall on southbound Aurora Ave due to an increase of construction impacts in the area, the addition of a new southbound bus lane on Aurora has helped reduce the impacts of construction; improvements in reliability on this pathway are evident.

Transportation Demand Management Summary

- As of September 2012, the TDM program has converted over 7,200 peak hour trips. This is 77% over the contract target of 4,130 trips converted.
- *Four TDM Tasks have met their contract targets:*
 - *Promotions:* with a trip reduction target of 1,380 trips, Promotions of Transit and Ridesharing has reduced 4,784 trips so far.
 - *Incentives:* with a trip reduction target of 236 trips, Incentives for Transit and Ridesharing has reduced 297 trips so far.
 - *Employer Outreach:* with a trip reduction target of 100 trips, Employer Outreach has reduced 1,225 trips so far.
 - *Carpool:* with a trip reduction target of 370 trips, Carpool has reduced 579 trips so far.

2009 – 3RD QUARTER 2012

As of the end of September 2011, Metro has invoiced WSDOT \$17,825,666 (\$544,456 under GCA 5864, \$16,256,613 under GCA 5820 and \$1,024,597 under GCA 5865) of the state's \$31.9 million investment in enhanced transit and demand management services.

PERFORMANCE REPORT SCHEDULE

Performance Reports will be produced three times a year, approximately two months after the service change. This reporting schedule is provided in more detail in the chart below.

Performance Report Release Dates												
											CURRENT REPORT	
Performance Measure Updates Submittal Date	Draft 12-14-09	Volume 1 4-05-10	Volume 2 8-09-10	Volume 3 12-13-10	Volume 4 4-04-11	Volume 5 8-22-11	Volume 6 12-12-11	Volume 7 4-02-12	Volume 8 08-20-12	Volume 9 12-28-12	Volume 10 TBD	Volume 11 TBD
Reporting Period of Volume Data												
Ridership/ Capacity/ Utilization Baseline		Feb 09 Jun 09 Sep 09										
Travel Time Baseline		Sep 2009*										
Service Plan		As of April 2010	As of Aug 2010	As of Dec 2010	As of April 2011	As of Aug 2011	As of Dec 2011	As of April 2011	As of Aug 2012	As of Dec 2012		
Travel Time Monitoring, Ridership/ Capacity/ Utilization Data, TDM Measures			Feb 10- Jun 10	Jun 10- Sept 10	Sep 10 – Feb 11	Feb 11 – Jun 11	Jun 11 – Sep 11	Sep 11 – Feb 12	Feb 12 – Jun 12	Jun 12 – Sep 12	Sep 12 – Feb 13	Feb 13 – Jun 13

*The September 2009 travel time data will serve as the travel time baseline, against which, all travel time monitoring activities will be compared

This page left intentionally blank

Enhanced Transit Service Report

INTRODUCTION

The Nisqually earthquake highlighted the structural vulnerability of the State's Alaskan Way Viaduct portion of SR 99 and the region began immediately planning for its reinforcement or replacement. SR 99 serves as a major transportation facility carrying approximately 110,000 vehicles a day to and through downtown Seattle. As the region planned for its replacement it became apparent that a facility of this size could not be planned for and replaced without considering the impacts that the construction phase and final design would have on virtually all major north/south arterials and I-5. Inevitable construction impacts and potential for reduced capacity in the final SR 99 design increased interest in utilization of transit as a more compact travel alternative. In March of 2007, as planning continued on the central waterfront portion of SR 99 and the Viaduct (King St. to Battery Street), Governor Gregoire identified several projects for the Early Safety and Mobility projects, i.e. "Moving Forward Projects". Enhanced transit services were one of the major components of the Moving Forward Projects.

One of the major objectives of the enhanced transit services agreement is to "reduce vehicle travel demand in order to help mitigate construction related mobility impacts on the general public." Metro identified 33 candidate routes that, with additional service could help reduce vehicle travel demand. Greater transit utilization can help maintain public mobility while roadway capacity is constrained. The purpose of this report is to understand and document the usefulness of WSDOT's resources that will be used to maintain and enhance transit service in the SR 99 corridor during the Moving Forward construction projects.

In the Summer of 2009, the baseline against which service in this report will be compared, Metro transit service on these pathways provided an estimated 79,300 unlinked passenger trips daily. A conservative estimate would value these trips to equal approximately 38,000 vehicle trips a day in the SR 99 corridor. This transit service provided mobility to thousands of people per day and removed nearly 38,000 vehicle trips a day reducing delay for all other vehicular traffic in the corridor.

ENHANCED TRANSIT SERVICE REPORT PURPOSE

The Enhanced Transit Service Report provides various data that are useful in understanding the impact of the 30 additional trips funded by WSDOT. The trips funded by WSDOT as part of the Summer 2012 service change were scheduled on routes 21 Express (X), 56X and 120 (part of Pathway J), 18X (Part of Pathway A), 358 (Part of Pathway B) and 121 (part of Pathway I). This report compares Summer 2009 baseline performance measures with Summer of 2012 performance measures. As with previous volumes, these transit performance measures are presented in daily totals and by peak, shoulder and midday periods. Ridership data for the past three years, 2010, 2011 and 2012 is also included to show short term trends.

Time of Day and Pathway Group designations are described below:

- **Time of Day Designations:** Time of day designations measure changes in transit supply and use by peak period (6-9am, 3-6pm), shoulder periods (9-10am, 2-3pm, 6-7pm) and midday periods (10am-2pm).
- **Pathway Groups:** The four pathway groups defined below are the transit corridors of emphasis for this contract. A more complete description is available in Travel Time Table 1. System-wide ridership numbers are also shown to give perspective on the relative performance of the four pathway groups when compared to the system as a whole.

Pathway A - Ballard/Magnolia: 15th Avenue and Elliot Avenue W between NW 85th Street and 1st Avenue and Denny Way, Including routes 15, 15X, 17X 18, 18X, 19, 24 and 33.

Pathway B – Aurora/Fremont: Aurora Avenue, Nickerson Street, Dexter Avenue and Westlake Avenue between NW 85th Street, Ballard Bridge, Fremont and 3rd Avenue/Denny Way, including routes 5, 5X, 16, 17, 26, 26X, 28, 28X and 358.

Pathway I: - SODO: 1st Avenue S, East Marginal Way, and 4th Avenue S between S Michigan and S Jackson Streets, including routes 23, 113, 121, 123, 124, 131, 132, 134.

Pathway J: - West Seattle: Admiral Way, Fauntleroy Way, 35th Avenue SW, Delridge Way and SR 99 between California Avenue, SW Morgan Street, Andover Street and Columbia/Seneca Streets, including routes 21, 21X, 37, 54, 54X, 55, 56, 56X, 57, 116, 120, 125.

RIDERSHIP TRENDS

Transit ridership is influenced by many factors, including amount of service provided, seasonal travel patterns, the cost of driving (fuel/vehicle expenses and time), employment, route design, and construction impacts. The purpose of looking at ridership trend data is to measure and understand these influences. This section includes a brief overview of ridership trends over the last three years.

Three-Year Ridership Trends – System-wide ridership grew in 2011 and again in 2012. The increase relative to 2010 was 7%. Higher fuel prices and a somewhat stabilized economy are likely contributing factors to this ridership growth.

Coming off record ridership in 2008, the year 2009 was the first year to show a ridership decline since 2002. Many of the factors influencing ridership growth in 2008 reversed course in 2009, fuel prices fell, unemployment rose and sales tax receipts declined. In 2010 ridership stabilized and the economy began a slow recovery. In 2012, the unemployment rate for the months of June to October (7.4 percent) was 1.1 percentage points below the unemployment rate for the same months in 2009 (8.5 percent). Fuel prices increased by 37 percent, from a weekly average of \$2.82/gal between June and October in 2009 to \$3.87/gal in 2012.

The Enhanced Transit Service Table 1 below shows that the ridership trends of the Enhanced Transit Service pathways on the whole have exceeded system-wide ridership growth by 13 percentage points. Ridership growth exceeded the system average in each of the four pathways and was greatest in Pathway J, where 18 of the 30 ETS trips were added.

The system-wide and pathway trends provide the context for which we will evaluate the effectiveness of the WSDOT funded construction mitigation.

Enhanced Transit Service Table 1

3 YEAR TRANSIT CORRIDOR WEEKDAY RIDERSHIP TREND FOR JUN SERVICE CHANGE				
Ridership Group	2010	2011	2012	% Change 2010-2012
System-wide Ridership	347,000	362,000	373,000	7%
Total of Pathways	77,320 [80,640]*	88,190 [93,060]*	92,650 [97,320]*	20% [20%]*
Pathway A – Ballard/Magnolia	16,170	17,730	18,120	12%
Pathway B – Aurora Fremont	31,900	34,410	36,690	15%
Pathway I – SODO/Georgetown	7,400 [10,910]*	9,630 [14,490]*	9,380 [14,040]*	27% [29%]*
Pathway J – West Seattle	21,850	26,420	28,460	30%

*The increase in ridership reported in the brackets is due to the addition of route 124 to the pathway. Route 124 began operating in pathway "I" in September 2009.

RIDERSHIP CHANGE IN JUN 2012 COMPARED TO 2009 BASELINE

The Enhanced Transit Service Table 2 below compares the June 2012 system-wide and Enhanced Transit Service pathway ridership with the June 2009 baseline for average weekday ridership by time of day

Ridership Changes Vary by Time of Day – Evaluating aggregate ridership numbers alone can sometimes hide shifts in ridership that have important planning implications. Ridership analysis by time of day allows you to see which time period has the greatest demand for resources. Employment driven transit service tends to be oriented toward the peak period (6-9 am) and (3-6 pm) while general purpose mobility occurs during all periods of the day. Table 2 shows that ridership is up for all pathways during the peak and shoulder periods, with 7,320 more trips being made during the peak period and 2,420 more trips during the shoulder period than in the baseline. Peak and shoulder-of-peak ridership grew in all four pathways - in Pathway J most of all.

The system-wide and pathway trends shown in Table 2 provide more context for which we will evaluate the effectiveness of the WSDOT funded construction mitigation.

Enhanced Transit Service Table 2

COMPARISON OF JUN 2009 BASELINE WEEKDAY RIDERSHIP BY TIME OF DAY AND PATHWAY WITH JUN 2012 SERVICE CHANGE RIDERSHIP								
Ridership Group	Avg. Weekday		Peak Period*		Shoulder Periods		Midday Period	
	2009	2012 (% Change)	2009	2012 (% Change)	2009	2012 (% Change)	2009	2012 (% Change)
System-wide Ridership	355,000	373,000 (5%)	169,000	179,000 (6%)	64,000	67,000 (5%)	76,000	75,000 (-1%)
Total of Pathways	79,530	92,650 (16%) [97,320 (22%)]*	37,770	44,970 (19%) [46,950 (24%)]*	14,070	16,430 (17%) [17,160 (22%)]*	16,420	17,840 (9%) [18,760 (14%)]*
Pathway A – Ballard/Magnolia	17,090 [†]	18,120 (6%)	8,500	9,580 (13%)	2,910	3,040 (4%)	3,850	3,120 (-19%)
Pathway B – Aurora Fremont	31,960 [†]	36,690 (15%)	14,270	16,740 (17%)	5,930	6,690 (13%)	6,590	7,470 (13%)
Pathway I – SODO/Georgetown	8,150	9,375 (13%) [14,040 (72%)]*	4,240	5,020 (18%) [7,000 (65%)]*	1,320	1,460 (10%) [2,190 (66%)]*	1,420	1,560 (10%) [2,470 (74%)]*
Pathway J – West Seattle	22,330 [‡]	28,460 (27%)	10,760	13,630 (27%)	3,910	5,240 (34%)	4,560	5,700 (25%)

*The increase in ridership reported in the brackets is due to the addition of route 124 to the pathway. Route 124 began operating in pathway "I" in September 2009.

[†] Pathway A ridership is slightly lower and B is slightly higher than the baseline ridership shown in the Vol 3 because express 17 trips were incorrectly assigned to pathway A.

[‡]Pathway J baseline is larger than the baseline shown for Vol 3 because express routes 118 and 119 were inadvertently excluded from the previous baseline.

PERFORMANCE OF ENHANCED TRANSIT SERVICE ADDITIONS

In June 2012, WSDOT funded the continuation of 30 trips on routes 18X, 21X, 56X, 120, 121 and 358 during the peak and shoulder periods. Compared to the June 2009 baseline, peak period ridership increased on all six routes that received mitigation funding by 20 percent overall, resulting in 2,080 more peak period trips. The largest absolute changes in peak period ridership were observed on the two all-day routes that received added trips – Routes 120 and 358. The largest percent increase in ridership was in the shoulder period on the 21X which increased by 50 additional peak period trips or 123 percent.

On the whole, the peak period ridership performance of the enhanced transit service routes outperformed system-wide trends by 16 percentage points. The ridership performance of the ETS routes also outperformed system-wide trends in the shoulder and midday periods.

Enhanced Transit Service Table 3

COMPARISON OF RIDERSHIP PERFORMANCE OF SERVICES THAT RECEIVED WSDOT FUNDED ENHANCEMENTS WITH JUN 2009 BASELINE								
Route/Pathway	Avg. Weekday		Peak Period*		Shoulder Periods		Midday Period	
	2009	2012 (% Change)	2009	2012 (% Change)	2009	2012 (% Change)	2009	2012 (% Change)
21X / Pathway J	750	1,010 (34%)	710	920 (29%)	40	90 (123%)	No Service	No Service
56X / Pathway J	600	780 (30%)	520	650 (25%)	60	110 (85%)	No Service	No Service
120 / Pathway J	6,650	8,170 (23%)	2,690	3,380 (26%)	1,260	1,650 (31%)	1,620	1,890 (17%)
Total Pathway J	8,000	9,960 (25%)	3,920	4,950 (26%)	1,360	1,850 (36%)	1,620	1,890 (17%)
121 / Pathway I	1,060	1,260 (18%)	730	1,010 (39%)	180	180	100	No Service
18X / Pathway A	760	910 (21%)	760	880 (17%)	No Service	30	No Service	No Service
358 / Pathway B	9,860	11,450 (16%)	4,200	4,850 (15%)	1,750	2,180 (25%)	2,350	2,540 (8%)
Enhanced Transit Service Route Total	19,680	23,580 (20%)	9,610	11,690 (22%)	3,290	4,240 (29%)	4,070[†]	4,430 (9%)

*Peak Period is 6-9 am and 3-6 pm; Shoulder Period is 9-10 am, 2-3 pm, and 6-7 pm; Midday is 10 am - 2 pm.

TRANSIT CAPACITY

The primary way transit services have mitigated construction impacts is by providing an alternative travel option to driving alone. In order to attract people to transit service, that service must be reliable. In addition, sufficient transit capacity is a prerequisite to establishing transit as a desirable alternative travel option.

June 2012 Transit Capacity Compared to June 2009 Baseline – The baseline is the scheduled number of seats that are supplied each weekday within a pathway group for June 2009. Enhanced Transit Service Table 4 shows the number of seats by time of day for June 2012 for the four different pathways compared to the baseline. The pathway trends shown in Table 4 are provided for context to help evaluate the effectiveness of WSDOT investments.

Table 4 shows that the WSDOT investments in the pathway J (routes 21X, 56X and 120) have helped increase the peak period capacity of the whole corridor. Peak period capacity also increased in Pathways A and B, but decreased slightly in Pathway I as a result of trip reductions in 2010 and 2011 to address Metro’s budget deficit. Overall, peak period capacity grew by nine percent in the four pathways.

Transit capacity by time period can change based on the number of trips scheduled in the time period, or the coach size assigned to the trips. Both factors explain the seating capacity changes shown in Table 4. In all pathways Metro has assigned larger coaches to accommodate demand. This has resulted in larger average number of seats per trip for all pathways; Pathway A increased from 51 seats to 57 seats, Pathway B increased from 55 to 56, Pathway I increased from 50 to 55, Pathway J increased from 53 to 57. At a pathway level, the total number of trips has remained fairly constant for pathways A, B and I during the peak, shoulder and midday periods. Pathway J, however, increased by 27 trips in the peak period and 39 trips in the mid-day and shoulder periods.

Enhanced Transit Service Table 4

JUN 2012 SERVICE CHANGE COMPARISON OF WEEKDAY TRANSIT SEATING CAPACITY BY CORRIDOR AND TIME OF DAY WITH JUN 2009 BASELINE						
Pathway	Peak Period		Shoulder Periods		Midday Period	
	2009	2012 (% Change)	2009	2012 (% Change)	2009	2012 (% Change)
Pathway A – Ballard/Magnolia [†]	9,240	10,300 (11%)	3,040	3,420 (13%)	3,690	4,430 (20%)
Pathway B – Aurora Fremont [†]	15,490	15,890 (3%)	5,900	6,060 (3%)	7,650	7,590 (-1%)
Pathway I – SODO/Georgetown*	6,290	6,170 (-2%) [8,270 (31%)]	1,920	1,900 (-1%) [2,770 (44%)]	1,950	1,920 (-2%) [2,880 (48%)]
Pathway J – West Seattle [‡]	16,340	19,170 (17%)	5,830	7,740 (33%)	7,480	9,190 (23%)
Total of all Pathways^{††}	47,360	51,530 (9%) [53,630 (13%)]	16,630	19,120 (15%) [19,990 (20%)]	20,770	23,130 (11%) [24,090 (16%)]

*The increase in capacity reported in the brackets is due to the addition of route 124 to the pathway. Route 124 began operating in pathway "I" in September 2009.
[†]Pathway A is slightly lower and B is slightly higher than the capacity shown in the Vol 3 baseline because express 17 trips were incorrectly assigned to pathway A.
[‡]Pathway J baseline is larger than the baseline shown for Vol 3 because express routes 118 and 119 were inadvertently excluded from the previous baseline.

Enhanced Transit Service Table 5 compares the actual transit capacity delivered during the June 2012 service change to the June 2012 enhanced transit service proposal. As described above, the larger coaches assigned to service in these corridors has resulted in Metro providing four percent more capacity than originally proposed. During the June 2012 service change WSDOT funds provided 17 percent more transit capacity than the peak period capacity of routes 18X, 21X, 56X, 120, 121 and 358. This additional capacity certainly helped attract some of the 2,080 peak period transit trips over the 2009 baseline.

Enhanced Transit Service Table 5

COMPARISON OF WSDOT FUNDED TRANSIT SEATING CAPACITY WITH METRO FUNDED PEAK PERIOD TRANSIT SEATING CAPACITY				
Jun 2011				
Route/Pathway	Metro Funded Peak Period*	Actual WSDOT Funded*	Jun 2011 ETS Proposal†	% Increase in Seating Capacity Compared to Metro Peak Period
18X	740	120	120	16%
21X	830	370	350	45%
56X	650	240	230	37%
120	3,200	510	460	16%
121	1,400	220	230	16%
358	3,590	350	350	10%
Total	10,410	1,810	1,740	17%
*Actual average seats/trip for Jun 2012 were as follows: 18X:62, 21X:61, 56x:59, 120:64, 121:56, 358:58 †ETS Proposal was based on 58 seats/trip				

TRANSIT CAPACITY LEVEL OF SERVICE

Transit capacity level of service (LOS) measures how riders perceive crowding and comfort on transit services. The second edition of the Transit Cooperative Research Program’s Transit Capacity and Quality of Service Manual describes the importance of transit capacity LOS in the following statement:

From the passenger’s perspective, passenger loads reflect the comfort level of the on-board vehicle portion of a transit trip—both in terms of being able to find a seat and in overall crowding levels within the vehicle. From a transit operator’s perspective, a poor LOS may indicate the need to increase service frequency or vehicle size in order to reduce crowding and provide a more comfortable ride for passengers. A poor passenger load LOS indicates that dwell times will be longer for a given passenger boarding and alighting demand at a transit stop and, as a result, travel times and service reliability will be negatively affected.

The Transit Capacity and Quality of Service Manual provides suggested capacity LOS guidelines. This report uses the ratio of passengers to seats, or Load Factor to evaluate the transit capacity LOS on routes in the identified pathways. The level of service thresholds are described in the table below.

Enhanced Transit Service Table 6

TRANSIT CAPACITY AND QUALITY OF SERVICE MANUAL LOAD FACTOR GUIDELINES		
LOS	Load Factor (passengers/seat)	Comments
A	0.00-0.50	No passenger need sit next to another
B	0.51-0.75	Passengers can choose where to sit
C	0.76-1.00	All passengers can sit
D	1.01-1.25*	Comfortable standee load for design
E	1.26-1.50*	Maximum schedule load
F	>1.50*	Crush load

*Approximate value for comparison, for vehicles designed to have most passengers seated.

June 2012 Transit Capacity Compared to Spring 2009 Baseline – Enhanced Transit Service tables 7, and 8 display the number and percent of riders experiencing a transit capacity LOS of C or worse when traveling in the peak direction during the peak period as compared to the June 2009 baseline.

Crowding happens when demand pushes the limits of capacity. Changes in crowding reflect a change in the capacity, the demand or both. Even with peak period ridership growing on all enhanced transit service routes the percent of riders experiencing transit capacity level of service C or worse declined on all routes during the PM, when two-thirds of the ETS trips were added. Ridership growth resulted in a greater percentage of riders experiencing level of service C or worse on three routes in the AM: 18X, 120 and 121. Overall, there are 540 fewer peak period riders experiencing transit capacity level of service C or worse than there were in the June of 2009.

One of the purposes of these added trips was to make room for additional transit commuters in advance of the most disruptive construction period. Tables 7 and 8 below show that the average load factors on all routes were down during the PM, meaning that WSDOT has made it possible for Metro to make room for additional transit commuters even while increasing the number of transit riders.

Enhanced Transit Service Table 7

COMPARISON OF JUN 2012 TRANSIT CAPACITY LOS WITH JUN 2009 BASELINE								
AM 6:00-9:00 Inbound								
Route/ Pathway	Average Load Factor		# of trips providing a transit capacity LOS of C or worse		% of riders at a transit capacity LOS of C or worse		Est. Number of daily riders at a transit capacity LOS of C or worse	
	2009	2012	2009	2012	2009	2012	2009	2012
18X	0.81	0.91	4	4	77%	83%	260	330
21X	0.74	0.63	4	2	66%	27%	250	120
56X	0.69	0.64	3	1	66%	19%	170	50
120	0.72	0.83	5	11	43%	83%	340	810
121	0.50	0.68	0	2	0%	37%	0	100
358	0.72	0.84	9	11	67%	67%	710	860
Total							1,730	2,270

Enhanced Transit Service Table 8

COMPARISON OF JUN 2012 TRANSIT CAPACITY LOS WITH JUN 2009 BASELINE								
PM 3:00-6:00 Outbound								
Route/ Pathway	Average Load Factor		# of trips providing a transit capacity LOS of C or worse		% of riders at a transit capacity LOS of C or worse		Est. Number of daily riders at a transit capacity LOS of C or worse	
	2009	2012	2009	2012	2009	2012	2009	2012
18X	0.76	0.74	3	3	53%	44%	230	210
21X	0.78	0.64	4	2	80%	28%	270	130
56X	0.74	0.59	3	1	78%	13%	210	50
120	0.77	0.65	7	4	46%	24%	470	320
121	0.68	0.60	3	2	57%	22%	170	90
358	0.86	0.80	18	11	87%	44%	1,390	860
Total							2,740	1,660

Enhanced Transit Service tables 9, and 10 display similar information as tables 7 and 8 for all the ETS pathways. As with tables 7 and 8, the percent of riders experiencing LOS C has increased overall in the AM, and decreased overall in the PM. In addition they give the number and percent of riders that experience a transit capacity LOS of C or worse for those traveling in off peak periods. The off peak information is included to show that crowding occurs at times outside the peak period. The table also provides the total daily trips and estimated number of riders that experience LOS C or worse. These tables are provided for context to evaluate the effectiveness of WSDOT funded construction mitigation services.

