



## Memorandum

**DATE:** June 26, 2015  
**TO:** Debbie Tarry, City Manager  
**FROM:** Kendra Dedinsky, City Traffic Engineer  
**RE:** Meridian Ave N Origin-Destination Study Results  
**CC:** Tricia Juhnke, Peter Hahn

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### **Introduction**

In response to a 2014 budget request from Councilmember Hall, a consultant was utilized to collect partial license plate data at three locations in order to determine the percentage of cut through traffic using Meridian Ave N from the northern extent of the City limits to the I-5 southbound on ramps at N 175<sup>th</sup> Street and at N 145<sup>th</sup> Street.

In addition, this study will be used to calibrate Bluetooth devices which were purchased as part of the 2014 budget request and will provide ongoing real-time origin-destination and travel time data.

### **Background**

The average daily traffic (ADT) on Meridian Ave N ranges from approximately 6000 on the south end, 13,000 near N 175<sup>th</sup> Street, and 10,000 near N 205<sup>th</sup> Street.

The SR-104 (N 205<sup>th</sup> Street) on ramp to I-5 southbound consists of two, approximately 800 foot metered lanes and one HOV bypass lane. The N 175<sup>th</sup> Street on ramp to I-5 southbound consists of one approximately 600 foot metered lane and one HOV bypass lane. The N 145<sup>th</sup> Street on ramp to I-5 southbound is unmetered.

### **Methodology**

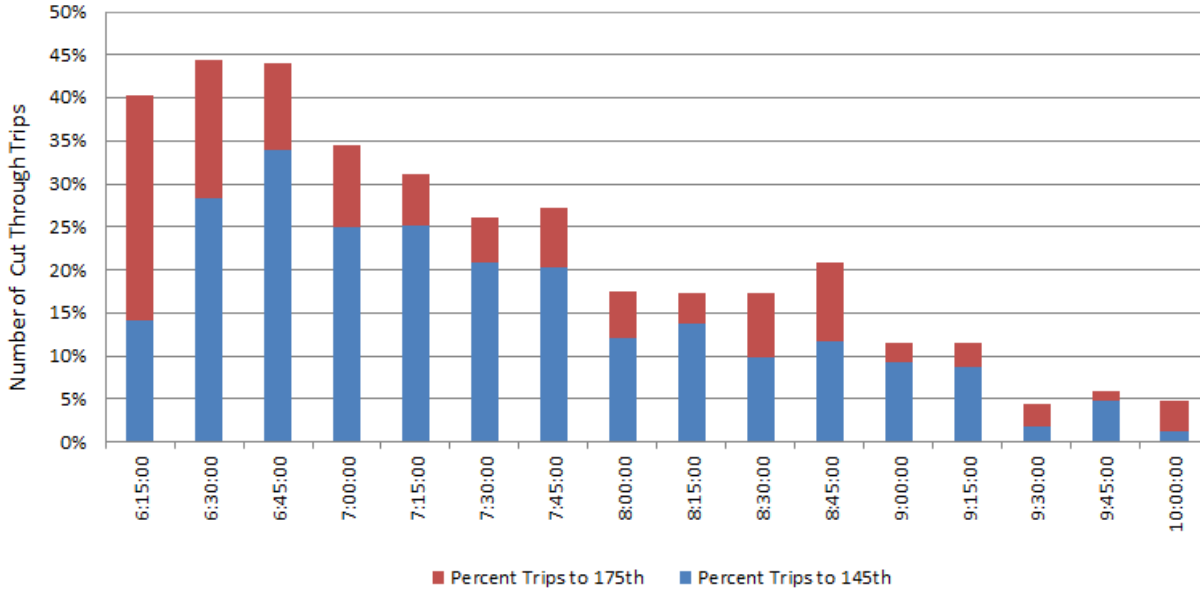
Consultant staff recorded license plates and times at three locations as shown in attachment A. Data was collected on Wednesday June 3, 2015 and Thursday June 4, 2015 between the hours of 6 AM and 10 AM. City staff correlated results by analyzing license plate matches within the data set.

In the following graphs, percent cut through traffic was calculated using the matched trips measured at N 145<sup>th</sup> Street or N 175<sup>th</sup> Street divided by the total number of license plates counted at N 205<sup>th</sup> Street.