Enhanced Transit Service Table 9

JUN 2012 SERVICE CHANGE COMPARISON OF INBOUND WEEKDAY PASSENGER LOADS BY CORRIDOR PEAK PERIOD SUMMARY WITH JUN 2009 BASELINE						
AM 6:00-9:00 Inbound						
Pathway	% of riders at a transit capacity LOS of C or worse		# of trips in period providing a transit capacity LOS of C or worse		Est. Number of daily riders at a transit capacity LOS of C or worse	
	2009	2012	2009	2012	2009	2012
Pathway A – Ballard/Magnolia	38%	58%	14	26	890	1,780
Pathway B – Aurora Fremont	43%	63%	30	42	1,970	3,090
Pathway I – SODO/Georgetown	13%	26%	5	11	200	540
Pathway J – West Seattle	35%	39%	22	25	1,310	1,700
All Pathways	36%	49%	71	104	4,370	7,110
Inbound Trips All Other Times of Day						
	2009	2012	2009	2012	2009	2012
Pathway A – Ballard/Magnolia	27%	16%	26	16	1,400	920
Pathway B – Aurora Fremont	24%	27%	46	54	2,740	3,360
Pathway I – SODO/Georgetown	17%	7%	12	7	500	390
Pathway J – West Seattle	8%	3%	8	4	550	300
All Pathways	20%	15%	92	81	5,190	4,970
Total Inbound Trips			163	185	9,560	12,080

Enhanced Transit Service Table 10

JUN 2012 SERVICE CHANGE COMPARISON OF OUTBOUND WEEKDAY PASSENGER LOADS BY CORRIDOR PEAK PERIOD SUMMARY WITH JUN 2011 BASELINE						
PM 3:00 – 6:00 Outbound						
Corridor	% of riders at a transit capacity LOS of C or worse		# of trips in period providing a transit capacity LOS of C or worse		Est. Number of daily riders at a transit capacity LOS of C or worse	
	2009	2012	2009	2012	2009	2012
Pathway A – Ballard/Magnolia	48%	24%	24	15	1,430	840
Pathway B – Aurora Fremont	61%	45%	51	40	3,270	2,760
Pathway I – SODO/Georgetown	45%	24%	12	10	620	510
Pathway J – West Seattle	40%	18%	25	14	1,580	910
All Pathways	50%	30%	112	79	6,900	5,020
Outbound Trips All Other Times of Day						
	2009	2012	2009	2012	2009	2012
Pathway A – Ballard/Magnolia	23%	17%	23	15	1,380	1,000
Pathway B – Aurora Fremont	19%	13%	35	26	2,080	1,620
Pathway I – SODO/Georgetown	8%	4%	5	4	190	170
Pathway J – West Seattle	12%	5%	14	6	880	410
All Pathways	15%	10%	77	51	4,520	3,200
Total Outbound Trips			192	130	12,110	8,220

FLEXIBLE TRANSIT SERVICE

The Enhanced Transit Service contract provides for the use of flexible hours to meet the day to day variations in construction related traffic disruptions. These hours allow Metro to assign standby buses that enable Metro to respond immediately to conditions on the street. In the June 2011 ETS proposal, Metro budgeted 900 hours of flexible services to meet these needs. However, no flexible hours were needed during the June 2012 service change.

Transit Travel Time Report

TRAVEL TIME REPORT PURPOSE

As part of the AWW Moving Forward contract, Metro received funding to improve the equipment that monitors bus travel time through the construction corridors. The Transit Travel Time report uses data from this equipment provided by WSDOT and other sources throughout the network. This report summarizes data collected to monitor transit travel times along pathways that are expected to be most heavily impacted by the Moving Forward project of the AWW program.

This report compares the Summer 2012 service change condition to the previous travel time report (Spring 2012) and the baseline condition (Fall 2009). The list below show the dates of when travel time observations were collected for those conditions:

- Fall 2009 service change (baseline condition): September 21, 2009 through October 16, 2009
- Spring 2012 service change condition: April 2, 2012 through April 27, 2012
- Summer 2012 service change condition: September 4, 2012 through September 28, 2012

Travel time data was collected and processed as discussed below:

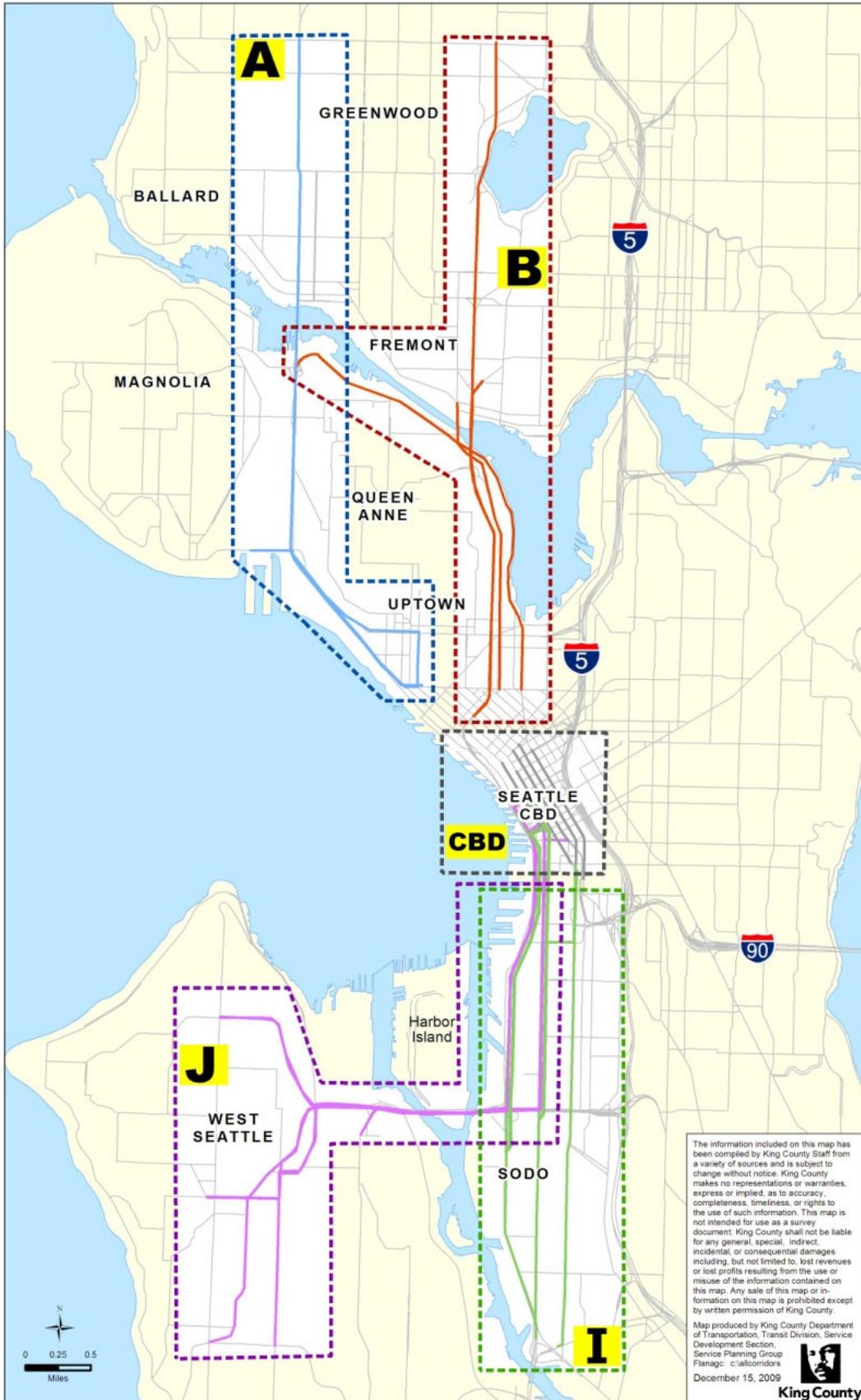
- Transit travel time was measured on key transit corridors feeding into and within the Seattle Central Business District (CBD). The data for this was collected through:
 - o Automatic Vehicle Identification (AVI) readers installed at endpoints of key transit corridors
 - o Data from Metro's signpost-based Automatic Vehicle Location (AVL) system
- Pathways were defined by the roadway segments on which one or more transit routes operate.
- Pathways were grouped by geographic market area, as shown in the "Pathways and Pathway Groups" map on the next page. Each group consists of several distinct pathways described in the "Description of Pathways and Associated Transit Routes" (Travel Time Table 1).
- Because pathway lengths vary, and travel times will not be comparable across pathways, travel *speeds* are used to assess pathway group performance and travel *times* are used to assess individual pathway performance.

For this report, several data substitutions were made due to AVI reader availability. AVI readers at 4th Avenue/2nd Avenue Extension & Jackson Street have been offline during a portion of the reporting period, affecting pathways I.2, I.3, J.6, CBD2 and CBD4. For pathways I.3, CBD2, and CBD4, enough data was collected during a one week period (9/24-9/28) to make meaningful conclusions about these pathways. For pathways I.2 and J.6, AVL was substituted for AVI data. These data substitutions have affected the number of observations along these pathways, which may have a slight impact on the median speeds for pathway groups.

The next report, covering Fall 2012 conditions, will represent a shift in travel time reporting due to major changes in service that were implemented on September 28, 2012. Many bus routes have been altered to use different pathways, and some pathways will no longer be used at all. These changes will complicate travel time comparisons with previous and baseline conditions; new and revised pathways may need to be introduced into the report, without any historical data available for these pathways.

Pathways and Pathway Groups

Transit Routes Affected by AWW Project



Travel Time Table 1

Description of Pathways and Associated Transit Routes					
Pathway Group	Pathway	Market Coverage	From	To	Current Transit Routes*
A	A.1	Ballard, Uptown	15 th NW/NW 85 th	1 st Ave/Denny	15,[18]
	A.2	Ballard	15 th NW/NW 85 th	1 st Ave/Denny	15X,[17X,18X]
	A.3	Magnolia	Elliot Ave/Magnolia Br.	1 st Ave/Denny	19,24,33
B	B.1	North Seattle	Aurora Ave NW/NE 85 th	3 rd Ave/Battery	358
	B.2	North Seattle	Bridge Way/N 38 th	3 rd Ave/Battery	5, [5X,26X,28X]
	B.3	Fremont	Dexter/Westlake/Fremont	Dexter/Denny	26,28
	B.4	South Lake Union	Ballard Br./Denny	Denny/Westlake	17
I	I.1	South Seattle/Burien	1 st Ave S/E. Marginal (OB) S Alaska/E Marginal (IB)	1 st Ave/Columbia (OB) 1 st Ave/Seneca (IB)	121,122
	I.2	South Seattle/Burien	4 th Ave S/S Michigan	4 th /2 nd Ave/Jackson	23, 123X, 124
	I.3	South Seattle/Burien	1 st Ave S/E. Marginal	4 th /2 nd Ave/Jackson	132
J	J.1	West Seattle	Alaska Jct.	3 rd Ave/Seneca	22
	J.2	West Seattle	35 th Ave SW/SW Morgan	3 rd Ave/Seneca	21
	J.3	West Seattle	Alaska Jct.	1 st Ave/Columbia (OB) 1 st Ave/Seneca (IB)	54,55 [21X]
	J.4	West Seattle	California Ave/SW Fauntleroy Way	3 rd Ave/Yesler	116,118, 119, [54X]
	J.5	West Seattle/Burien	Delridge Way/Andover	1 st Ave/Columbia (OB) 1 st Ave/Seneca (IB)	120,125
	J.6	West Seattle	Admiral Way/California Ave	4 th Ave/Jackson	56, 57
	J.7	West Seattle	Admiral Way/California Ave	1 st Ave/Columbia (OB) 1 st Ave/Seneca (IB)	56X
CBD	CBD.2	2 nd Ave	4 th Ave/Stewart	2 nd /Jackson	Many
	CBD.3	3 rd Ave	3 rd Ave/Stewart	3 rd Ave/Yesler	Many
	CBD.4	4 th Ave	4 th Ave/Jackson	4 th Ave/Stewart	Many
	CBD.5	5 th Ave	5 th Ave/Pine	5 th Ave/Weller	Many

*Routes identified with an X are express routes. Routes in [brackets] are routes that parallel a significant portion of the pathway, but are not included in the data for that pathway. Because so many routes operate on the five CBD pathways they are not all listed here.

TRAVEL TIME DATA

A summary of performance results are reported on the "Performance by Pathway Group" and "Performance of Pathways with Service Additions" tables below, while detailed travel time charts of the individual pathways are included in Appendix A.

Travel Time Table 2 below shows daily median travel speeds and range of speeds experienced by each pathway group during the am and pm peaks, including a comparison with the baseline condition. The "Median Speed" is the speed where 50 percent of the observed transit speeds are faster and 50 percent of the observed transit speeds are slower than the median speed. The median speed includes all transit trips operating along all of the pathways in each group, in both directions, on weekdays between 5 am and 8 pm. Median speed is reported rather than average speed because the median is less sensitive to unusual events such as bus breakdowns or accidents that could skew the average. This measure gives an overall performance metric for the pathway group, and is a useful aggregate measure to assess whether the speeds of individual pathways in a given group are trending up or down. It is not, however, appropriate to use the pathway group median speed as an assessment of travel speed for any individual pathway. In Appendix A, observed travel times are aggregated by hour of day for both directions of each pathway.

The strongest influence in travel time variability is time of day and direction of travel. The "PM Peak Period Hourly Median Range" and "AM Peak Hourly Median Range" are aggregate performance measures for the times of day that traditionally have the most congestion. The PM Peak Range is the range between the median speed for the slowest hour of the slowest pathway and the fastest hour of the fastest pathway between 3 pm and 6 pm; the AM Peak Range is a similar comparison of speeds between 6 am and 9 am. These ranges can be used to understand pathway group performance and assess whether, as a group, speeds are trending up or down during periods when daily travel demand is the greatest.

Travel Time Table 2: Spring 2012, Fall 2011, and Baseline Travel Speeds

Performance by Pathway Group: Spring 2012, Fall 2011, & Baseline Comparison					
Pathway Group	Area	Service Change Period	Median Speed [MPH]	AM Peak Period* Hourly Median Range [MPH]	PM Peak Period* Hourly Median Range [MPH]
A	Ballard, Interbay	Summer '12	14.7	13.3 – 21.3	11.2 – 16.4
		Spring '12	15.3	12.4 – 21.9	12.1 – 18.0
		Baseline	14.9	12.1 – 23.6	11.4 – 19.0
B	Aurora, Fremont	Summer '12	16.3	11.0 – 19.1	11.7 – 24.1
		Spring '12	17.3	10.8 – 19.4	10.6 – 19.2
		Baseline	18.6	11.0 – 22.7	11.0 – 20.3
I	SODO, Georgetown	Summer '12	17.2	12.6 – 35.8	12.9 – 21.3
		Spring '12	18.3	15.4 – 36.7	13.1 – 23.0
		Baseline	17.7	16.4 – 48.4	12.7 – 21.7
J 1 st Ave	West Seattle via 1 st Ave S	Summer '12	14.9	10.2 – 21.1	12.5 – 19.3
		Spring '12	13.4	10.2 – 16.9	10.4 – 14.9
		Baseline	15.9	11.9 – 20.7	12.4 – 21.0
J AWV	West Seattle via AWV	Summer '12	28.9	13.4 – 32.0	23.0 – 32.5
		Spring '12	25.2	15.3 – 29.6	19.3 – 33.0
		Baseline	30.1	20.1 – 36.6	22.1 – 33.8
CBD	2 nd - 5 th Avenues	Summer '12	6.8	3.8 – 10.5	4.1 – 8.6
		Spring '12	7.3	5.3 – 9.8	5.0 – 9.4
		Baseline	7.2	5.9 – 9.9	5.4 – 9.6

* AM peak includes 6 – 9 am and inbound trips only, pm peak includes 3 – 6 pm and outbound trips only, except CBD group includes both directions for am and pm peak ranges.

Summer 2012 Highlights

During the Summer 2012 reporting period, new construction impacts occurred related to the North Portal and Mercer projects. Intermittent lane closures occurred on Mercer Street, Fairview Avenue, and other streets in the area, which directly impacted transit routes travelling on or crossing those roadways, while other transit pathways were indirectly impacted by the resulting traffic diversions. In addition, the eastbound off-ramp from the Spokane Street Viaduct to 1st Avenue S was closed for a period, requiring a detour of Sodo buses to 4th Avenue South.

The opening of the new on-ramp from 1st Avenue S to the West Seattle Bridge has alleviated the lengthy and unreliable detour over multiple rail crossings and the Lower Level drawbridge. Significant improvements are seen in the outbound direction on J pathways using 1st Avenue S, due to restoration of these transit routes to their original pathways. These pathways have seen improvements between 5 - 7 minutes in median travel time since the previous reporting period, however they are still operating 2 – 5 minutes longer than the baseline condition.

J Pathways

Pathways using both 1st Avenue and the AWW have shown some improvement in overall median speeds, however speeds are still slower than baseline conditions and the range in speeds has grown, indicating less reliable operation. Although outbound pathways on 1st Avenue have improved, inbound pathways are operating worse due to the off-ramp closure.

B pathways

Pathways B.1 and B.2 in the inbound/southbound direction continue to be impacted by ongoing construction in the Mercer and North Portal area. Although these pathways benefit from the new SB bus lane on Aurora Avenue, they are likely getting delayed crossing Denny Way. Reliability on these pathways has shown improvement, as evidenced by the smaller spread between 25th and 75th percentile speeds. Outbound, these pathways have shown consistent or better performance compared to the previous reporting period or baseline condition; this is likely due to the fact that the Battery Street Bus Lane provides an effective bypass around the bottleneck at Denny Way.

Pathways B.3 and B.4, on Westlake and Dexter Avenue, both show a significant spike in inbound travel times during the PM peak hour, where travel times have increased by 2 – 4 minutes since the previous period and reliability has taken a significant hit. This is likely due to increased congestion on the Mercer corridor.

Additional highlights of changes in travel time and travel speeds observed in Summer 2012 compared to Spring 2012 and baseline conditions are noted below. See Appendix A for details.

- The A Pathways travelling on Elliott and 15th Avenue overall show slight degradation in travel speeds, although individual pathways show mixed results. These impacts are likely due to additional traffic diversion from Mercer and North Portal projects, as well as other smaller construction projects occurring in the summer, including Rapid Ride D line station construction.
- I pathways travelling through south SODO and Georgetown have shown overall degradation in travel speeds, likely do to an increase of construction activity during summer months, such as the Argo bridge reconstruction. Special events at the stadiums may have also impacted these pathways.
- Pathway CBD2 continues to show poor reliability, due to impacts from special events and friction from general traffic that occurs in the single bus lane along that corridor.
- Pathway CBD3 has shown a slight increase in travel time in the northbound direction compared to Spring 2012, by about 1 minute or less. This travel time increase may be due to seasonal effects. (i.e. more tourists during summer months). Southbound travel times and reliability have remained consistent.
- Pathway Columbia has shown continued improvement in travel time and reliability, due to bus lanes and queue jump signals installed along that corridor.

SERVICE ADDITIONS TRAVEL TIME

The following is a summary of travel time performance of transit pathways that have received WSDOT funding during this period.

Route 21X [Pathway J.3] – Pathway J.3 shows some improvement in the outbound direction; however the inbound direction has become worse by 1 – 2 minutes all day. Note that the route 21X does not follow the J.3 pathway exactly, but parallels a significant portion of it.

Route 56X [Pathway J.7] – Pathway J.7 is a peak-only pathway using the AWW. Performance on this pathway has been fairly consistent compared to Spring 2012 and baseline condition, except that AM travel times remain up to 7 minutes longer during the AM peak hour compared to baseline conditions, due to continued use of the Wosca detour.

Route 121 [Pathway I.1] – Pathway I.1 is also a peak-only pathway, with limited reverse-peak trips, that also has also been impacted significantly by the Wosca detour during the AM peak flow. AM inbound trips show additional delay of one minute or less over Spring 2012 conditions, while PM outbound trips have shown consistent performance.

Route 120 [Pathway J.5] – Pathway J.5 has shown some improvement for the AM peak flow, but these travel times are still 3 – 5 minutes longer compared to baseline. PM performance has continued to be consistent and reliable.

Route 18X [Pathway A.2] – Pathway A.2, a peak-only pathway using 15th, Elliott, and Western Avenues, has shown travel time increases around one minute in both directions, consistent with other "A" pathways.

Route 358 [Pathway B.1] – Pathway B.1 has been impacted in the southbound direction by construction and lane closures related to the Mercer and North Portal projects, resulting in 1 – 2 minutes additional travel time. A new bus lane is now available on southbound Aurora Avenue. AM inbound travel times are about 1 – 2 minutes longer than Spring 2012 conditions, however they have become more consistent. The outbound direction as shown consistent or better performance compared to Spring 2012 and baseline conditions, thanks to Bus lanes installed on Battery Street.

Transportation Demand Management Report

TDM REPORT PURPOSE

Transportation Demand Management (TDM) projects are designed to improve system efficiency by reducing traffic congestion on SR 99 during the construction of the Moving Forward Projects primarily S Holgate Street to S King Street. WSDOT is investing \$1.7 million in strategic trip reduction projects to complement the Enhanced Transit Service project with incentives, transit subsidies, outreach events and consultations. These projects encourage people to ride the bus, helping to fill seats on the added bus service. The TDM projects also help show people their travel options which include carpooling, vanpooling, teleworking, or flexing their work schedules.