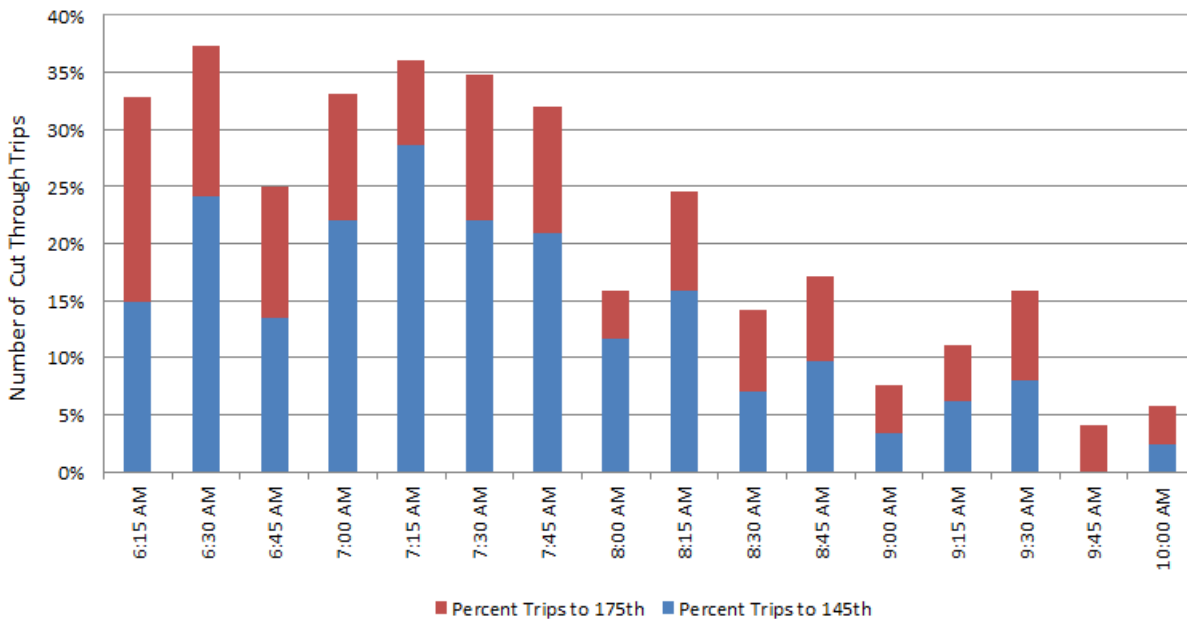
**Summary of Results**

The highest percentage of cut through traffic observed occurred between 6:30 – 6:45 AM with a total of 44% on Wednesday and 37% on Thursday. Distributions for each day are shown in the graphs below.