The goal of the overall TDM project is to reduce *4,130 peak round trips each weekday*. The agreement requires that the projects target two areas, downtown Seattle (and impacted surrounding areas) and the south end along the SR 99 corridor. In addition to the WSDOT funded programs, Metro will contribute matching dollars. A description of the various TDM projects follows TDM Table 1 below:

TDM Table 1

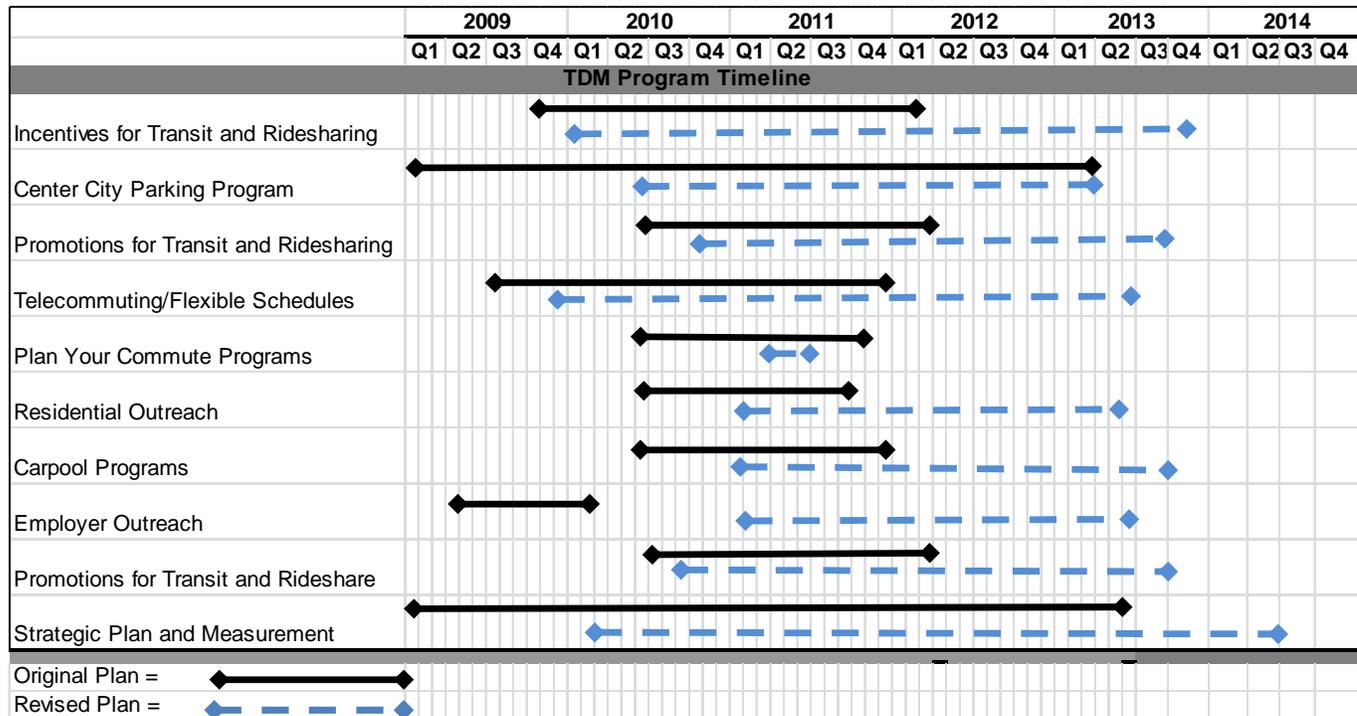
TDM Project Definitions for Downtown Seattle and the South End SR 99 Corridor	
Program	Description
Incentives for Transit and Ridesharing \$343,520 WSDOT	Provide a minimum of 2,500 transit pass incentives to downtown Seattle employers.
Reduce Single Occupancy Vehicles (SOV) Commuter Parking \$225,000 WSDOT	Encourage property owners and drivers to use the City of Seattle’s electronic parking guidance system to convert 2,000 long term commuter parking stalls to short-term parking through marketing and incentives.
Promotions for Transit and Ridesharing \$362,000 WSDOT	Promote new transit services and all rideshare programs to a minimum of 165,000 households and/or employees.
Teleworking/Flexible Schedules \$140,000 WSDOT	Develop telework and flexible schedule plans with a minimum of 15 downtown Seattle companies with the help of a telework consultant. Consultant will also conduct a feasibility study for a telework center in West Seattle.
Plan Your Commute Programs \$81,480 WSDOT	Provide one-on-one consultations about commute options with Plan Your Commute Events. Information and free bus ride tickets are usually given to participants.
Residential Outreach \$300,000 WSDOT	Conduct residential outreach targeted to neighborhoods potentially affected by construction. Outreach will encourage residents to ride the bus, carpool, bicycle, walk or eliminate trips.
Carpool Programs \$105,000 WSDOT	Offer 2,000 incentives to new carpoolers in the SODO/Duwamish and West Seattle areas.

Employer Outreach \$100,000 WSDOT	Offer transit passes or subsidies to smaller employers (not required to participate in commute trip reduction) in SODO/Duwamish and the downtown neighborhoods (Lower Queen Anne, South Lake Union, First Hill, etc.).
Strategic Plan and Measurement \$51,612 WSDOT	Analyze and report on overall results of transportation demand management efforts
Match \$1,050,000 Metro	

TDM PROGRAM TIMELINE

Most TDM programs began in early 2011. Teleworking/Flexible Schedules, Center City Parking, and the Metro funded Incentives for Transit began in 2010. The program schedule is below:

TDM Table 2



TDM Program Update and Performance

Listed below in TDM Table 3 are the TDM program updates for June to September 2012.

Each TDM task has a trip reduction target set by contract (GCA 5865). At the beginning of the contract, Metro worked with WSDOT and SDOT staff to develop the methodology to measure progress in meeting the trip reduction targets. The factors used to measure progress in the AWW TDM program used past performance and other factors to estimate performance. The mitigation is a collaboration of efforts to encourage people to meet their travel needs without driving alone. All the TDM elements are implemented in an environment where many different actions interact including but not limited to other promotions, changes in bus service, and construction activities. Broader factors like the price of gas, seasonal effects, unemployment, and other economic factors, can also influence a traveler's choice.

The individual tasks often targeted the same employers and travelers with different approaches. Task implementation also had to remain flexible to respond to factors beyond the project including staffing resources, agency policies, data gathering, gas prices or the economy. These factors made it difficult to attribute a trip reduction to a single task. To address this difficulty, King County Metro and WSDOT reviewed and documented changes to task level deliverables, trip reduction targets, funding allocations and performance measurement methodology. This ensured the task's deliverables, expected performance and final cost per trip reduced remained aligned. The adjustments outlined do not result in any net changes at the overall agreement level to deliverables, trip reduction targets or budget for the mitigation program.

Most reporting tools have been revised as of this reporting period; revised performance spreadsheets (and data) are available in the appendix for all TDM tasks.

TDM Table 3

TDM Program Update – (June 2012 – September 2012)	
Incentives for Transit and Ridesharing	<p>Performance: As of September, 297 trips were reduced though incentives for transit and ridesharing exceeding the revised trip reduction target of 236.</p> <p>Activities: Incentives continue to be offered in the Center City for first year Passport purchases. There were 810 incentives/passes distributed from July to September 2012.</p>
Reduce Single Occupancy Vehicles (SOV) Commuter Parking	<p>Performance: As of September, 2,063 long-term parking spaces have been reduced, but no trips have been reduced. The number of vehicles parking in downtown Seattle is increasing for all time periods: all-day and commuter parking, short-term parking, and evening and weekend parking. The increase in all parking counts is consistent with decreasing office vacancies, increasing retail sales, and the Great Seattle Wheel, which is generating increased vehicle trips.</p> <p>Activities: Designed and executed two key campaign elements: 1) e-Park summer marketing campaign including launch of the mobile-friendly e-Park website, development of new collateral materials, bus boards, and sponsorship for DSA’s Out to Lunch events; and 2) e-Park customer intercept survey to evaluate brand awareness and inform future marketing efforts. The intercept survey was conducted at all six e-Park pilot garages in September and gathered over 550 responses. Results will be analyzed and included in the next performance report.</p>
Promotions for Transit and Ridesharing	<p>Performance: The Promotions trip target of 1,380 has been exceeded with 4,784 trips reduced.</p> <p>Activities: Five (5) neighborhoods were identified as areas with significant service benefits resulting from the Fall service change but not directly related to Rapid Ride implementation. An outreach approach was developed for each neighborhood, which include an initial mailing with ORCA card offer, follow up mailing with detailed service map and ORCA card, and then a final survey. Materials were developed. Mailings will occur in fall and winter and evaluation will be complete in Winter 2013.</p>
Teleworking/Flexible Schedules	<p>Performance: WSDOT and King County Metro staffs have revised the performance measurement methodology based on changes to data availability and project approach. Based on this methodology, companies participating in the program have reduced 240 trips as a result of the telework program. This includes 88 trips from a company that completed a telework/compressed work week survey and the remainder calculated based on available CTR survey data for participants.</p> <p>Activities: Program development continues with Seattle Housing Authority and Port of Seattle.</p>
Plan Your Commute	<p>Performance: The program has reduced 33 trips.</p> <p>Activities: Work on this task was completed in June 2011, 83 of the 36 required events were held and more than 15 thousand pledges in Rideshare Online, more than exceeding the 1,800 required. Benefits of this task are on-going.</p>

<p>Residential Outreach</p>	<p>Performance: The program has reduced an average of 120 weekday round trips during peak hours daily, 89 trips during non-peak hours and 122 daily trips on weekends.</p> <p>Activities: Activities included planning and project development for the two In Motion projects, West Seattle and Ballard/Crown Hill. Extensive stakeholder outreach was conducted, sponsors and partners were solicited and signed, and materials were developed. Both projects launched mid-September. Evaluation of both projects will be completed in Winter 2013.</p>
<p>Carpool Program</p>	<p>Performance: The performance measures have been revised to better measure the benefits of vanpools formed in the AWW travel sheds. 579 trips have been reduced through this program, well above the goal of 370.</p> <p>Activities: Continued promotions to the public and commuters through at work transportation events, e-mail updates and RideshareOnline.com promotions.</p>
<p>Employer Outreach</p>	<p>Performance: As of September the program has reduced 1,225 trips.</p> <p>Activities: Planning continued for employer outreach in the AWW shed for the launch of the C and D RapidRide Lines. A mailer was created for distribution to employers within 1/4 mile of the C & D lines in late September; it included 10 Free Ride Tickets and a description of services available to employers. Employers, targeted by size, industry type and location, were contacted and offered free consultation about employee commute program. An event was held at Swedish Ballard; additional events will be scheduled in October, and individual consultations with employers will be conducted Winter 2013.</p>

Four TDM Tasks have met their contract targets:

- Promotions: with a trip reduction target of 1,380 trips, Promotions of Transit and Ridesharing has reduced 4,784 trips so far.
- Incentives: with a trip reduction target of 236 trips, Incentives for Transit and Ridesharing has reduced 297 trips so far.
- Employer Outreach: with a trip reduction target of 100 trips, Employer Outreach has reduced 1,225 trips so far.
- Carpool: with a trip reduction target of 370 trips, Carpool has reduced 579 trips so far.

To date, of the 4,130 trips targeted for reduction, 7,278 trips have been converted, exceeding the trip reduction target by 76%.

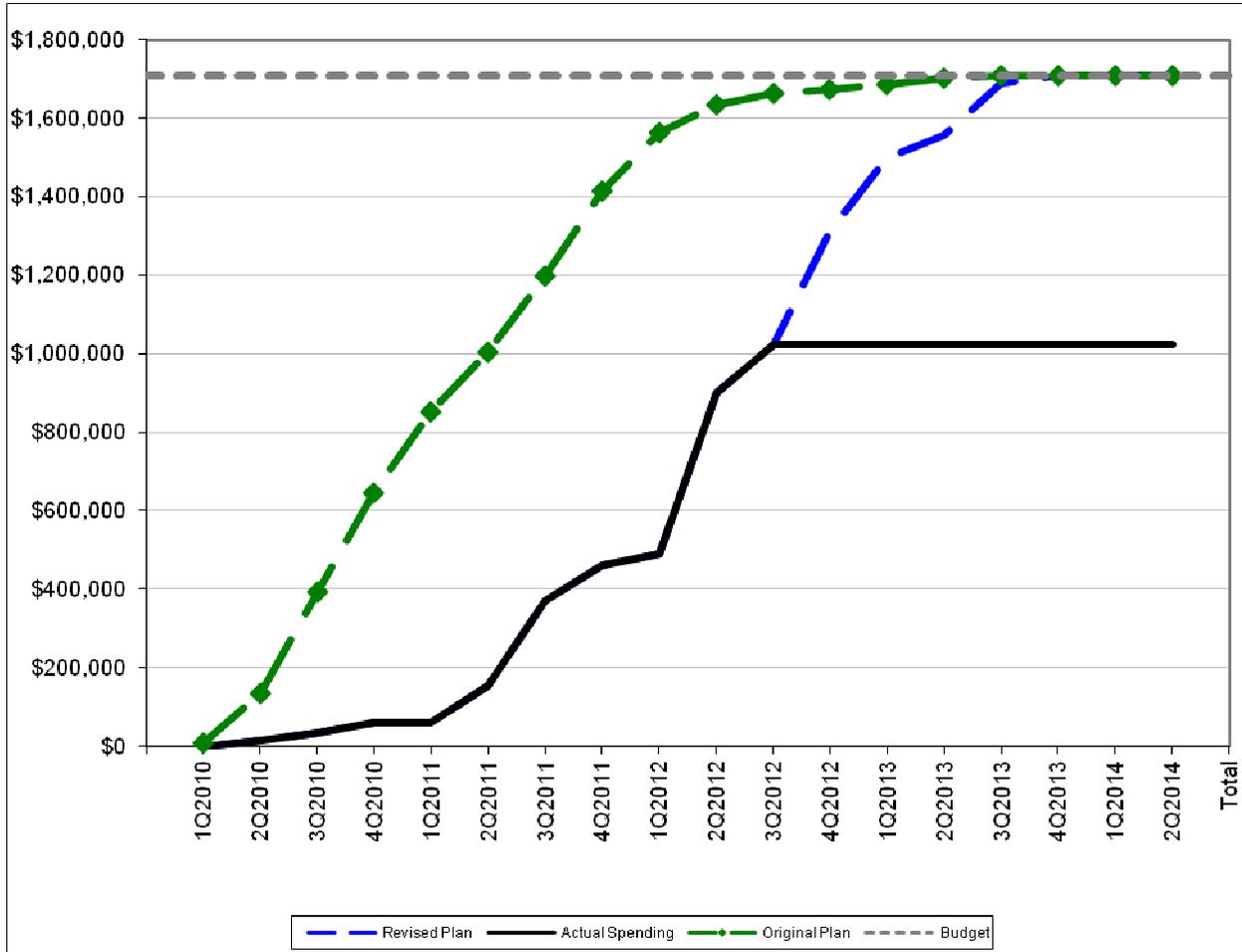
TDM Impacts: Table 4.

Activity	Trip Reduction (round trips reduced daily)		Individual Metrics		
	Target for entire program period	Current performance	Description	Target for entire program period	Current performance
Promotions for Transit and Ridesharing	1,380	4,784	Households / Employees	165,000	154,934
Incentives for Transit or Ridesharing	236	297	Transit Pass Incentives	2,284+	4,902
			Incentives to Garages	5	5
Carpool Program	370	579	Carpool Incentives	2,000	4,971
Reduce Single Occupancy Vehicles (SOV) Commuter Parking	200	0	Net Reduction of Downtown Long-Term Parking Spaces	2,000	2,063
Residential Outreach	390	120	Household Participation Rate	10%	10.7%
Plan Your Commute	744	33	Pledges	1,800	15,000+
			Transit Passes Distributed	N/A	216
			Pre-loaded ORCA Cards Distributed	N/A	331
Teleworking	710	240	Number of Companies Participating	15-20	15
Employer Outreach	100	1,225	Transit Passes Distributed	N/A	458
TOTAL	4,130	7,278			

TDM BUDGET AND EXPENDITURE – SEPTEMBER 2012

The estimated cash flow as of September 2012 by quarter is listed in the table below.

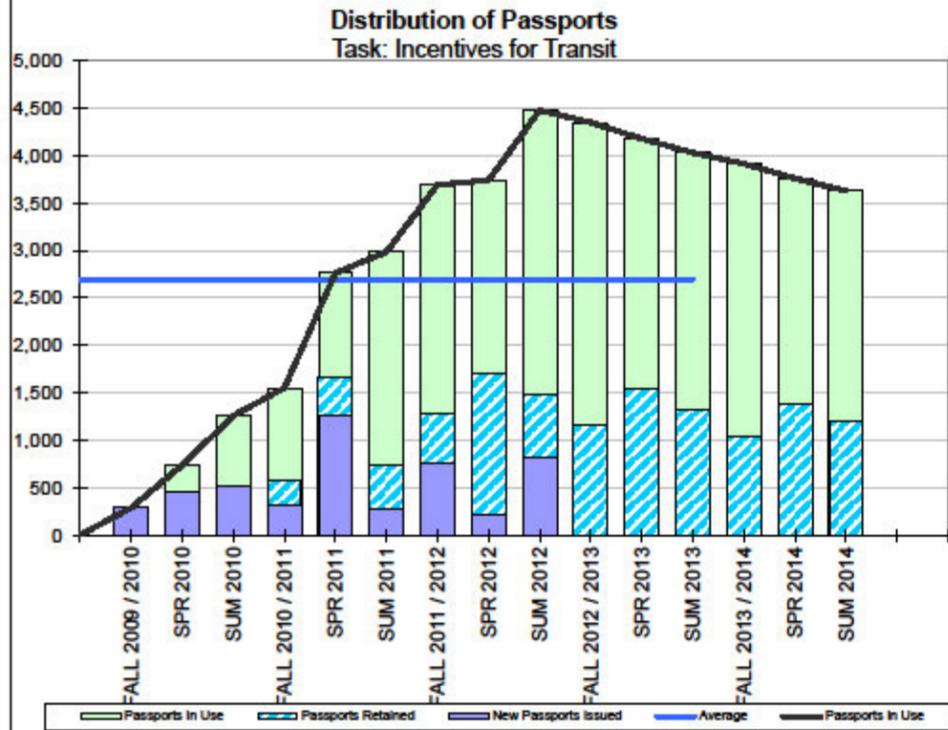
TDM Table 5



Task: Incentives for Transit
Task Lead: Kathy Koss

Target	
236	Trips Reduced
2,284+	Transit Pass Incentives
5	Garage Incentives

ORCA Passport	
Alternate Mode Share (transit and vanpool) for Passport Sites	44.0%
Alternate Mode Share for Non-Passport Sites	33.0%
Retention of Newly Distributed Passports	90.0%



	Service Period	Garage Incentives	New Passports Issued	Passports Expiring	Passports Retained	Passports In Use	Average Passports In Use
Program Period	FALL 2009 / 2010		288			288	2,696
	SPR 2010		453			741	
	SUM 2010		518			1,259	
	FALL 2010 / 2011		321	288	259	1,551	
	SPR 2011		1,257	453	408	2,763	
	SUM 2011		274	518	466	2,985	
	FALL 2011 / 2012	5	765	580	522	3,692	
	SPR 2012		216	1,665	1,498	3,742	
	SUM 2012		810	740	666	4,478	
	FALL 2012 / 2013				1,287	1,158	
Post Program Period	SPR 2013			1,714	1,543	4,177	3,784
	SUM 2013			1,476	1,329	4,030	
	FALL 2013 / 2014			1,158	1,043	3,914	
Total		5	4,902				

Average Daily Round Trips Reduced Through Distribution of New Passports	
$= \left(\left(\begin{matrix} \text{Alt. Mode Share} \\ \text{for Passport Sites} \\ \text{During Program} \end{matrix} \right) - \left(\begin{matrix} \text{Alt. Mode Share} \\ \text{for non-Passport Sites} \\ \text{During Program} \end{matrix} \right) \right) * \left(\begin{matrix} \text{Average \# of Passports} \\ \text{In Use During Program} \end{matrix} \right)$	
$= ((44.0\%) - (33.0\%)) * (2,696) =$	
297	

Contacts:
Theresa Gren, 206-464-1288, GrenT@wsdot.wa.gov or Janice Helmann, 206-464-1284, HelmanJ@wsdot.wa.gov

Calc Sheet Version 3.4

Task: Carpool Program
Task Lead: Tom Devlin

Target	
370	Trips Reduced
2,000	Carpool Incentives

Average Ridership Per Vanpool	8
Average Number of One-Way Trips Per Vanpool Rider Per Week	8

	Service Period	New Vanpools Formed	Vanpools Disbanded	Current Vanpools	Vanpool Riders	One-Way Vanpool Trips	Reported One-Way Carpool Trips		Commute Days in Service Period	Ridesharing Incentives Distributed	
Program Period (Service Change, Year)	SPR 2010			0	0	0			88		
	SUM 2010			0	0	0			77		
	FALL 2010 / 2011			0	0	0			86		
	SPR 2011	35		35	280	39,424	45,595		88	1,216	
	SUM 2011	52		87	696	85,747	85,174		77	733	
	FALL 2011 / 2012	61	3	145	1,160	178,178	82,423		98	1,508	
	SPR 2012	33	6	172	1,378	171,725	61,014		78	705	
	SUM 2012	41	17	196	1,568	193,178	81,829		77	809	
	FALL 2012 / 2013			196	1,568	240,845			96		
	SPR 2013			196	1,568	195,686			78		
	SUM 2013			196	1,568	193,178			77		
	FALL 2013 / 2014			196	1,568	240,845			96		
	% of Reported Trips Resulting in Trip Reductions by Mode						88%	50%	Total		4,971
	Participants Newness to Alternate Mode by Type*						57%	36%			
Total Round Trip Reduction (see formula below)						506	73	579			

Total Trip Reduction =
$$\left(\frac{\text{Total Reported One Way Trips by Mode Type}}{\text{Commute Days During Program Period}} \right) * \left(\frac{1 \text{ round trip}}{2 \text{ one way trips}} \right) * \left(\% \text{ of Reported Trips Resulting in Trip Reductions by Mode Type} \right) * \left(\% \text{ of Participants Newness to Alternate Mode by Type 0 - 6 months} \right)$$

* Participants newness to alternate mode by type was derived from data King County Metro collected. The vanpool percentage was based on King County Metro's vanpool entry survey (sent to all new vanpool participants).

Contacts:
Theresa Gren, 206-464-1288, GrenT@wsdot.wa.gov or Janice Helmann, 206-464-1284, HelmanJ@wsdot.wa.gov

Task: Plan Your Commute
Task Lead: Kathy Koss

Target	
744	Trips Reduced
216	Transit Pass Incentives
1,800	Pledges

Distribution of \$6 Pre-Loaded ORCA Cards

pre-loaded cards distributed to employees	331
total commute days during program	212
total calendar months during program	10.0
program period	5/1/2011 to 2/29/2012
maximum amount considered a transit transfer	\$0.50
Card Use Stats	
cards reloaded	43
cards reloaded with monthly pass	6
purse trips	1,859
purse trips per day	9
cards reloaded more than once or with a monthly pass	33

Total Trip Reduction = (E-Purse Trip Reductions) + (Monthly Pass Trip Reductions)

where

E-Purse Reductions

$$= \left(\frac{\# \text{ of Transit Purse Transactions} > \text{Maximum Amount Considered a Transit Transfer}}{\text{Eligible Commute Days}} \right) * \left(\frac{1 \text{ round trip}}{2 \text{ one-way trips}} \right)$$

$$\text{Monthly Pass Trip Reductions} = \frac{(\# \text{ of Monthly Pass Reloads}) * \left(\frac{\text{Total Commute Days During Program}}{\text{Total Calendar Months During Program}} \right)}{\text{Eligible Commute Days}}$$

Eligible Commute Days

= Count of Commute Days Between Earliest Date of Card Use and Program End Date

Trip Reductions	
E-Purse	6
monthly pass	3
Total	9

* Monthly passes are assumed to be used for each commute day in a month.

ORCA Passport (Transit Pass) Sales

Passports (transit passes) sold to employers	216
alternate mode share for Passport sites	44.0%
alternate mode share for non-Passport sites	33.0%

ORCA Passport Sales Trip Reductions

$$= \left(\left(\text{Alternate Mode Share for Passport Sites} \right) - \left(\text{Alternate Mode Share for non-Passport Sites} \right) \right) * (\text{Passports Sold})$$

$$= ((44.0\%) - (33.0\%)) * (216) = 24$$

Total Trip Reduction for Plan Your Commute Task

Total Trip Reduction

$$= \left(\text{Trip Reduction from Distribution of Pre-Loaded ORCA Cards} \right) + \left(\text{Trip Reduction from ORCA Passport Sales} \right)$$

$$= (9) + (24) =$$

33

Task: **Telework / Flexible Schedules**
Task Lead: **Sunny Knott**

Calc Sheet Version 3.5

Target	
710	Trips Reduced
15	Companies Participating

Company	Total Employees	Teleworkers %	Estimated Trip Reduction*
Russell Investments	950	36%	92
Fred Hutchinson Cancer Research Center	3,539	8%	49
Perkins Coie LLP	891	12%	-5
Starbucks Coffee Company	3,627	12%	73
Vulcan Inc.	309	5%	1
Gates Foundation	926	36%	7
Fisher Broadcasting Inc.	409	3%	1
Seattle Housing Authority	214	12%	3
US EPA	584	28%	19

240*

Example Russell Investments
Total Number of Employees at Company **950**

Mode	Number of Reported Trips in a Typical Week						Estimated Number of Trips Teleworkers Would Have Taken in a Week Without Telework Option	Resulting Daily Round Trip Reduction
	All Respondents 545 respondents		Non-Teleworkers 351 respondents		Teleworkers 194 respondents			
Drive Alone	187	7.4%	138	8.7%	49	5.1%	83	12
Bus	1,322	52.0%	972	81.2%	350	36.6%	585	-79
Train	441	17.3%	242	15.2%	199	20.8%	146	18
Carpool	182	7.2%	131	8.3%	51	5.3%	79	-5
Bicycle	18	0.7%	16	1.0%	2	0.2%	10	-3
Walk	99	3.9%	87	5.5%	12	1.3%	52	-14
Telework	289	11.4%	0	0.0%	289	30.3%	0	101
Compressed Work Week	4	0.2%	1	0.1%	3	0.3%	1	1
Total	2,542		1,587		955			92*

% of Reported Trips Resulting in Trip Reductions by Mode	
Bus	97%
Light Rail / Train	98%
Carpool	50%
Bicycle	100%
Walk	100%
Telework	100%
Compressed Work Week	100%

Estimated Number of Trips Teleworkers Would Have Taken in a Week Without Telework Option

$$= \left(\frac{\text{Mode Share for Non-Teleworkers}}{\text{Mode Share for Teleworkers}} \right) \times \left(\frac{\# \text{ of Reported Trips in a Typical Week by Teleworkers by Mode}}{\# \text{ of Reported Trips in a Typical Week by Teleworkers by Mode}} \right)$$

*Resulting daily round trip reduction equals the sum of

$$= \left(\begin{matrix} + \text{ for drive alone mode} \\ - \text{ for all higher efficiency modes} \end{matrix} \right) \times \left(\left(\frac{\text{Estimated \# of Trips Teleworkers Would Have Taken in a Week Without Telework Option by Mode}}{\text{Estimated \# of Trips Teleworkers Would Have Taken in a Week Without Telework Option by Mode}} \right) - \left(\frac{\# \text{ of Reported Trips in a Typical Week by Teleworkers by Mode}}{\# \text{ of Reported Trips in a Typical Week by Teleworkers by Mode}} \right) \right) \times \left(\frac{\% \text{ of Reported Trips Resulting in Trip Reductions by Mode}}{\% \text{ of Reported Trips Resulting in Trip Reductions by Mode}} \right) \times \left(\frac{1 \text{ week}}{5 \text{ days}} \right) \times \left(\frac{\text{Total Employees at Company}}{\text{Total Survey Respondents}} \right)$$

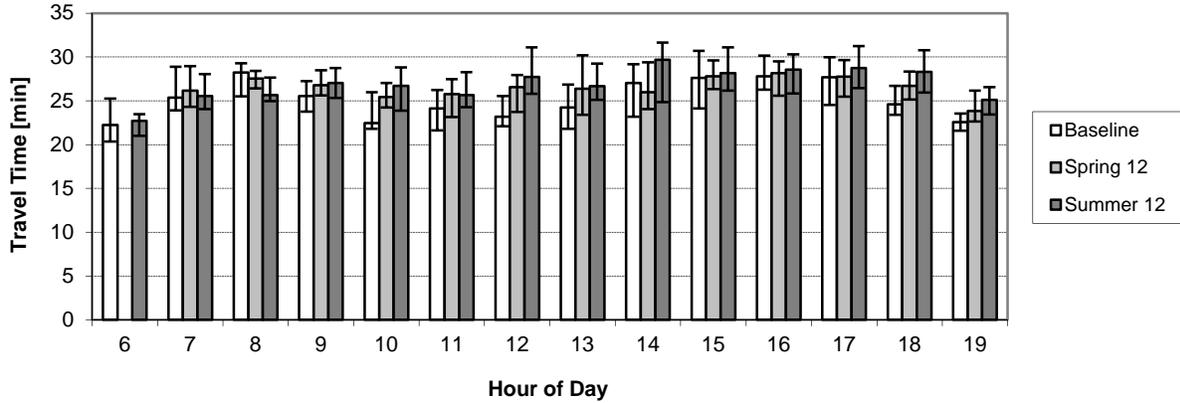
for all modes except if the sum of the bus/train modes is negative in which case the bus/train modes are ignored. Negative summations of the bus/train modes are ignored since transit ridership is likely to be backfilled by new riders.

Contacts: Theresa Gren, 206-464-1288, GrenT@wsdot.wa.gov or Janice Helmann, 206-464-1284, HelmanJ@wsdot.wa.gov

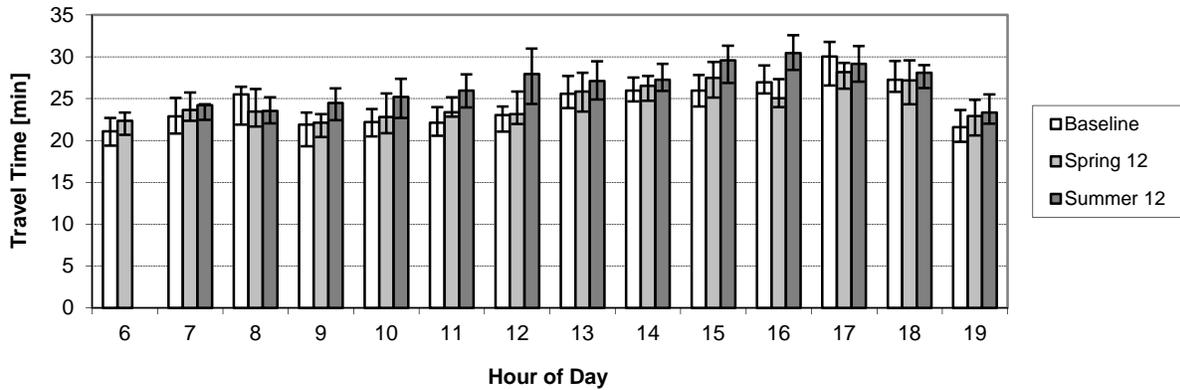
Pathway A.1

15th Ave NW & NW 85th St to 1st Ave & Denny Way via 15th/Elliott/Mercer

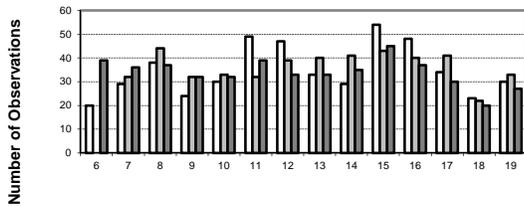
INBOUND Performance: Median Travel Time & Variability



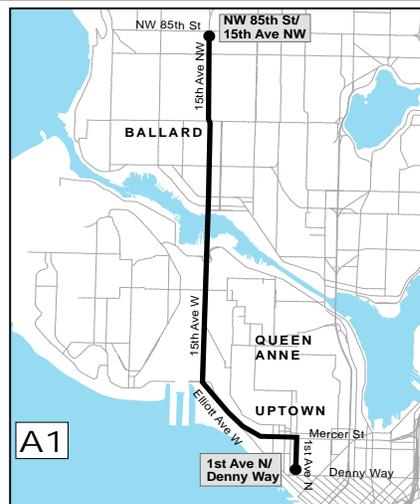
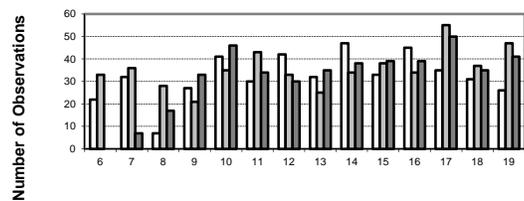
OUTBOUND Performance: Median Travel Time & Variability



Sample Size: INBOUND



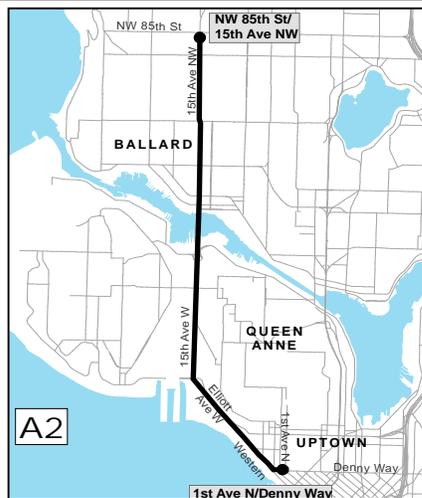
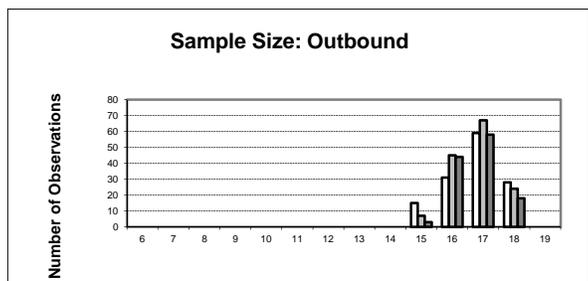
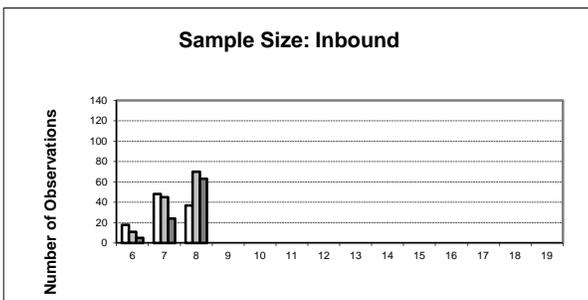
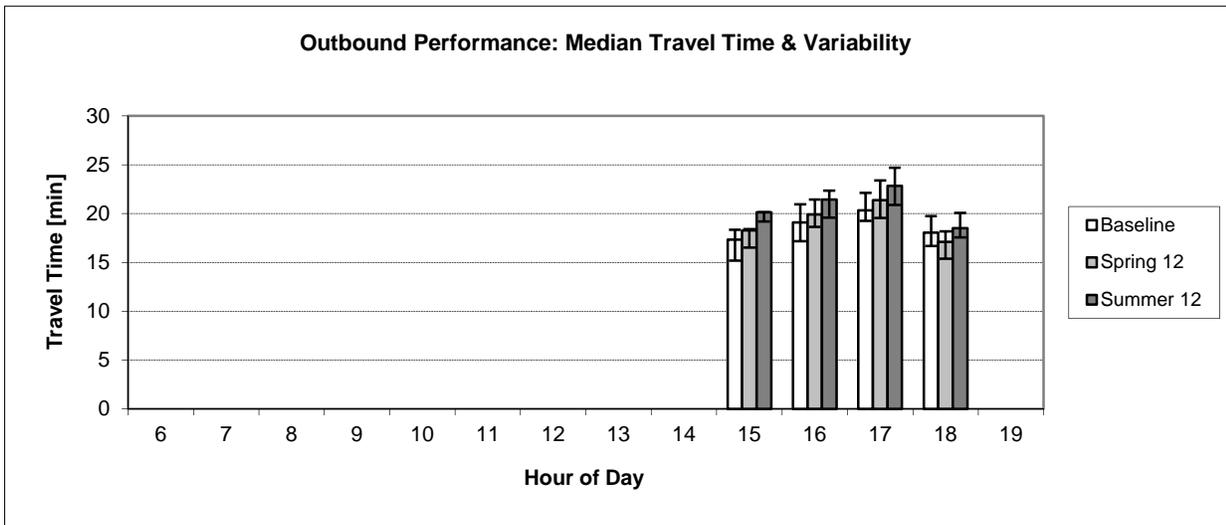
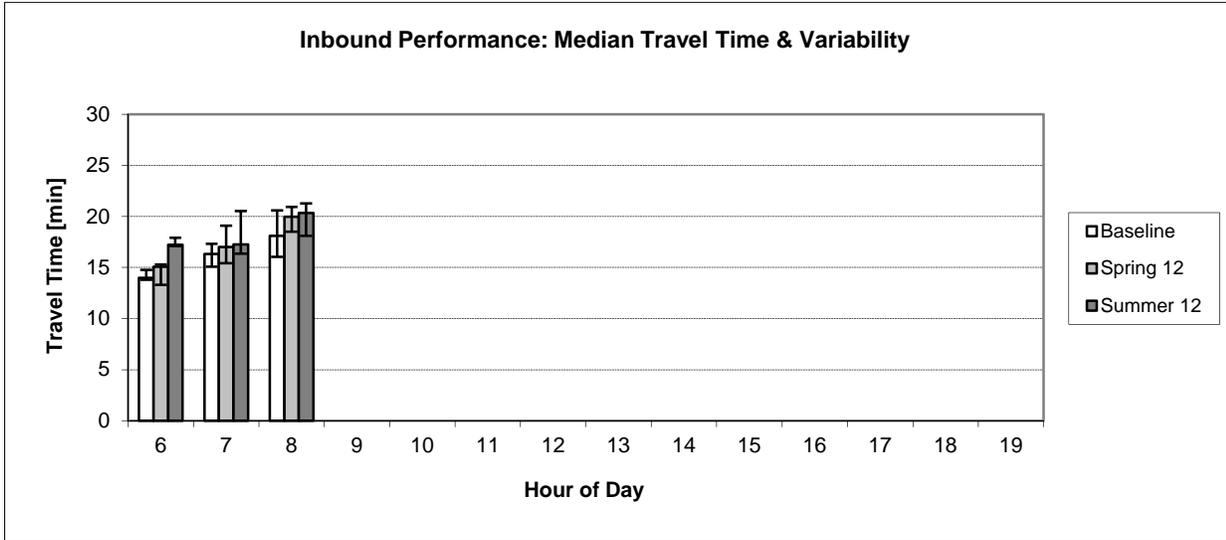
Sample Size: OUTBOUND



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/4/12 - 9/28/12	AVL-AVI

Pathway A.2

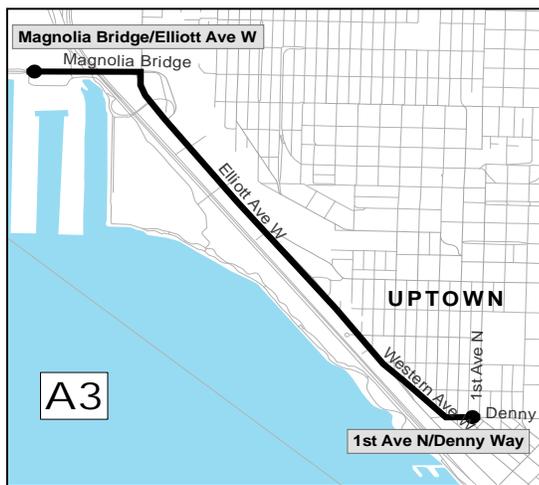
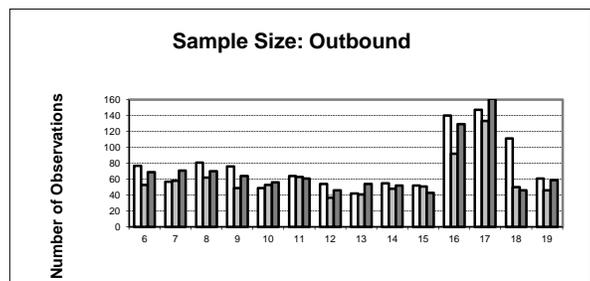
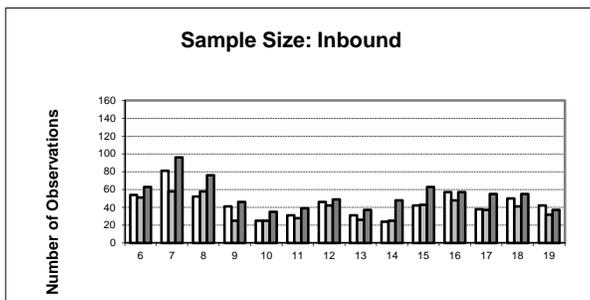
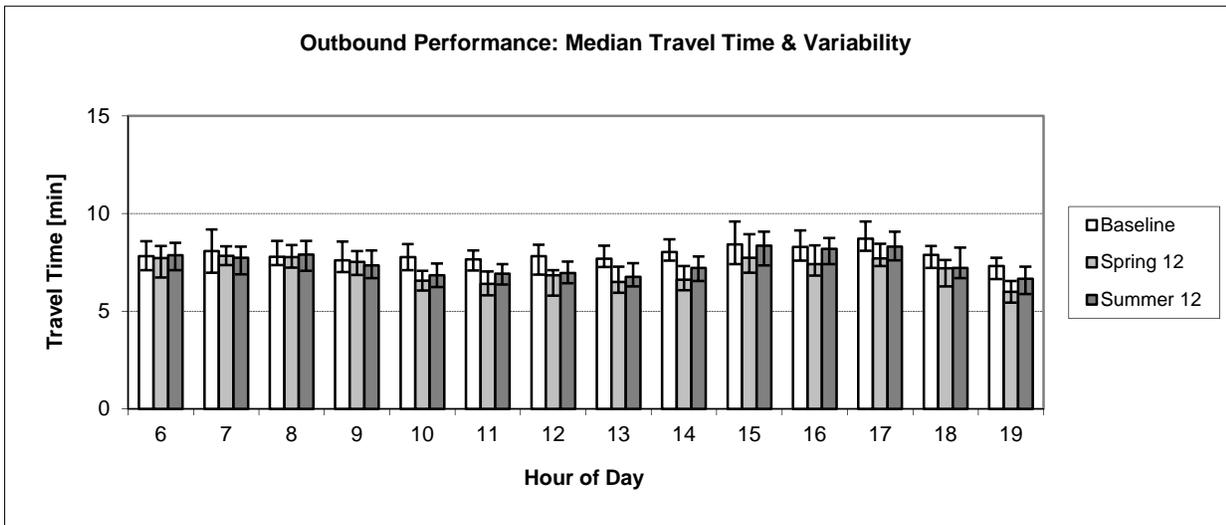
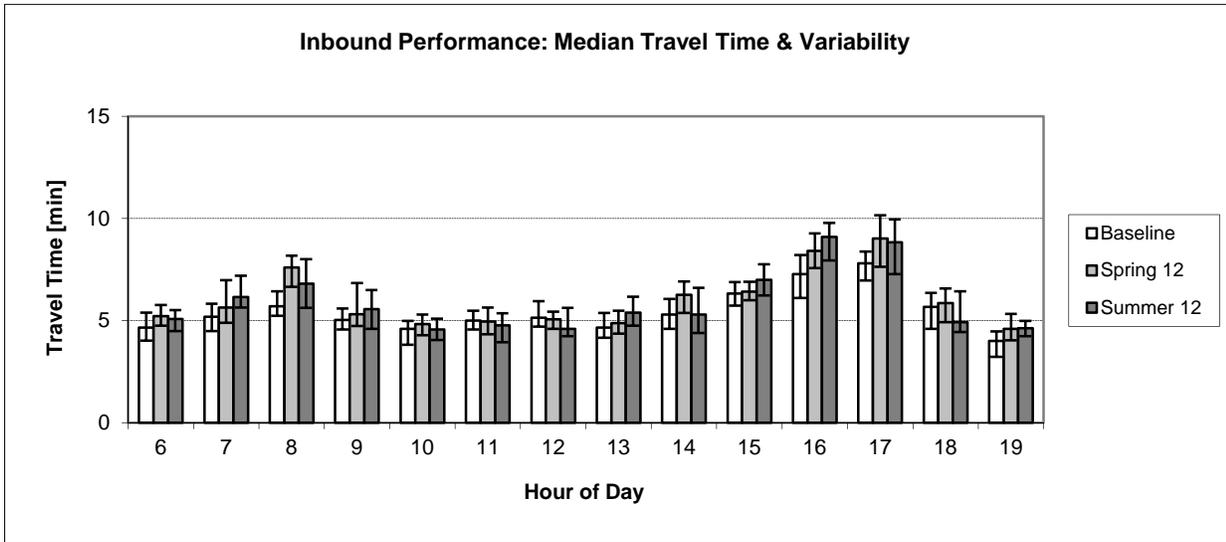
15th Ave NW & NW 85th St to 1st Ave & Denny Way via 15th/Elliott/Western (Peak Only)



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/4/12 - 9/28/12	AVL-AVI

Pathway A.3

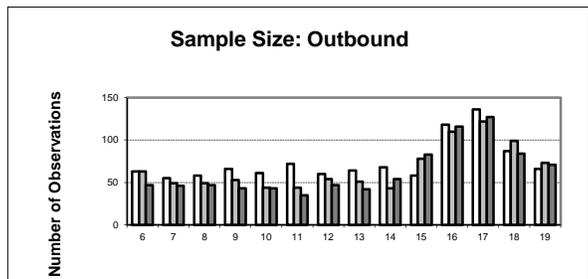
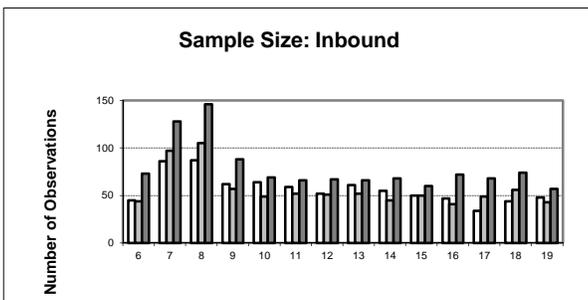
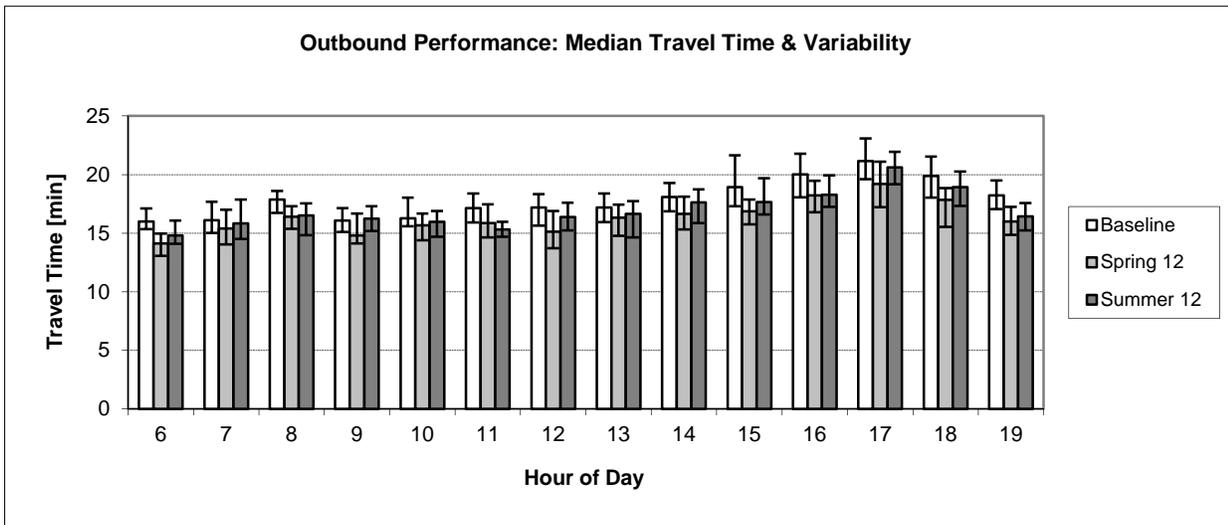
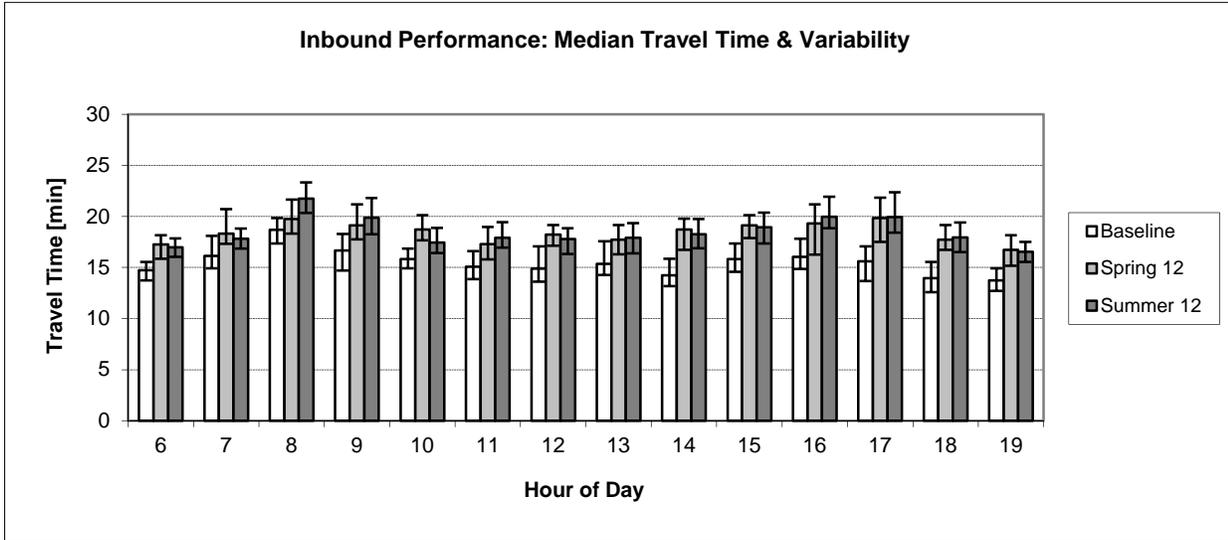
Magnolia Bridge to 1st Ave & Denny Way via Elliott/Western