**Percent Cut Through Trips on Meridian Ave N Through Shoreline**  
Wednesday 6/3/2015 (6 - 10 AM)



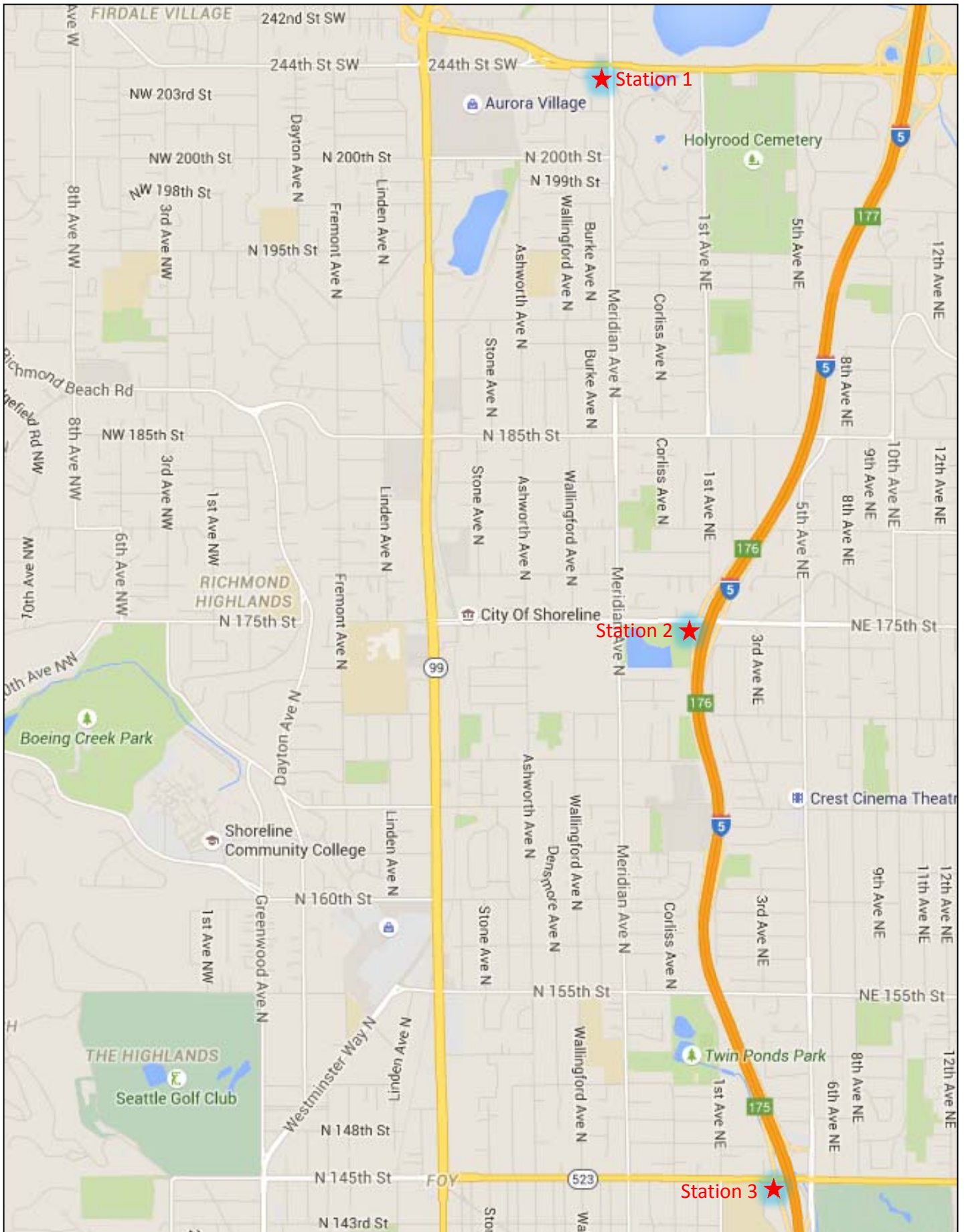
**Percent Cut Through Trips on Meridian Ave N Through Shoreline**  
Thursday 6/4/2015 (6 - 10 AM)