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/4/12 - 9/28/12	AVL-AVI

Pathway B.1

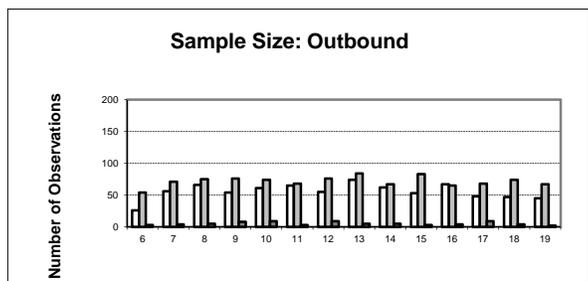
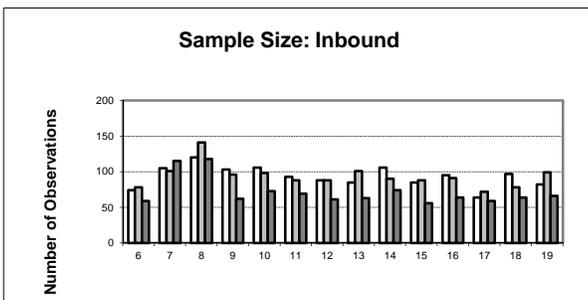
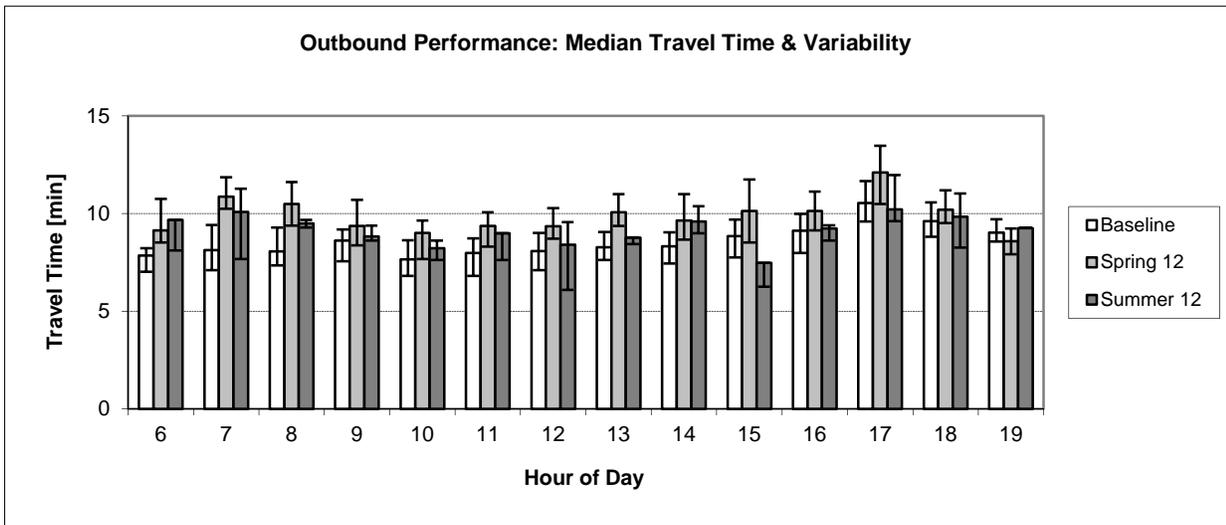
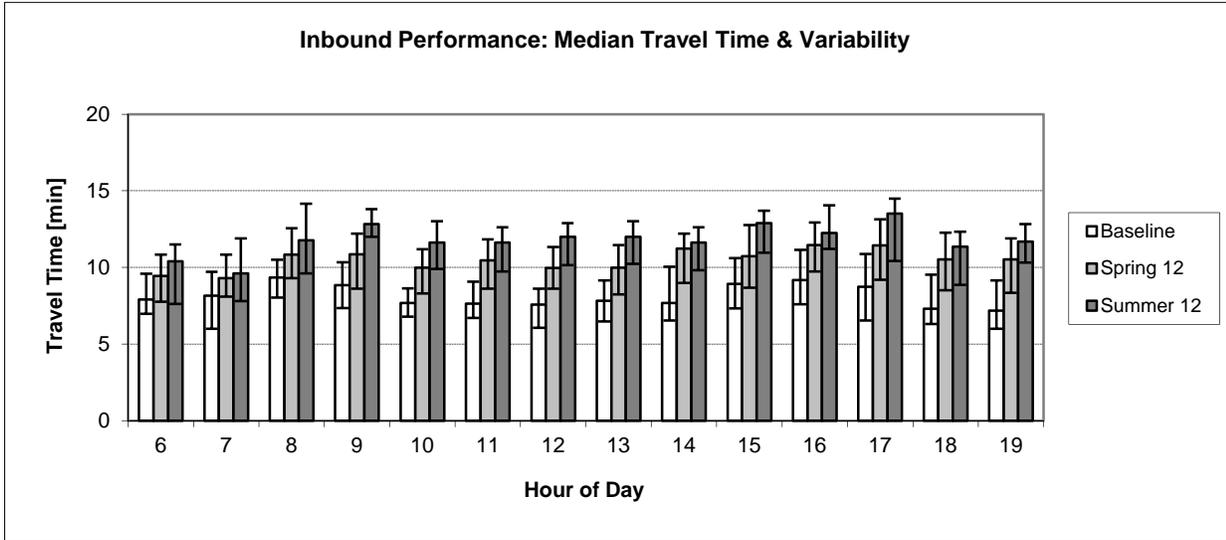
Aurora Ave N & N 85th St to 3rd Ave & Battery St via Aurora Ave



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/4/12 - 9/28/12	AVL

Pathway B.2

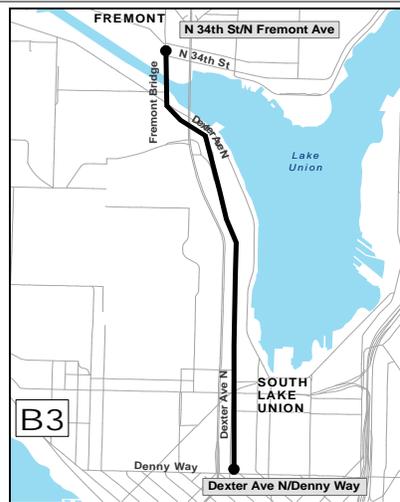
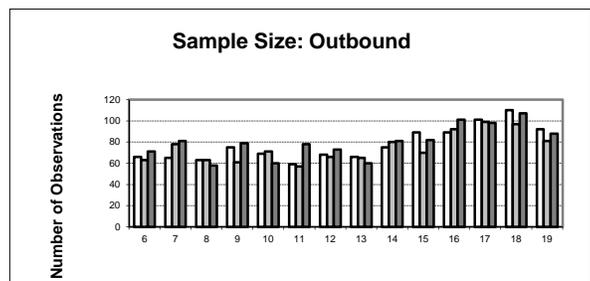
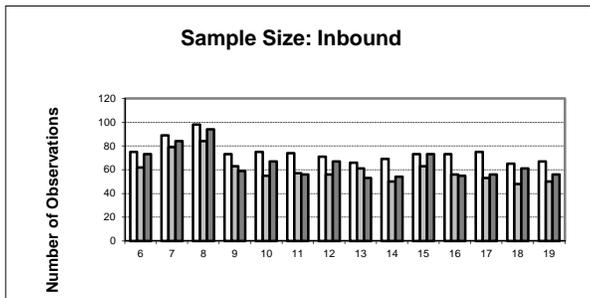
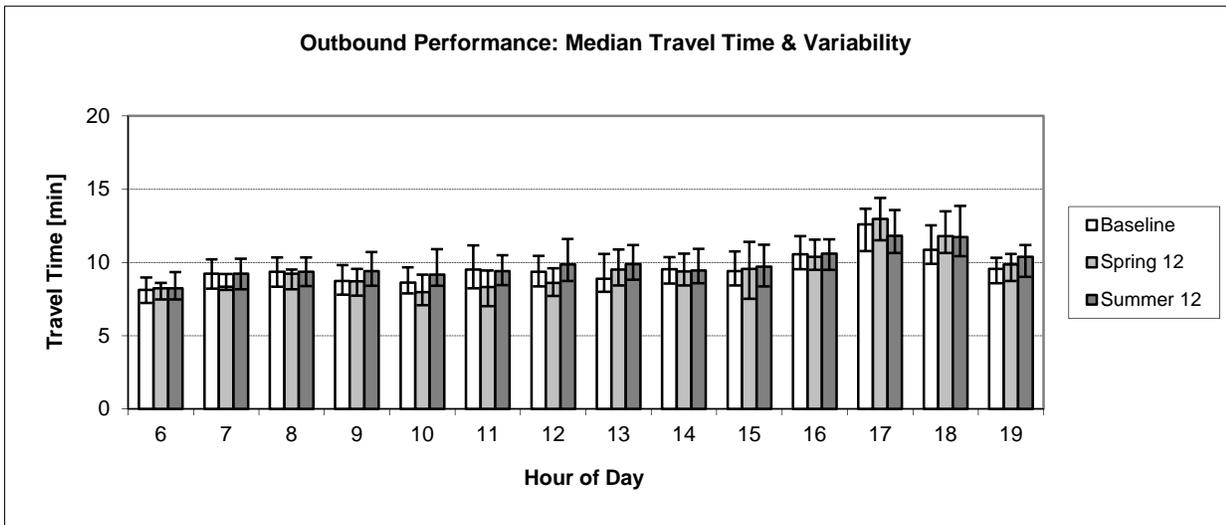
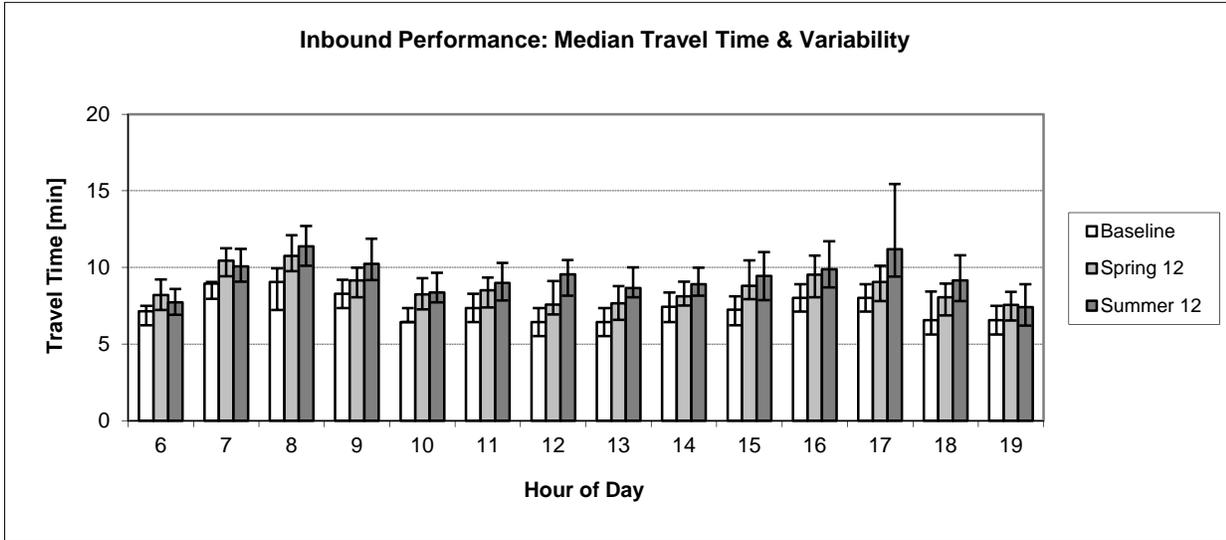
Bridge Way & N 38th St to 3rd Ave & Battery via Aurora Ave



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/4/12 - 9/28/12	AVL

Pathway B.3

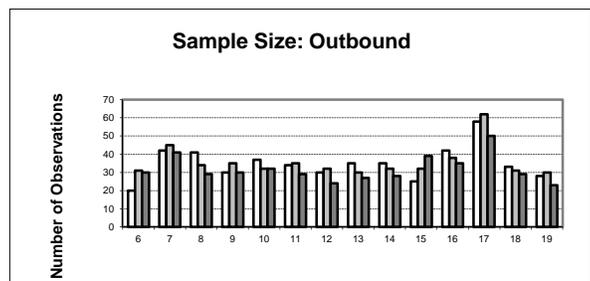
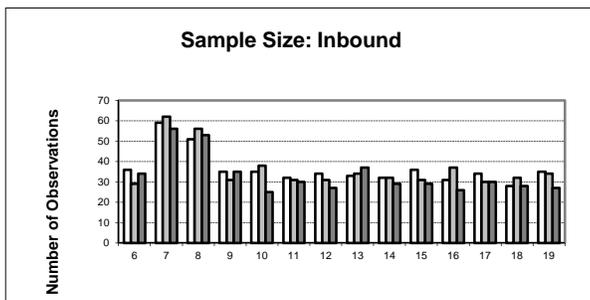
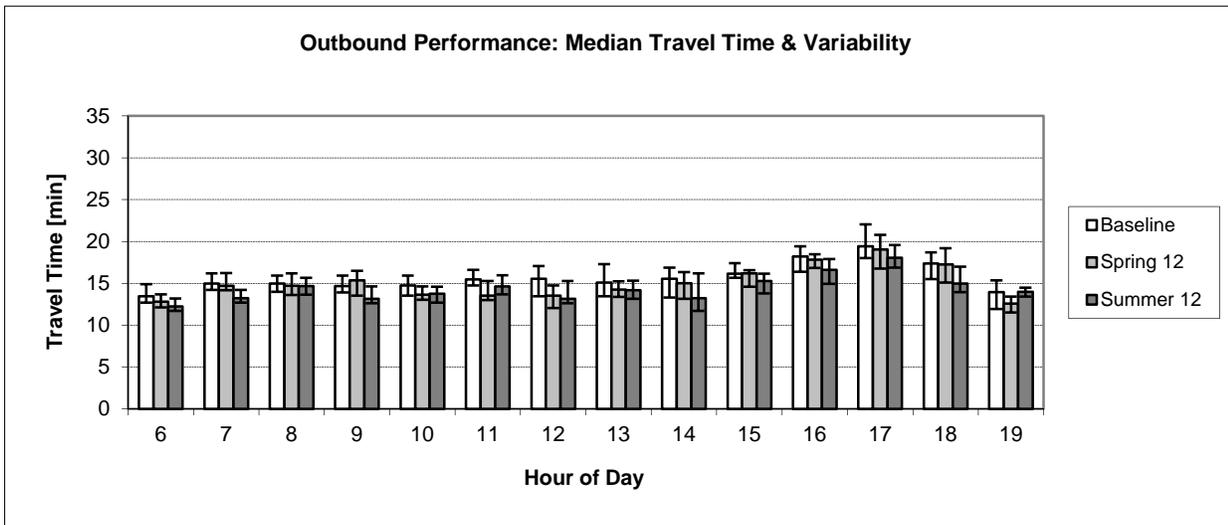
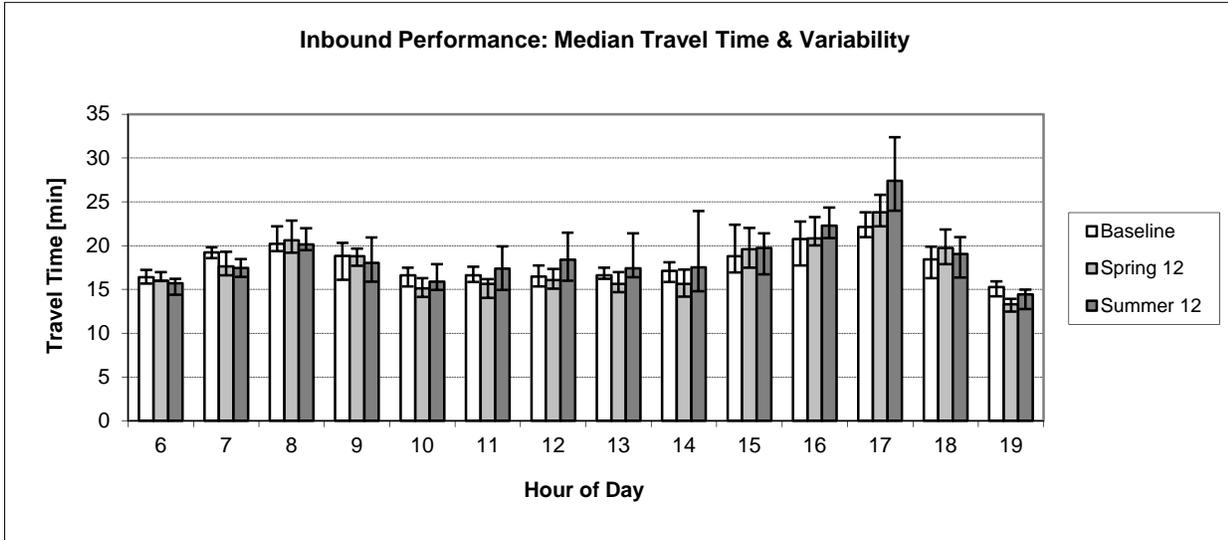
Fremont Ave N & N 34th St to Denny Way & Dexter Ave via Dexter



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL
Spring 12	4/2/12 - 4/27/12	AVL
Summer 12	9/4/12 - 9/28/12	AVL

Pathway B.4

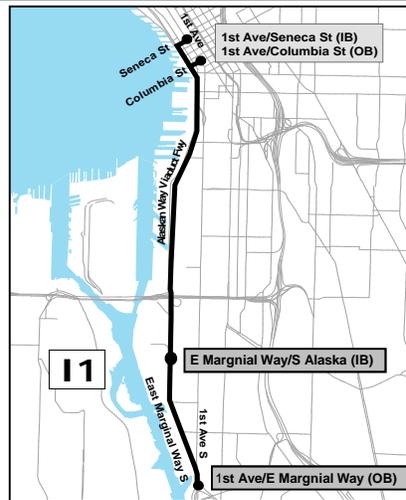
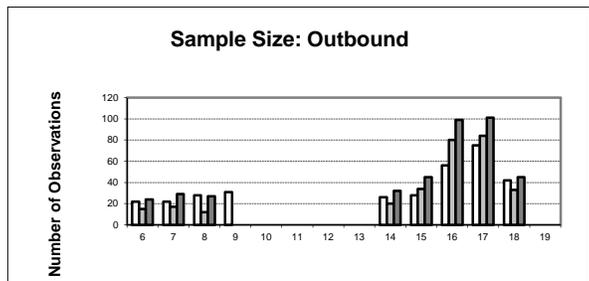
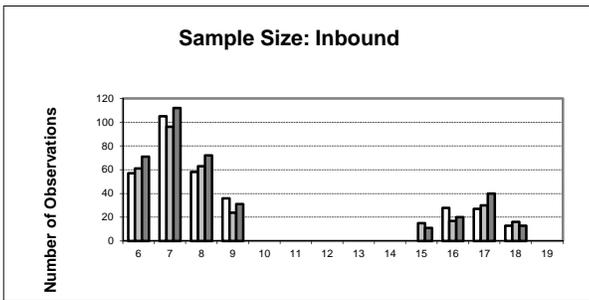
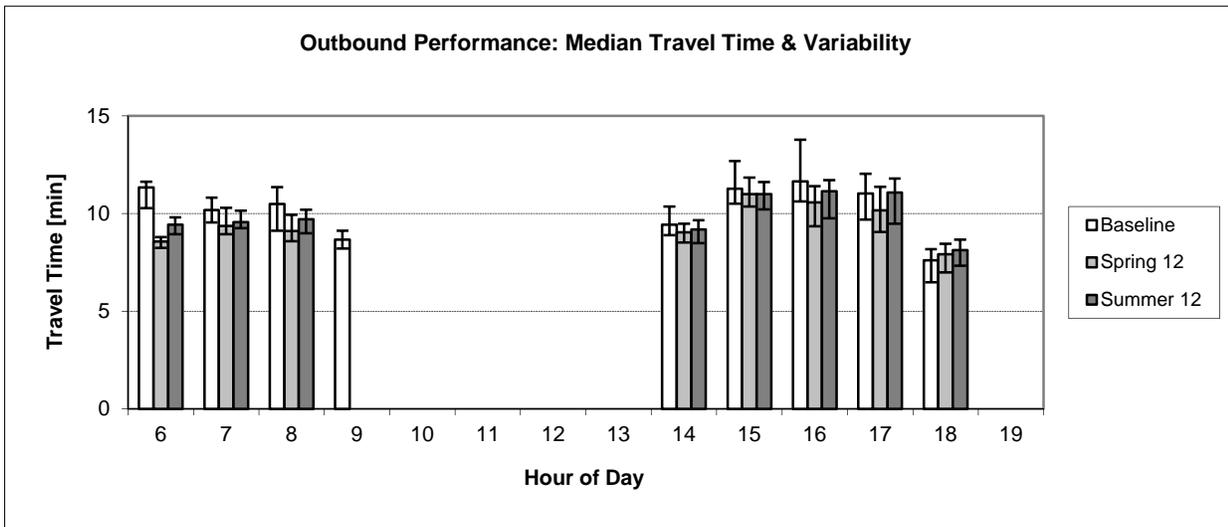
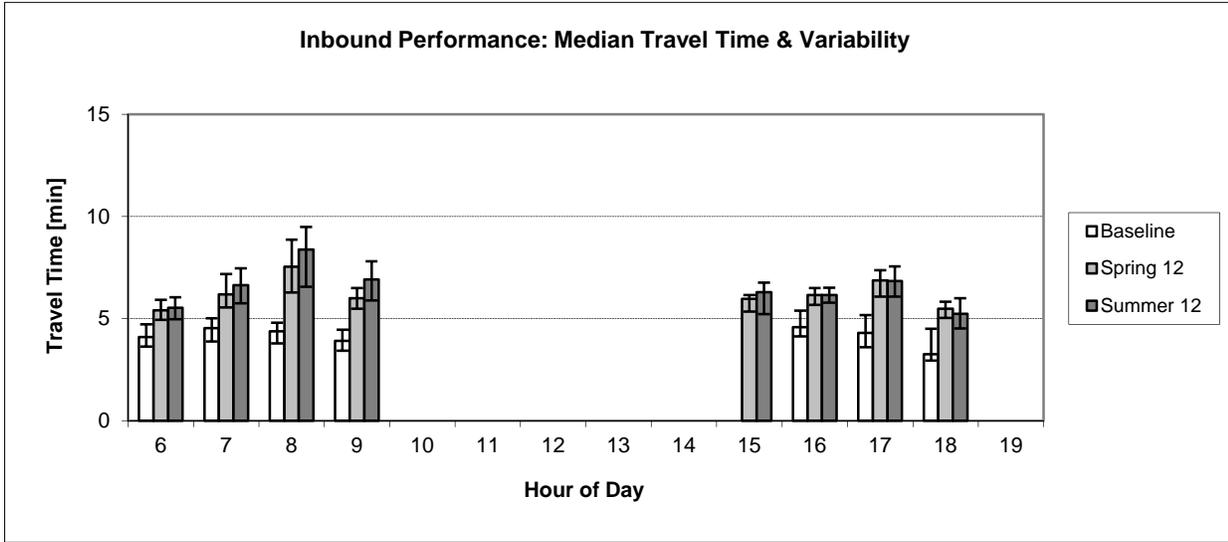
Ballard Bridge to Denny Way & Westlake Ave via Nickerson/Westlake



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL
Spring 12	4/2/12 - 4/27/12	AVL
Summer 12	9/4/12 - 9/28/12	AVL

Pathway I.1

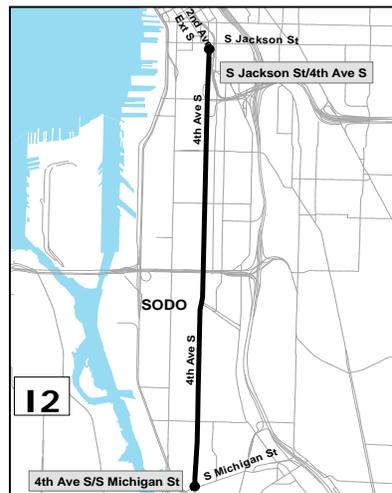
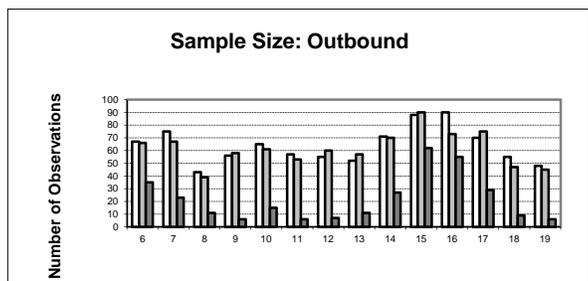
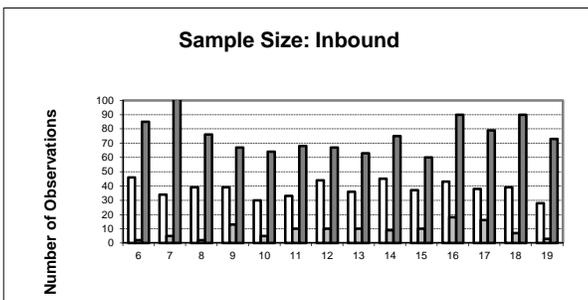
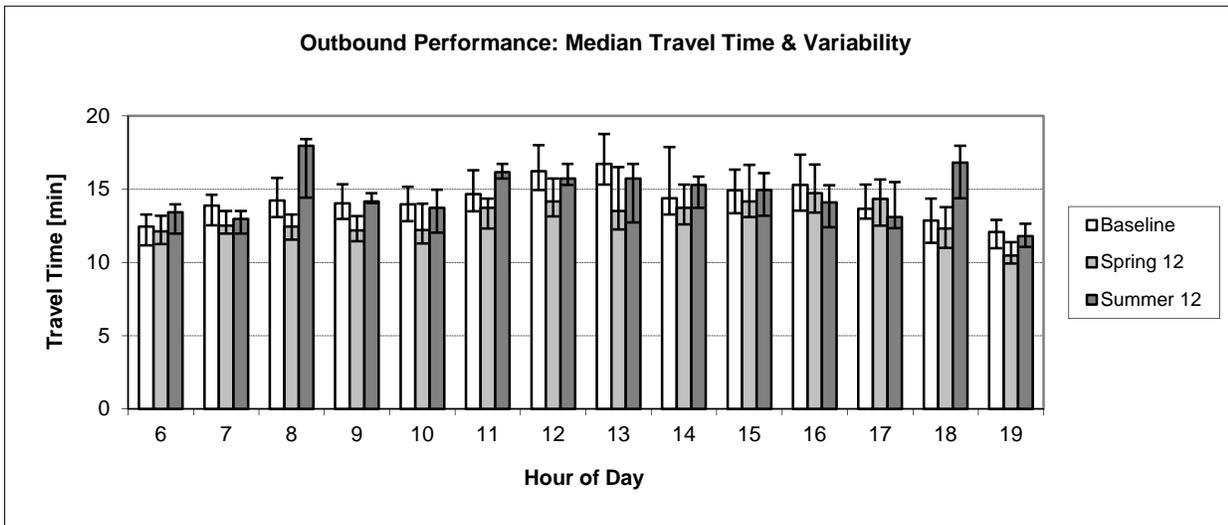
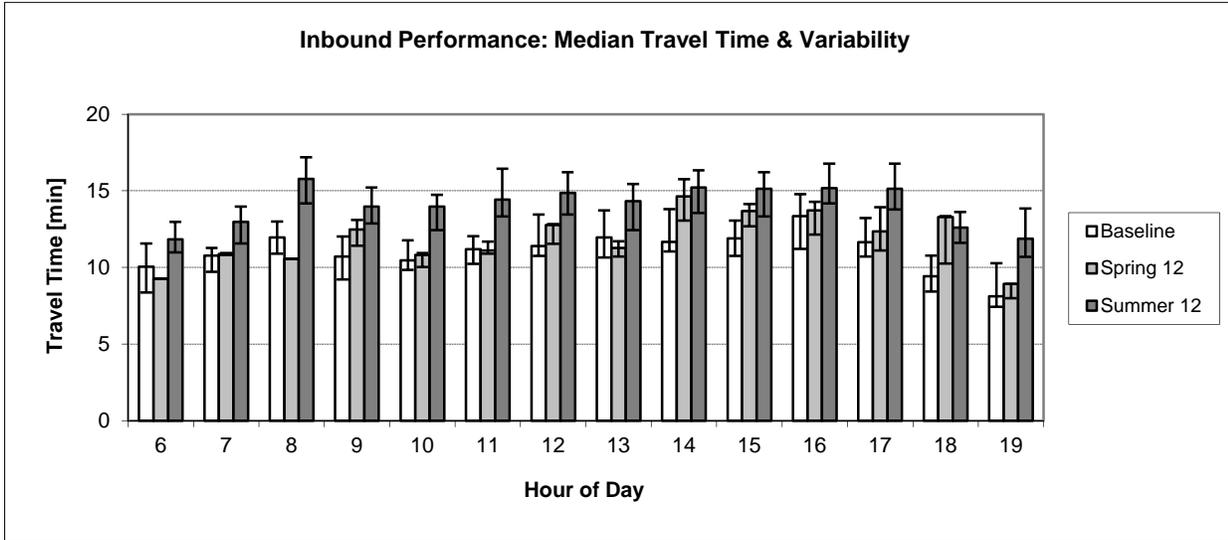
East Marginal Way & 1st Ave/Alaska St to 1st Ave & Seneca/Columbia St via Marginal/AWV



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/4/12 - 9/28/12	AVL-AVI

Pathway I.2

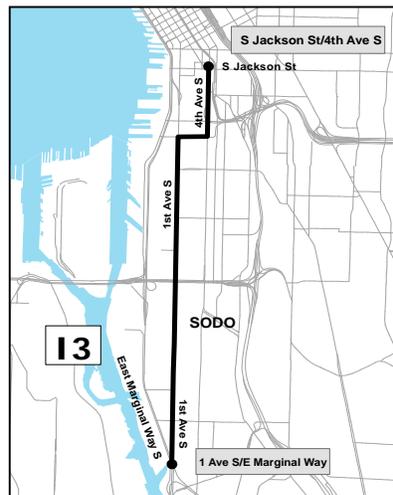
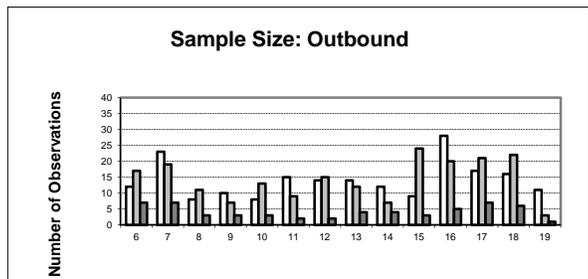
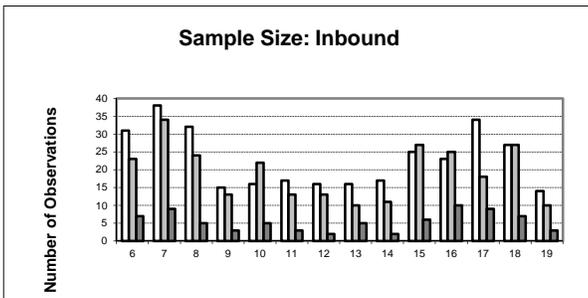
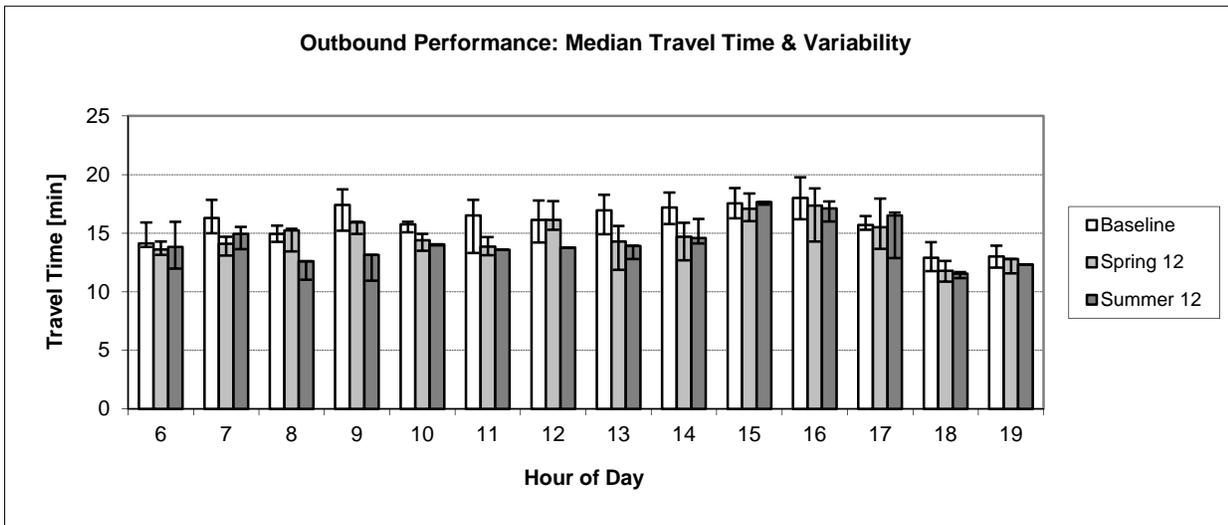
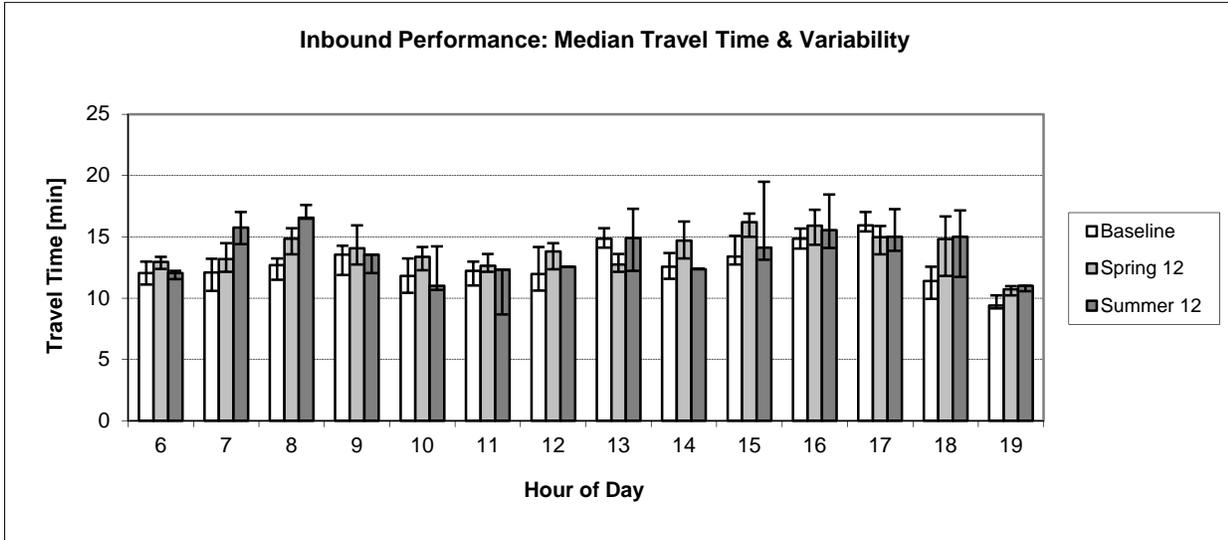
4th Ave S & S Michigan St to 4th/2nd Ave & Jackson St via 4th Ave S



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/4/12 - 9/28/12	AVL

Pathway I.3

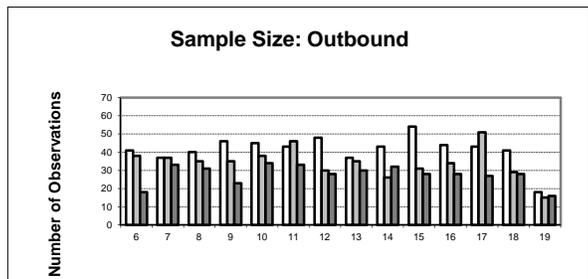
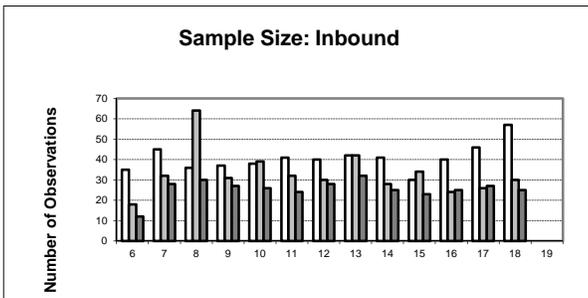
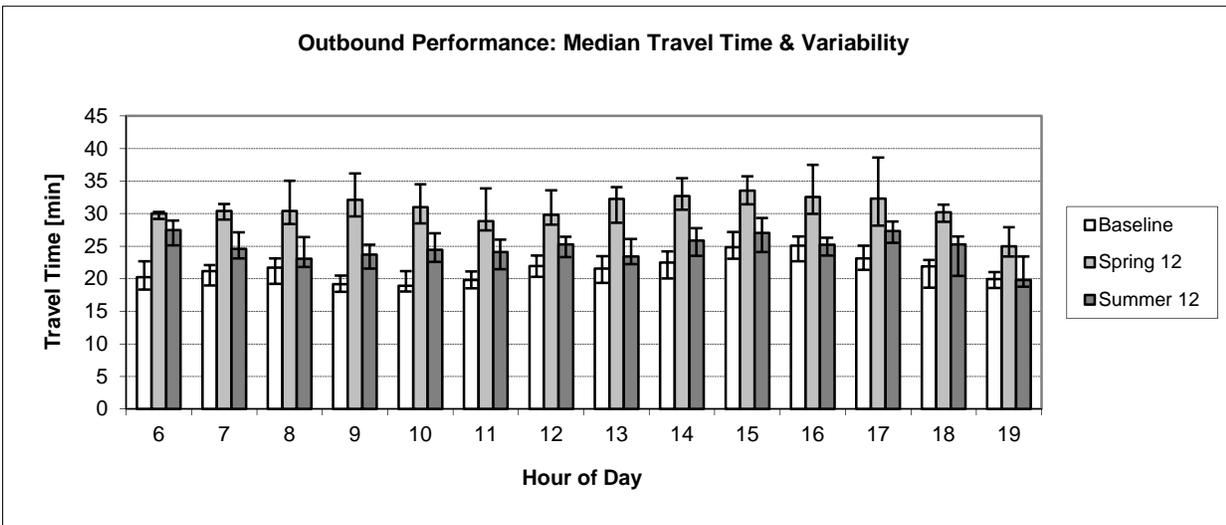
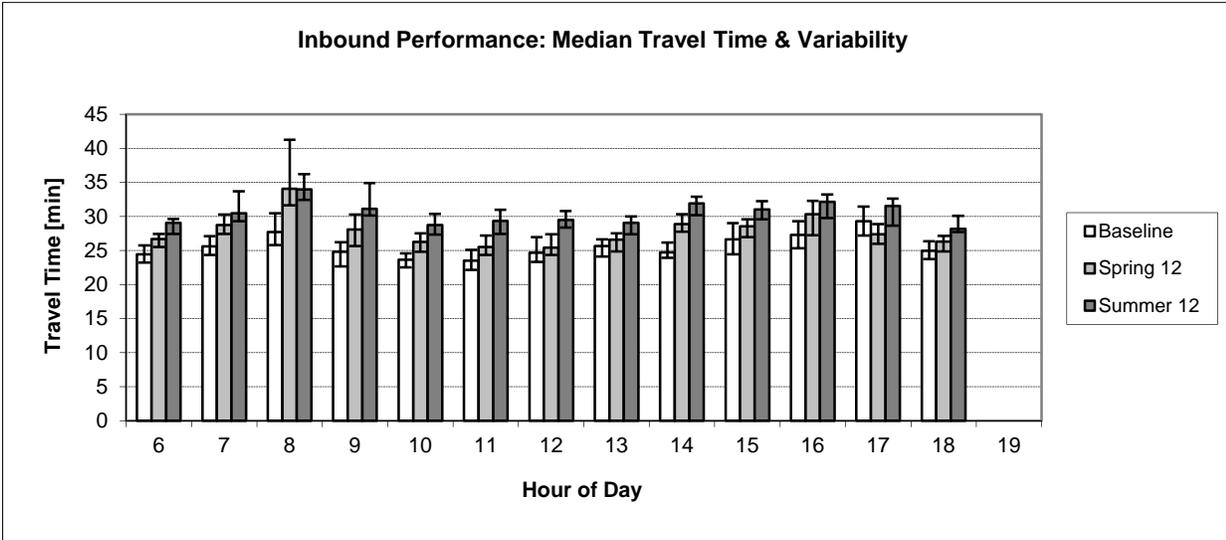
1st Ave S & East Marginal Way to 4th/2nd Ave & Jackson St via 1st Ave S



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/24/12 - 9/28/12	AVL-AVI

Pathway J.1

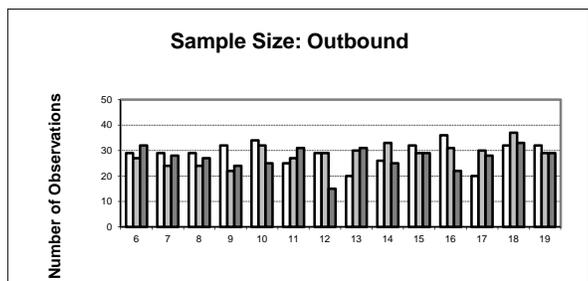
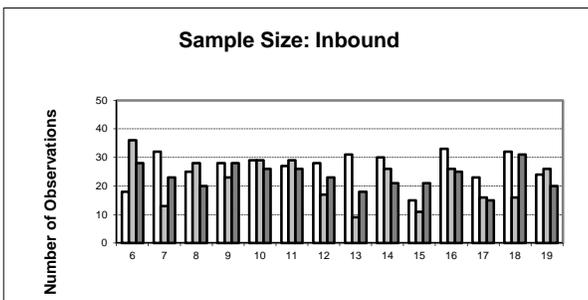
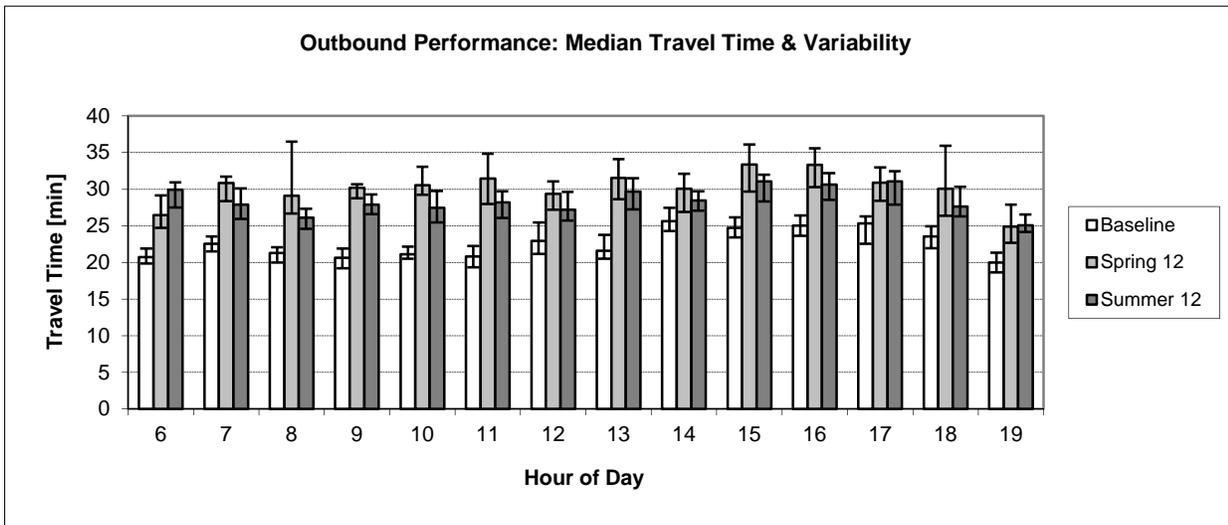
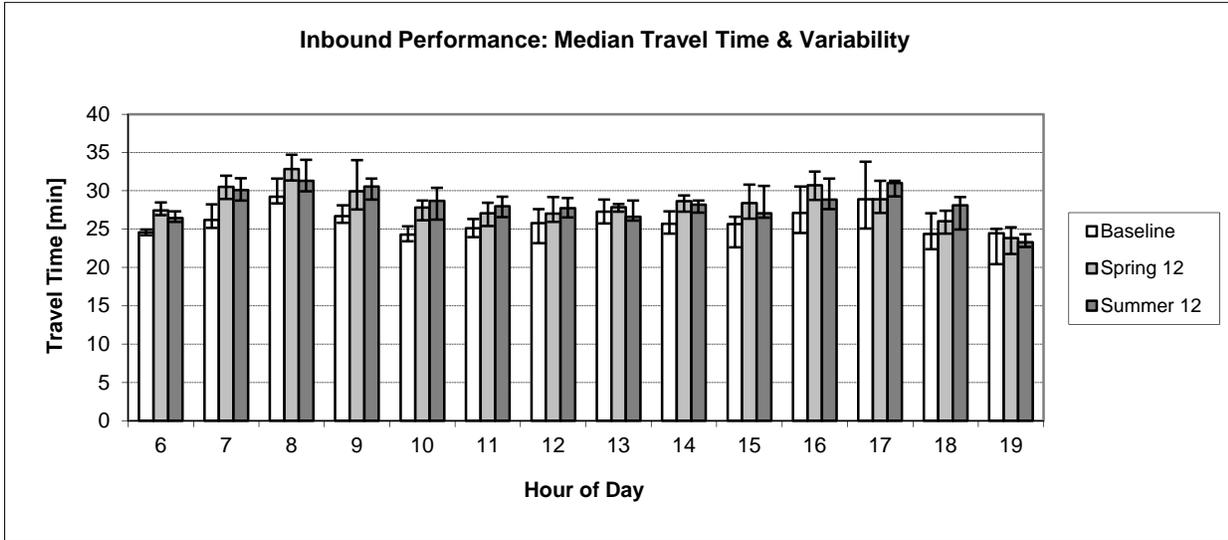
Alaska Junction to 3rd Ave & Seneca St via 1st Ave S