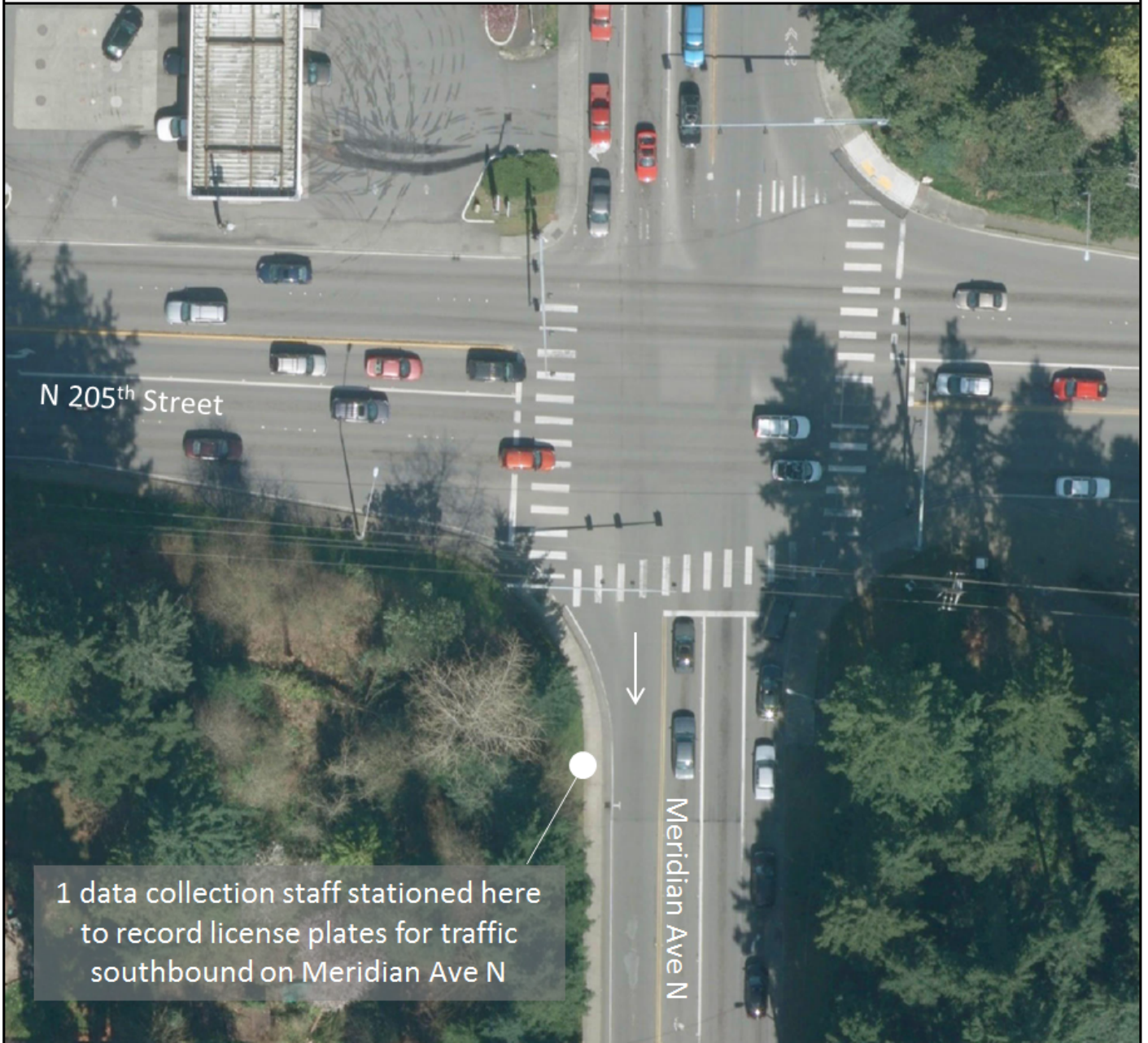
The following chart provides the counts at each location as well as the total number of license plates recorded at N 205<sup>th</sup> Street.

		205th to 145th Matches	205th to 175th Matches	205th Total Traffic	Percent Cut Through Trips to 145th	Percent Cut Through Trips to 175th	Percent Cut Through Total
<b>Wednesday 6/3/15</b>	6:15 AM	8	15	57	14%	26%	40%
	6:30 AM	28	16	99	28%	16%	44%
	6:45 AM	37	11	109	34%	10%	44%
	7:00 AM	34	13	136	25%	10%	35%
	7:15 AM	46	11	183	25%	6%	31%
	7:30 AM	28	7	134	21%	5%	26%
	7:45 AM	29	10	143	20%	7%	27%
	8:00 AM	18	8	149	12%	5%	17%
	8:15 AM	19	5	139	14%	4%	17%
	8:30 AM	12	9	122	10%	7%	17%
	8:45 AM	18	14	154	12%	9%	21%
	9:00 AM	13	3	139	9%	2%	12%
	9:15 AM	12	4	139	9%	3%	12%
	9:30 AM	2	3	114	2%	3%	4%
	9:45 AM	4	1	84	5%	1%	6%
	10:00 AM	1	3	83	1%	4%	5%
<b>Thursday 6/4/15</b>	6:15 AM	10	12	67	15%	18%	33%
	6:30 AM	20	11	83	24%	13%	37%
	6:45 AM	14	12	104	13%	12%	25%
	7:00 AM	28	14	127	22%	11%	33%
	7:15 AM	35	9	122	29%	7%	36%
	7:30 AM	31	18	141	22%	13%	35%
	7:45 AM	32	17	153	21%	11%	32%
	8:00 AM	14	5	120	12%	4%	16%
	8:15 AM	20	11	126	16%	9%	25%
	8:30 AM	7	7	99	7%	7%	14%
	8:45 AM	8	6	82	10%	7%	17%
	9:00 AM	4	5	118	3%	4%	8%
	9:15 AM	5	4	81	6%	5%	11%
	9:30 AM	7	7	88	8%	8%	16%
	9:45 AM	0	3	74	0%	4%	4%
	10:00 AM	2	3	86	2%	3%	6%