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVI-AVI
Spring 12	4/2/12 - 4/27/12	AVI-AVI
Summer 12	9/4/12 - 9/28/12	AVI-AVI

Pathway J.2

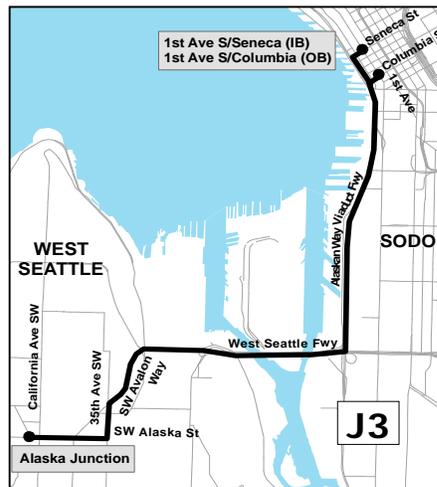
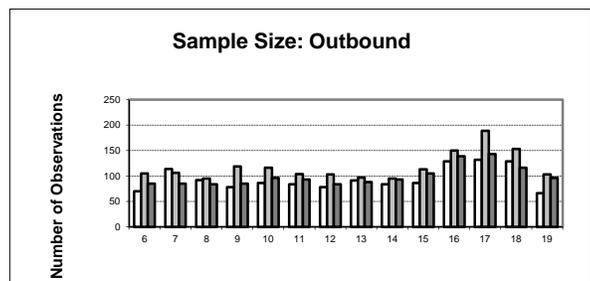
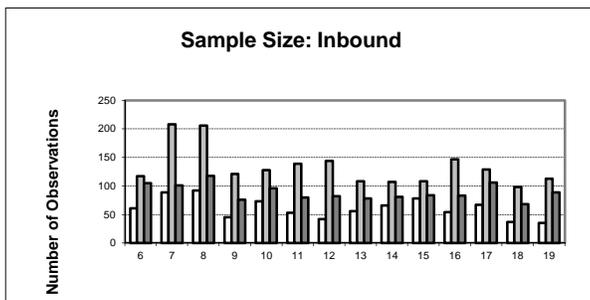
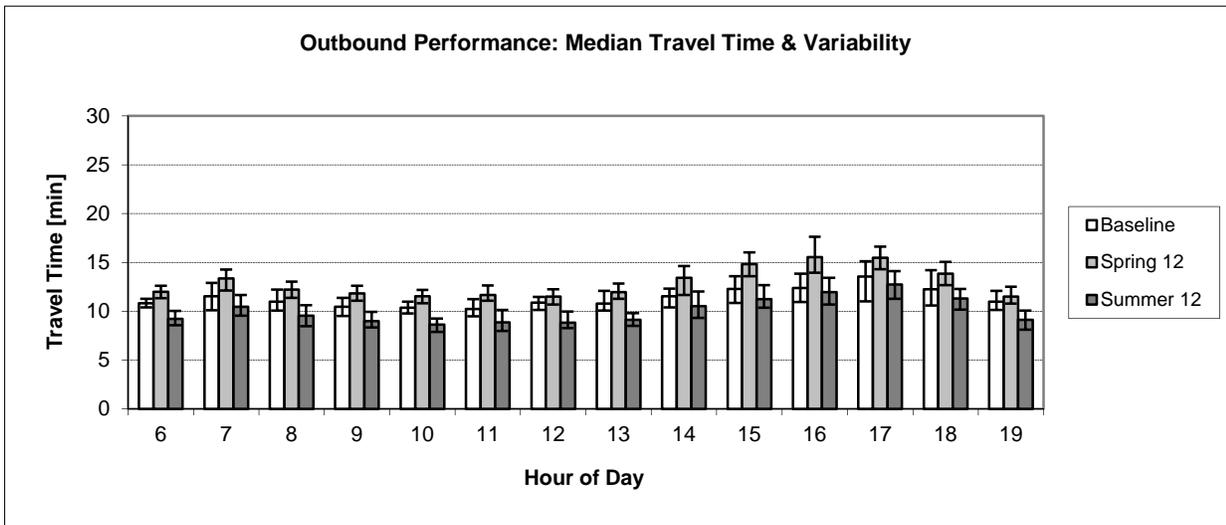
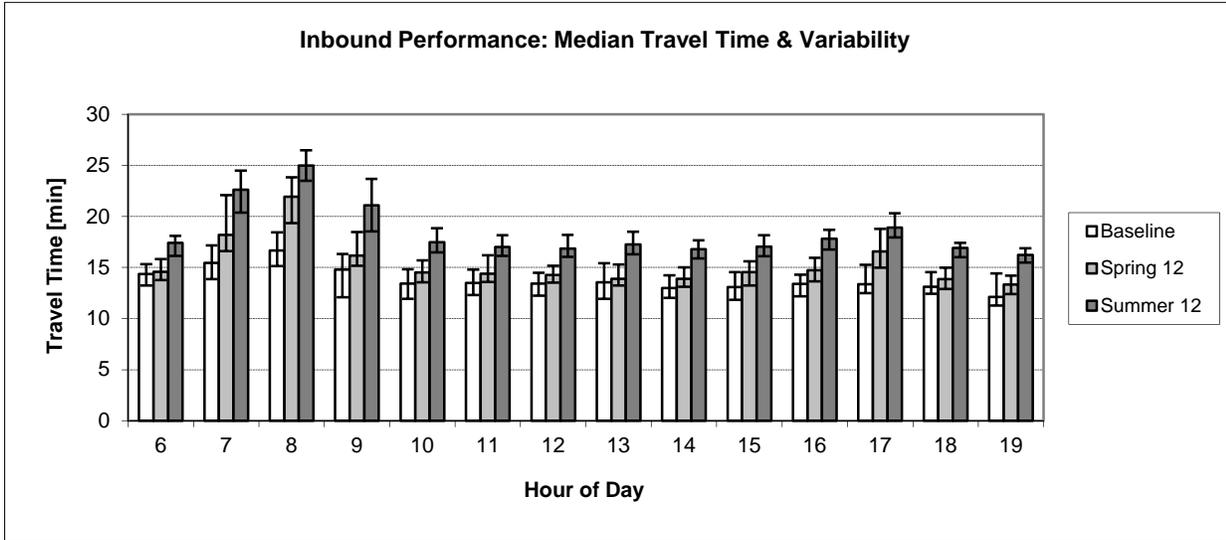
35th Ave SW & SW Morgan St to 3rd Ave & Seneca St via 1st Ave S



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/4/12 - 9/28/12	AVL-AVI

Pathway J.3

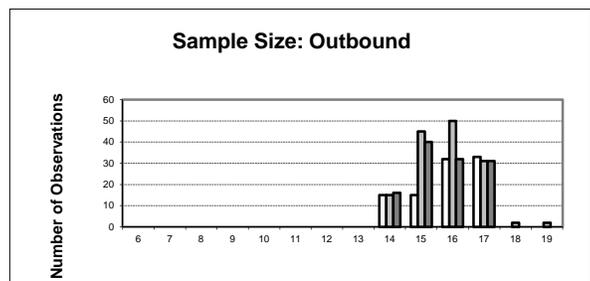
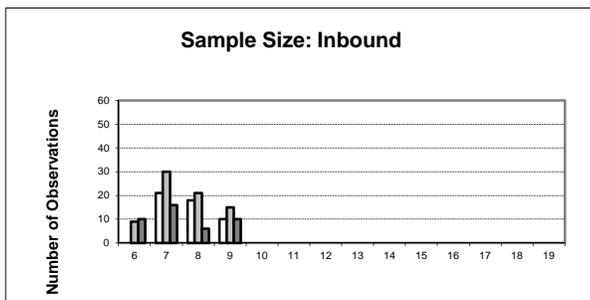
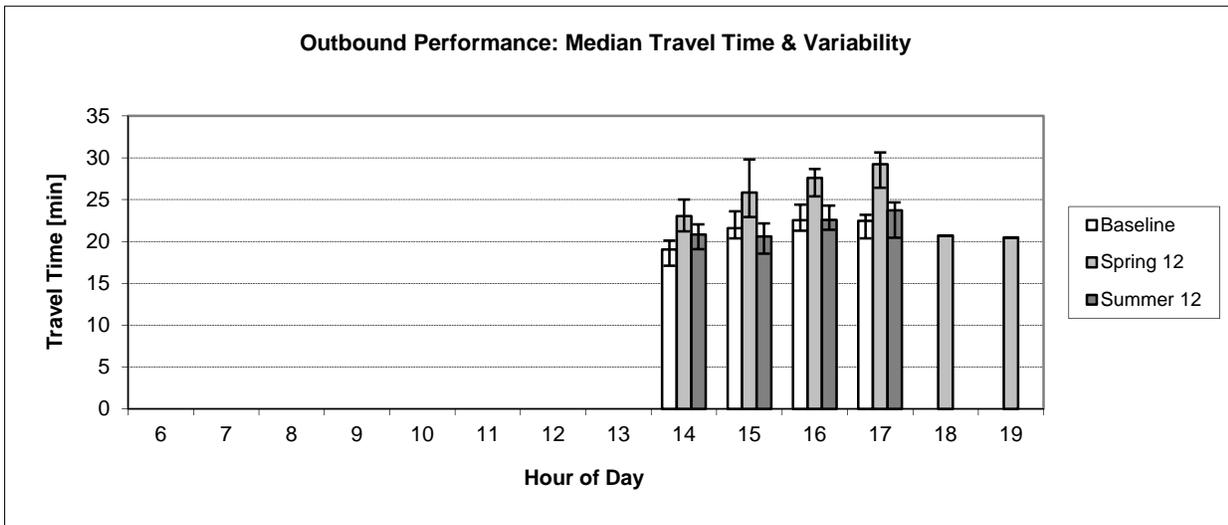
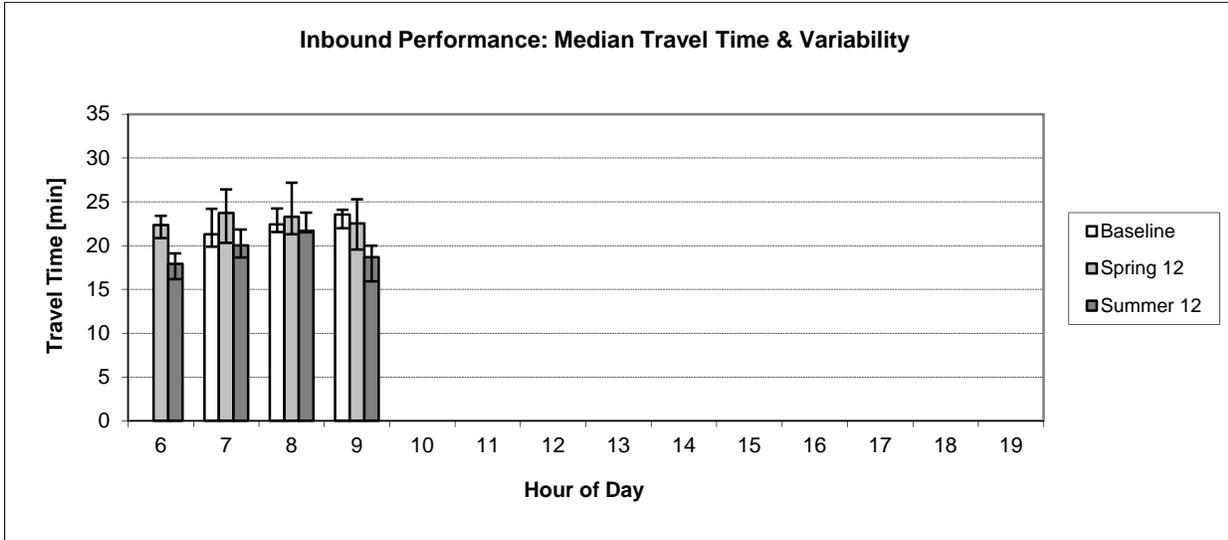
Alaska Junction to 1st Ave & Seneca/Columbia St via Alaskan Way Viaduct



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVI
Spring 12	4/2/12 - 4/27/12	AVI
Summer 12	9/4/12 - 9/28/12	AVI

Pathway J.4

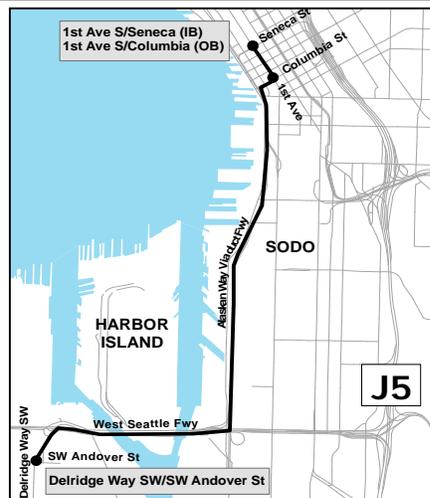
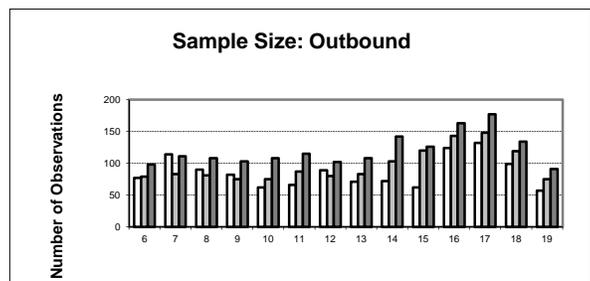
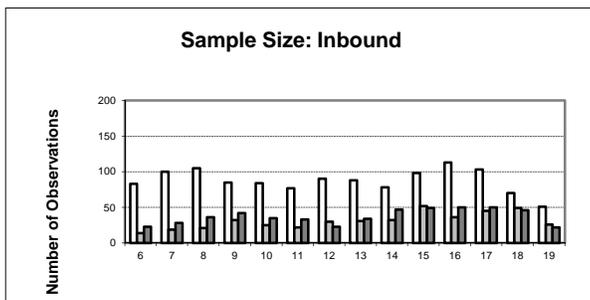
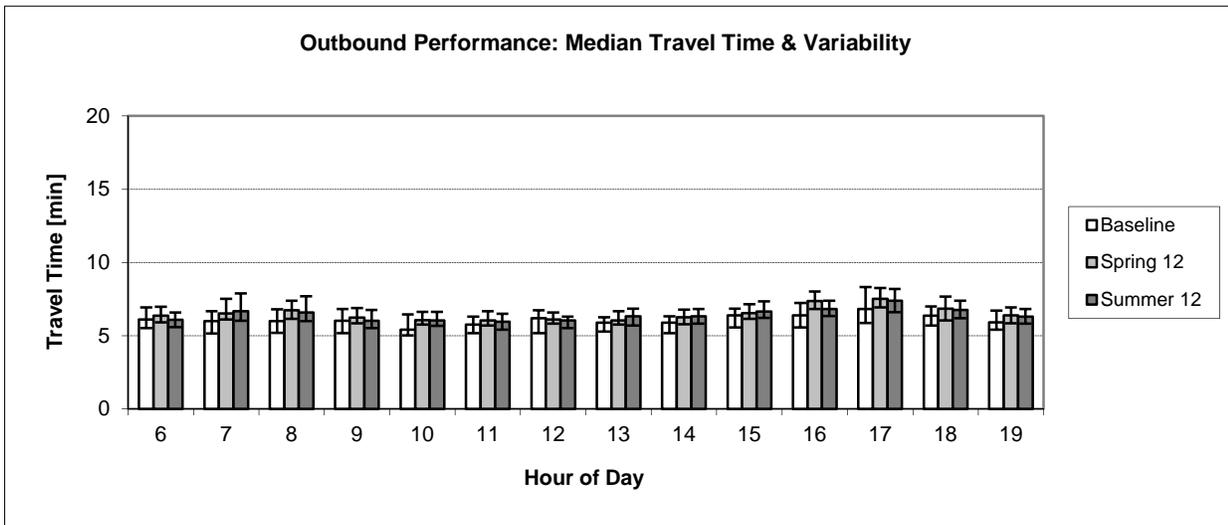
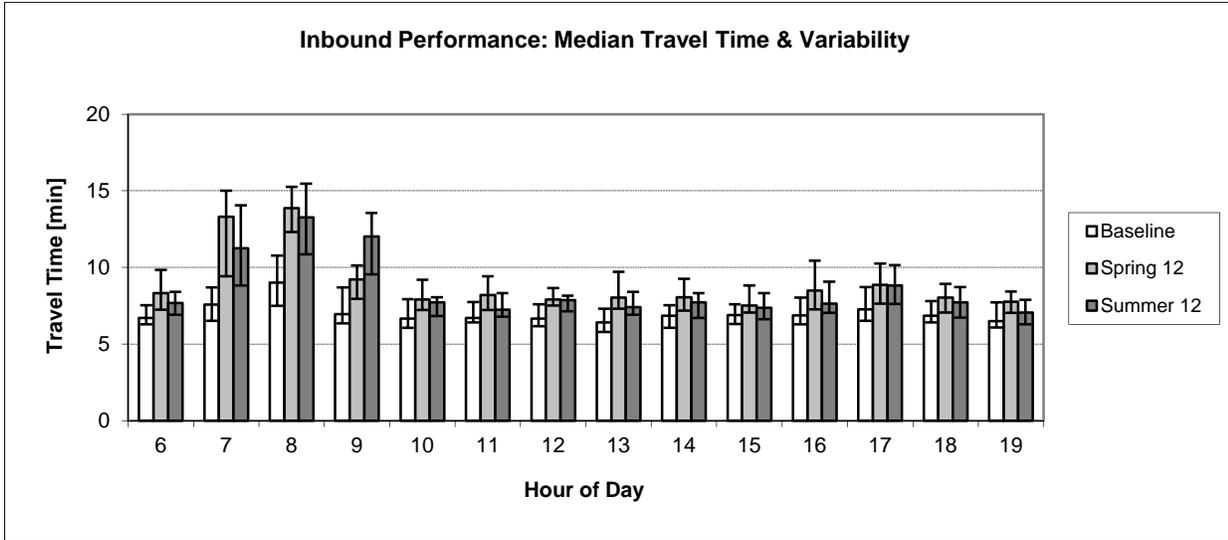
California Ave SW & SW Fauntleroy Way SW to 3rd Ave & Yesler St via 1st Ave S (Peak Only)



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/4/12 - 9/28/12	AVL-AVI

Pathway J.5

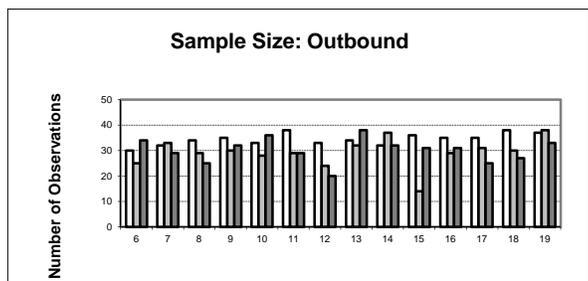
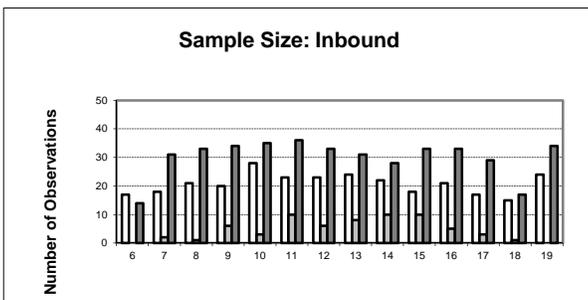
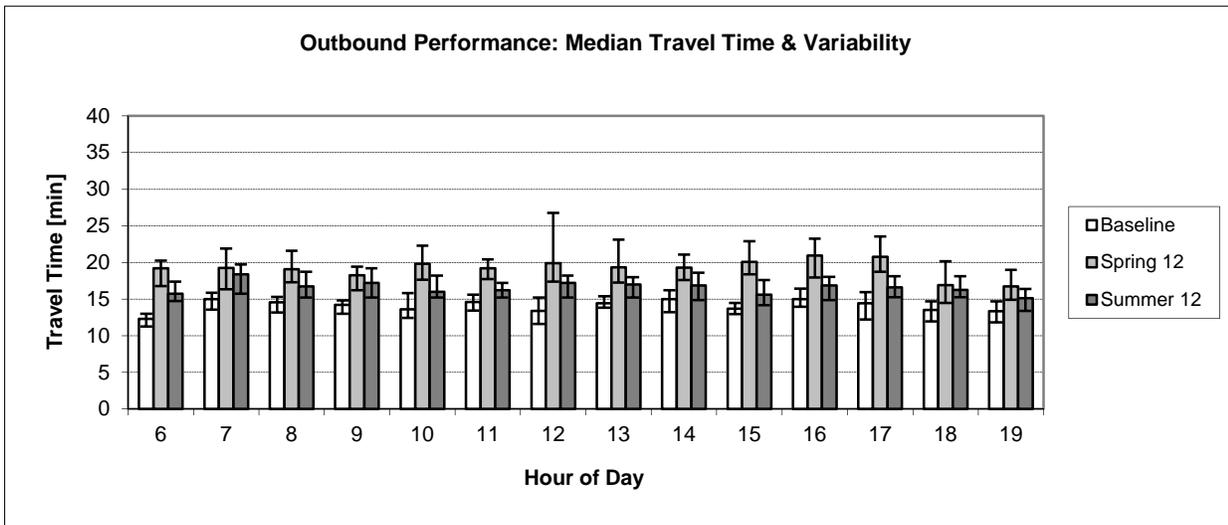
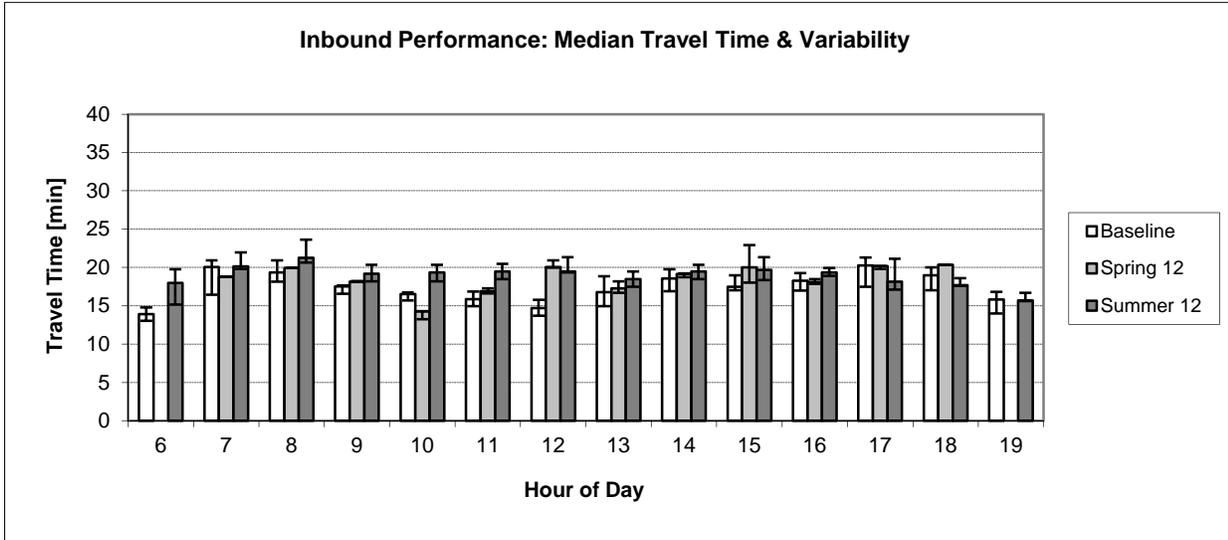
Delridge Way SW & SW Andover St to 1st Ave & Seneca/Columbia St via AWW



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVI
Spring 12	4/2/12 - 4/27/12	AVI
Summer 12	9/4/12 - 9/28/12	AVI

Pathway J.6

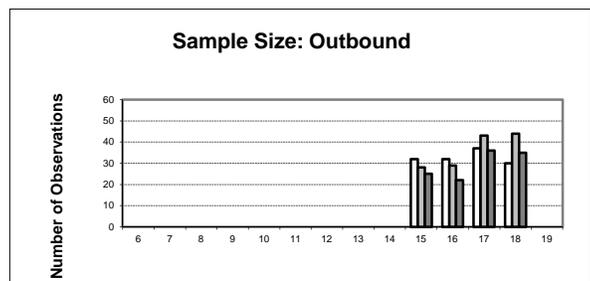
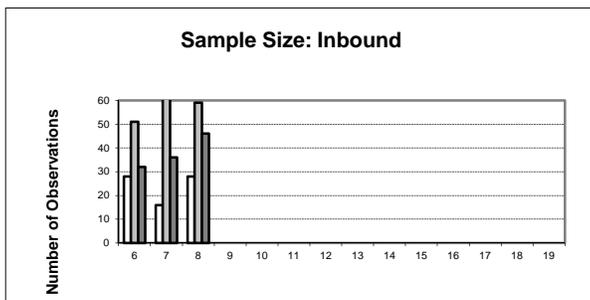
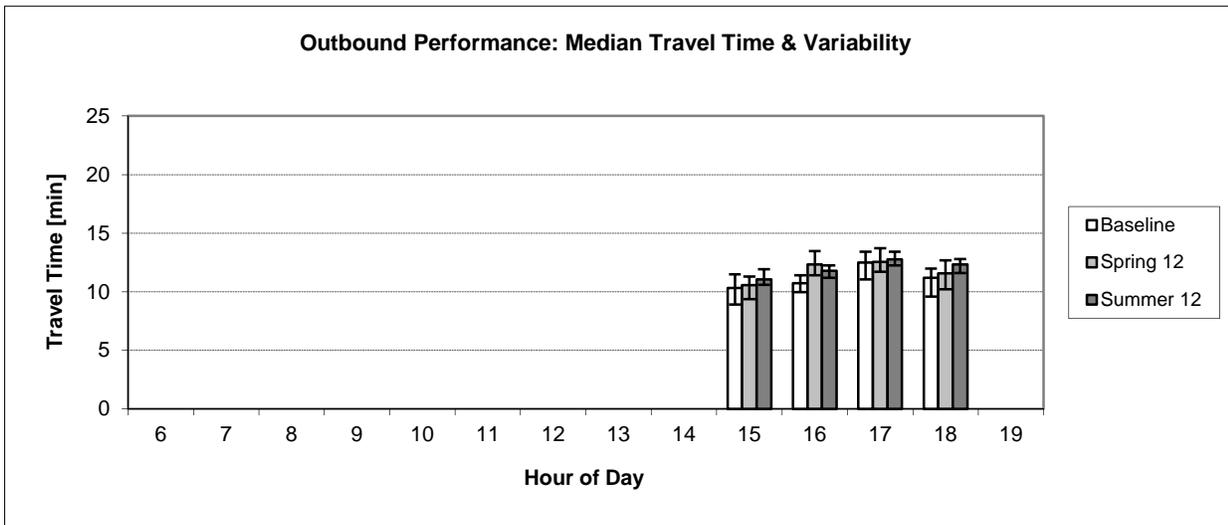
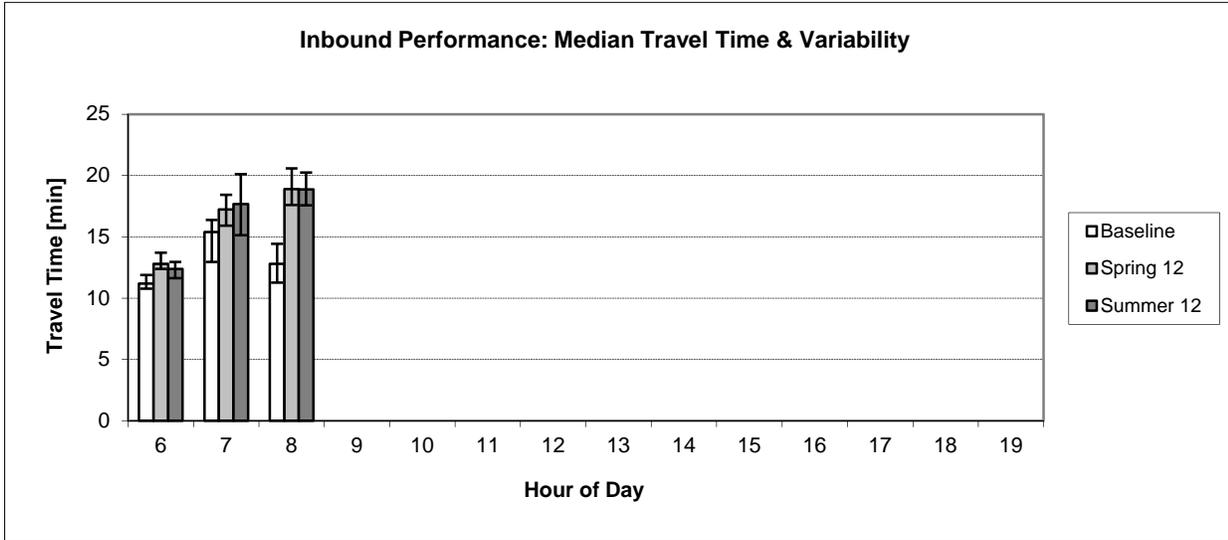
Admiral Way SW & California Ave SW to 2nd/4th Ave & S Jackson St via 1st Ave S



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVL-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/4/12 - 9/28/12	AVL

Pathway J.7

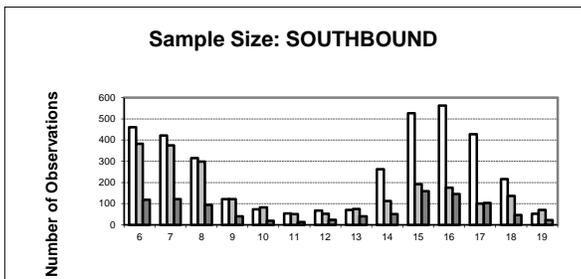
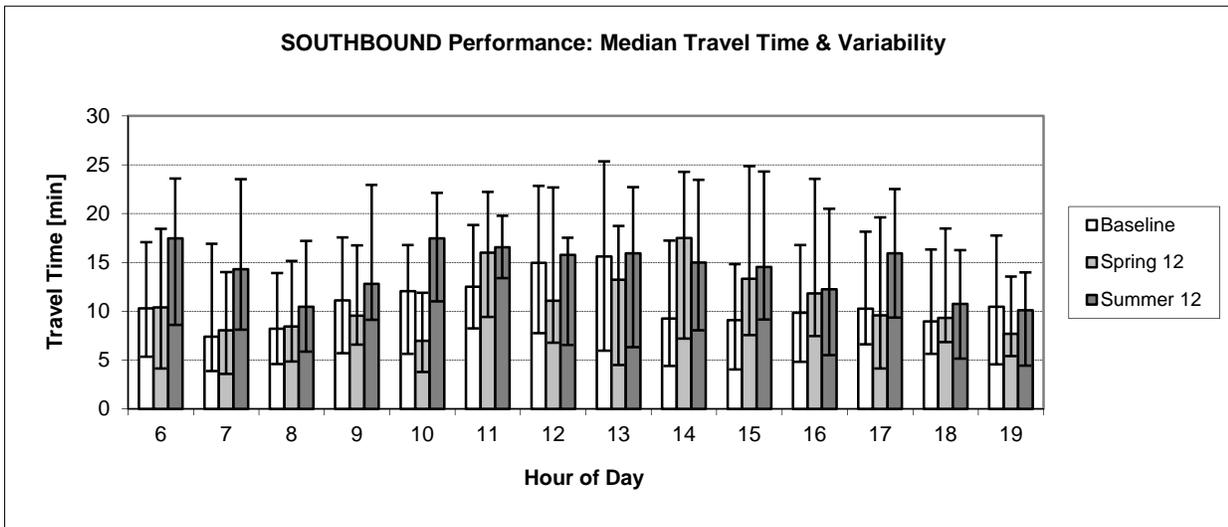
Admiral Way SW & California Ave SW to 1st Ave & Seneca/Columbia St via AWV (Peak Only)



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVI-AVL
Spring 12	4/2/12 - 4/27/12	AVI-AVL
Summer 12	9/4/12 - 9/28/12	AVI-AVL

Pathway CBD2

Second Avenue: Pike St to Jackson St

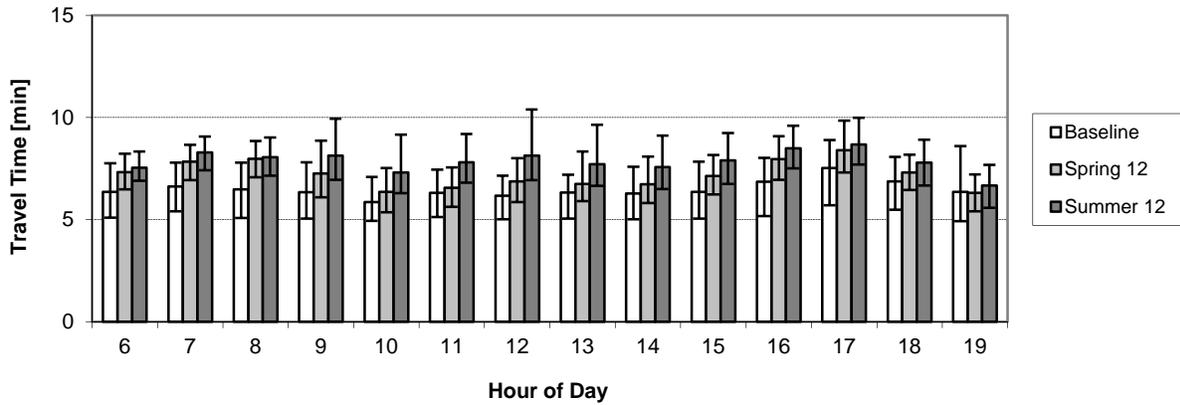


Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVI
Spring 12	4/2/12 - 4/27/12	AVI
Summer 12	9/24/12 - 9/28/12	AVI

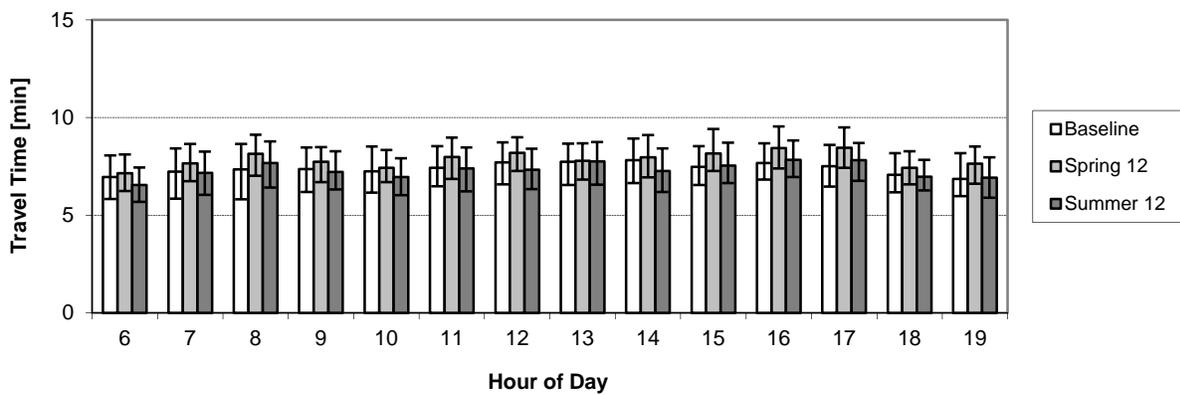
Pathway CBD3

Third Ave: Stewart St to Yesler Way

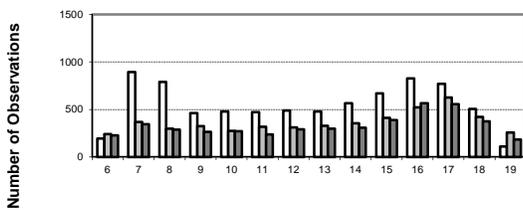
NORTHBOUND Performance: Median Travel Time & Variability



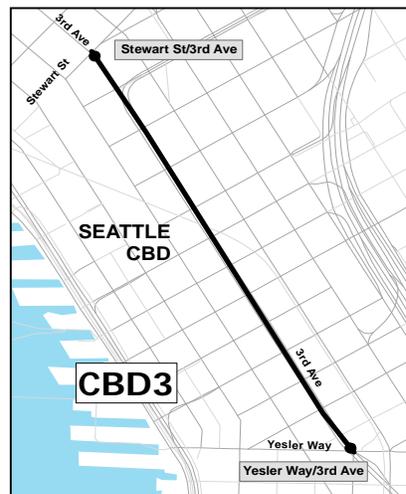
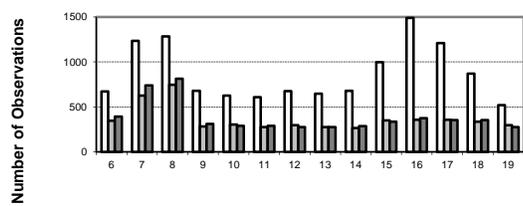
SOUTHBOUND Performance: Median Travel Time & Variability



Sample Size: NORTHBOUND



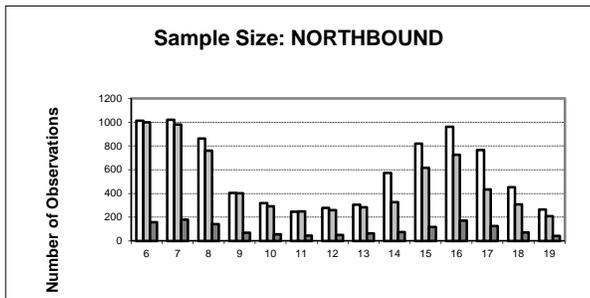
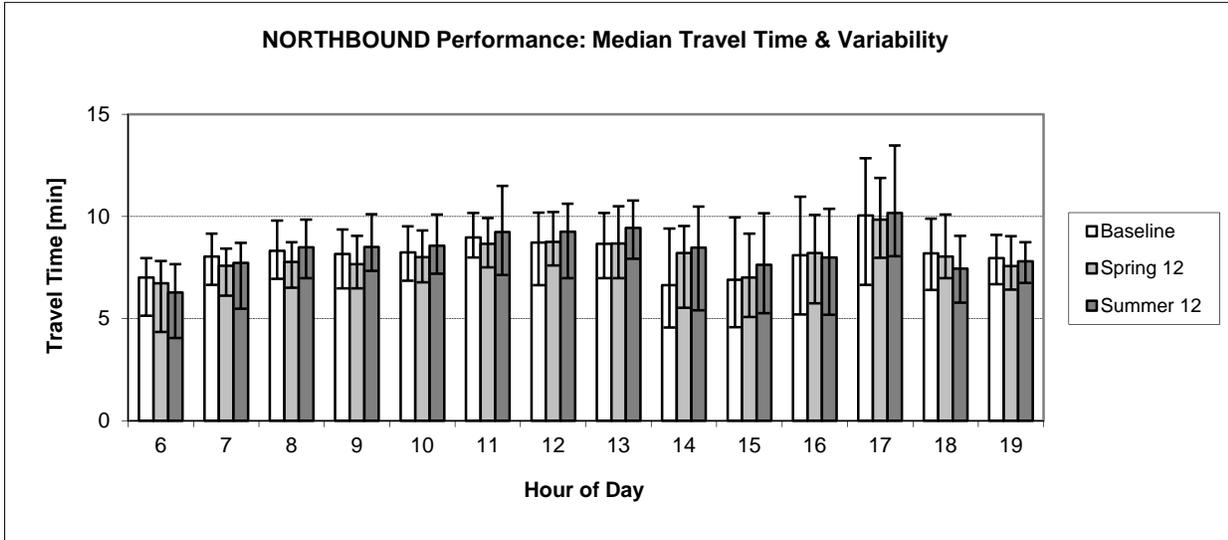
Sample Size: SOUTHBOUND



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVI-AVI
Spring 12	4/2/12 - 4/27/12	AVL-AVI
Summer 12	9/4/12 - 9/28/12	AVL-AVI

Pathway CBD4

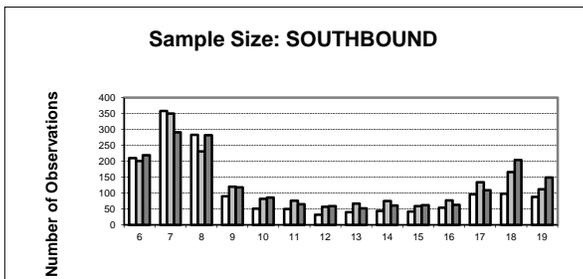
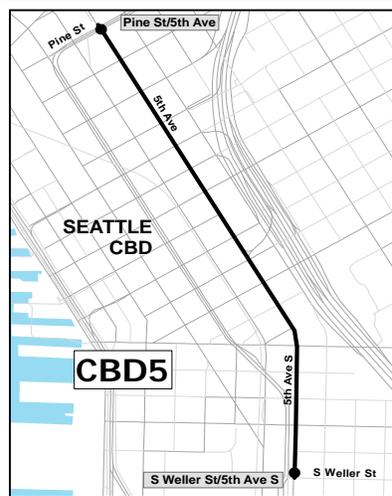
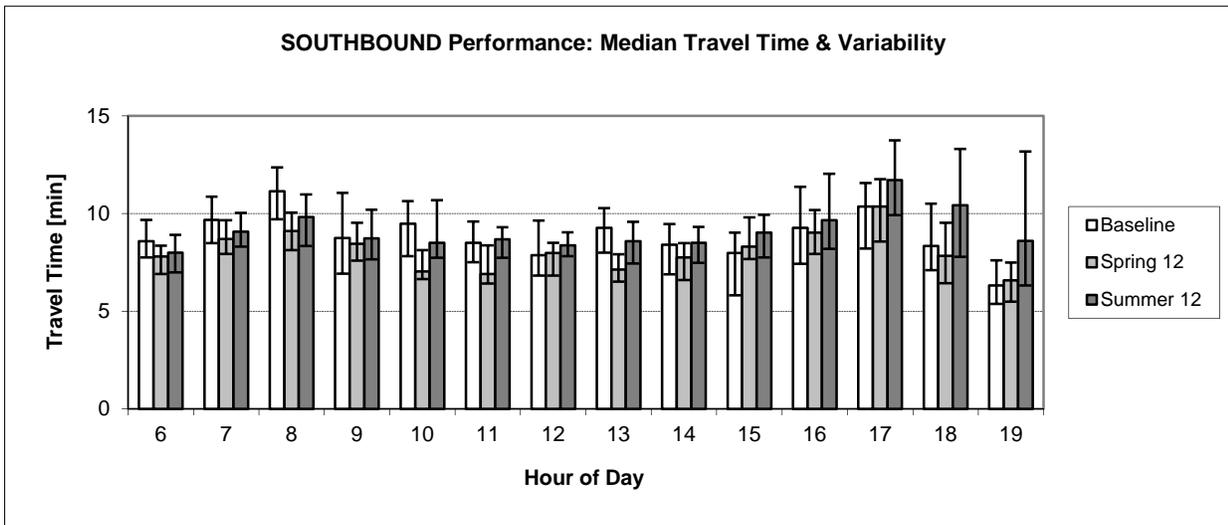
Fourth Ave: Jackson St to Stewart St



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVI
Spring 12	4/2/12 - 4/27/12	AVI
Summer 12	9/24/12 - 9/28/12	AVI

Pathway CBD5

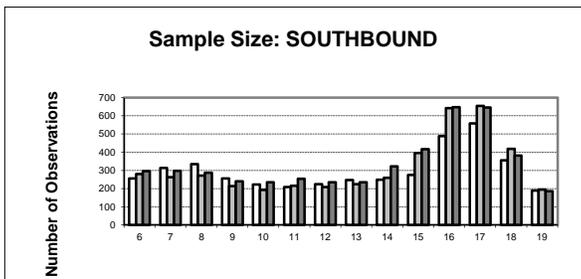
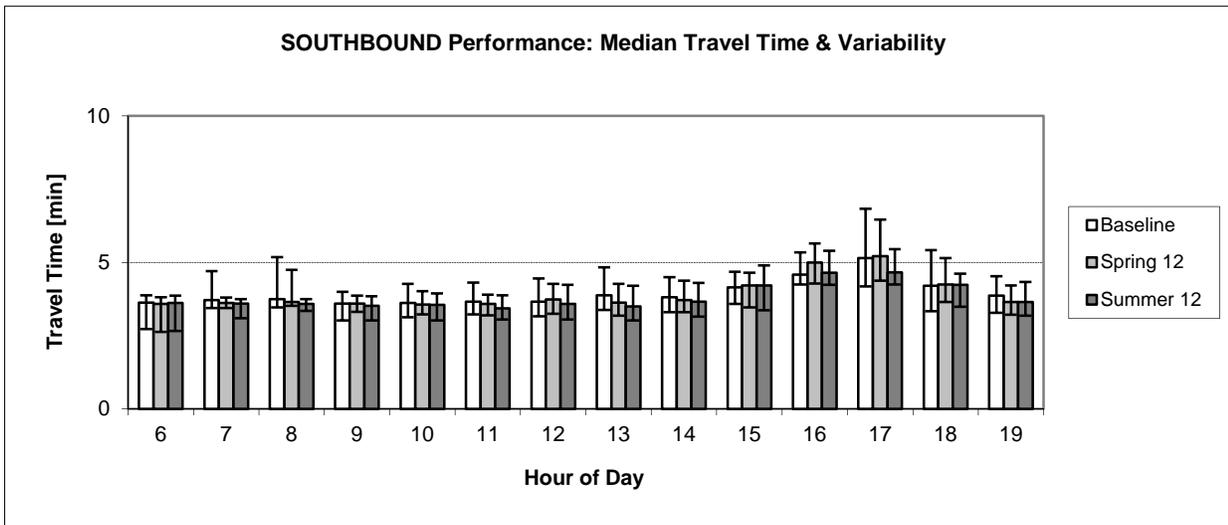
Fifth Ave: Pine St to Weller St



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVI
Spring 12	4/2/12 - 4/27/12	AVI
Summer 12	9/4/12 - 9/28/12	AVI

Pathway Columbia

Columbia Street: 3rd & Seneca to 1st & Columbia



Scenario	Date Range	Data source
Baseline	9/21/09 - 10/16/09	AVI
Spring 12	4/2/12 - 4/27/12	AVI
Summer 12	9/4/12 - 9/28/12	AVI