# Attachment A. Data Collection Stations

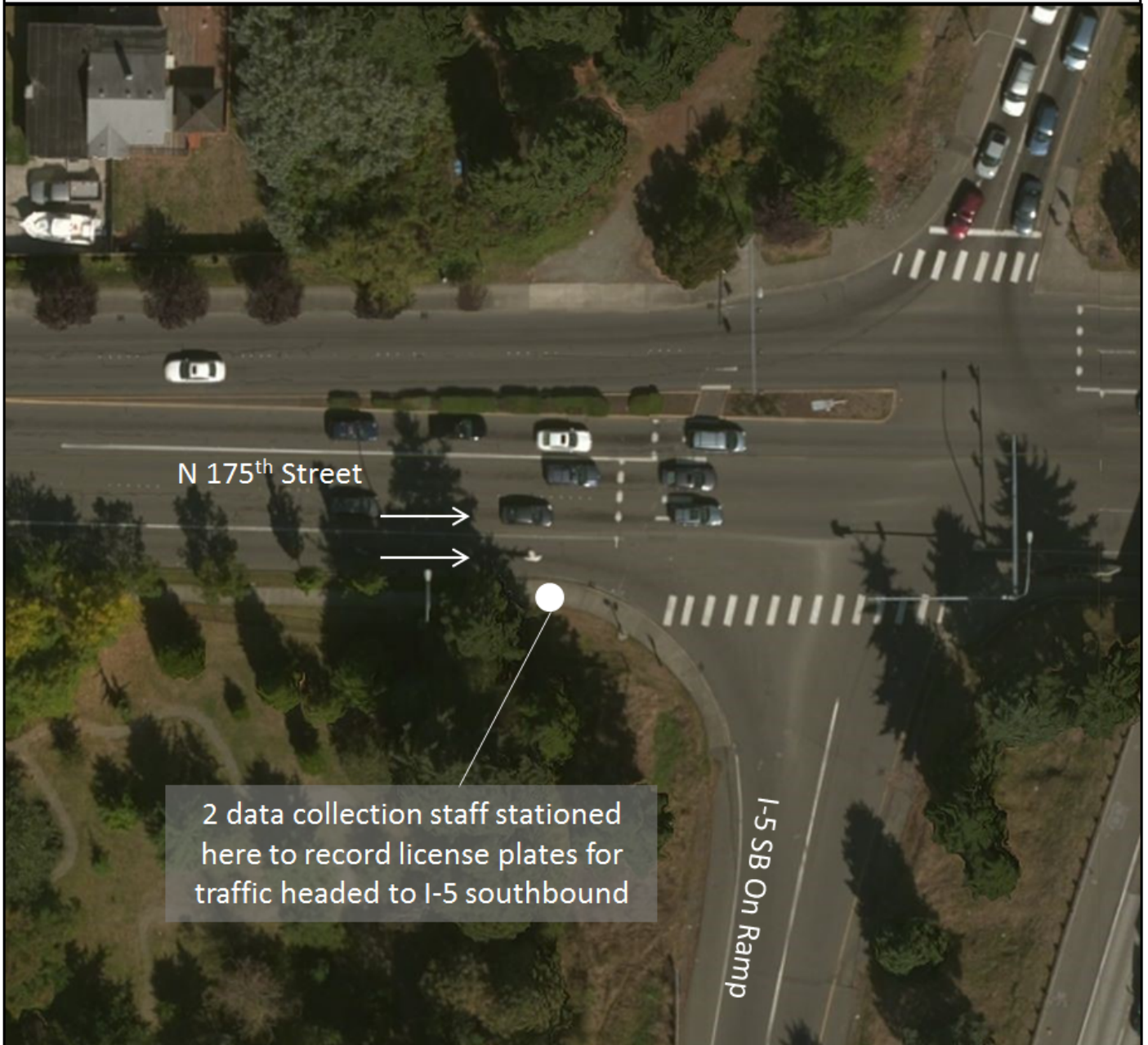


Station 1 – Meridian Ave N & N 205<sup>th</sup> St



1 data collection staff stationed here to record license plates for traffic southbound on Meridian Ave N

Station 2 – N 175<sup>th</sup> Street & I-5 Southbound



N 175<sup>th</sup> Street

I-5 SB On Ramp

2 data collection staff stationed here to record license plates for traffic headed to I-5 southbound

Station 3 – N 145<sup>th</sup> Street & I-5 Southbound



N 145<sup>th</sup> Street

1 data collection staff stationed here to record license plates for traffic headed to I-5 southbound

I-5 SB On Ramp