

TECHNICAL APPENDIX

**DEPARTMENT OF PUBLIC WORKS
MEMORANDUM**

To: Planning Department

From: Thang Nguyen, Transportation Engineer

Date: June 4, 2007

Subject: Cedar Park Sub-division Concurrency Test Notice

The purpose of this memo is to inform you that the revised traffic concurrency for the proposed Cedar Park Subdivision development has been completed and the proposed project passed traffic concurrency.

Project Description

The applicant proposes to replace 5,171 square foot (sf) church with 24 single family homes. It is anticipated that the project will be built and fully occupied by the end of 2009.

The proposed project passed traffic concurrency. Attached is the result of the concurrency test. This memo will serve as the concurrency test notice for the proposed project. Per *Section 25.10.020 Procedures* of the KMC, this Concurrency Test Notice will expire in one year (June 4 2008) unless a development permit and certificate of concurrency are issued or an extension is granted.

EXPIRATION

The concurrency test notice shall expire and a new concurrency test application is required unless:

1. A complete SEPA checklist, traffic impact analysis and all required documentation are submitted to the City within 90 calendar days of the concurrency test notice.
2. A Certificate of Concurrency is issued or an extension is requested and granted by the Public Works Department within one year of issuance of the concurrency test notice. (A Certificate of Concurrency is issued at the same time a development permit or building permit is issued if the applicant holds a valid concurrency test notice.)
3. A Certificate of Concurrency shall expire six years from the date of issuance of the concurrency test notice unless all building permits are issued for buildings approved under the concurrency test notice.

Memorandum to Planning Department

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APPEALS

The concurrency test notice may be appealed by the public or agency with jurisdiction. The concurrency test notice is subject to an appeal until the SEPA review process is complete and the appeal deadline has passed. Concurrency appeals are heard before the Hearing Examiner along with any applicable SEPA appeal. For more information, refer to the Kirkland Municipal Code, Title 25. If you have any questions, please call me at x3869.

cc: Vincent J. Geglia, TraffEx

1) Project ID: Cedar Park Sub-division	4) Transportation Concurrency Status: PASS	6) Transportation Concurrency Certificate Date:
2) Project Description: Replace a 5,171 sf church with 24 single family subdivision	5) Transportation Concurrency Test Date: 4 Jun-07	7) Certificate of Occupancy Date:
3) Build-out Year: 2009		

SUMMARY OF TRAFFIC IMPACTS

g) Daily Trips: 271	PM Peak Trips: 21	Impacted Subarea(s): NE	TAZ: 289
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Code	Intersection	Signalized Intersection PM Peak Traffic Impact												PM Peak Trips	Daily Trips	Sum of Critical Vol*	Vol. Capacity Ratio*
		Eastbound			Westbound			Northbound			Southbound						
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT				
	Onramp/NE 132nd Street	10		5	10			3						24		#N/A	#N/A
203	160th Ave NE/NE 132nd St							1		2			1	4		1188	0.86
204	116th Way NE/NE 132nd St		2	4			2		7					15		1411	1.03
324	NE 126th St/116th Way NE							1		3		6	1	11	3	476	0.00
312	NE 124th St/116th Ave NE							5			1		2	9		1370	1.00
317	1405 SW Dr NE 125th St						3						2	5		1120	0.75
316	Totem Lake Blvd/NE 132nd St		2				2							4		1417	1.03
301	120th Ave NE/NE 132nd St			1			2							4		911	0.66
303	120th Ave NE/NE 128th St			1										1		1052	0.70
	#N/A													0		#N/A	#N/A
	#N/A													0		#N/A	#N/A
	#N/A													0		#N/A	#N/A
	#N/A													0		#N/A	#N/A
	#N/A													0		#N/A	#N/A
	#N/A													0		#N/A	#N/A
	#N/A													0		#N/A	#N/A
	#N/A													0		#N/A	#N/A

Transportation Concurrency Test

Subarea No	LOS Standards		LOS with Project Impacts		a <= A?	b <= B?
	A= Max. Intersection LOS	B= Average 2010 V/C	a= No. exceeding 1.4	b= Average V/C		
Southwest (1xx)	1.4	0.80	0	0.82	yes	yes
Northwest (2xx)	1.4	0.80	0	0.87	yes	yes
Northwest (3xx)	1.4	0.85	0	0.85	yes	yes
East (4xx)	1.4	1.05	0	0.99	yes	yes

TEST RESULTS
Result: PASS

* Based on Critical Movement, Planning Method TRC #212
 1 Number of intersection exceeding Average V/C LOS Standard (2022)
 1 Sixth Year Target Average V/C ratio, see step 6, part 1 of the guidelines

Proportional Share Impact Worksheet

¹ See "Intersection Description" worksheet for descriptions

Input appropriate information in green cells

Project Name:	Cedar Park-203		Through Lanes ¹
Major Street ¹	100th Ave NE	# of Lanes* =	2
Minor Street ¹	NE 132nd St	# of Lanes* =	1

1. May Change without notice, call Thang Nguyen 425-587-3869 with questions

DATE: 6/27/2007

	Daily Volumes	Entering Leg Volumes *		
Daily Project Traffic Entering the Intersection (Total of both approaches divided by two) Major Street Volume V ₁ =	15	20	10	Major
(Total of both approaches divided by two) Minor Street Volume V ₂ =	5	10	0	Minor

*Do not leave cell empty for zero volume

Determine Geometric Factors

Number of Lanes		Geometric Factors			
Major Street	Minor Street	f ₁	f ₂	f ₃	f ₄
2	2	1.000	1.330	1.000	1.330
2	1	1.000	1.000	1.000	1.000
1	2	0.833	1.330	0.833	1.330
1	1	0.833	1.000	0.833	1.000

f ₁	f ₂	f ₃	f ₄
1	1	1	1

Calculate Base Percentages

$P_1 = V_1 / (10,000 \times f_1) = 0.15\%$
 $P_2 = V_2 / (5,000 \times f_2) = 0.10\%$
 $P_3 = V_1 / (15,000 \times f_3) = 0.10\%$
 $P_4 = V_2 / (2,500 \times f_4) = 0.20\%$

Calculate Proportional Share

$S_1 = (P_1 + P_2) / 2 = 0.13\%$
 $S_2 = (P_3 + P_4) / 2 = 0.15\%$

Intersection Proportional Share = Maximum of S1 and S2 = 0.15%
 Significant Intersection? no

1. Number of through lanes. Do not count exclusive turn lanes. Use the smaller number of lanes if the number of lanes is unequal on two legs. For Example, if one minor leg has two lanes and one minor leg has one lane, the number of lanes on the minor leg is one.

Computed By: VJG
 Company: TraffEx

Proportional Share Impact Worksheet

Input appropriate information in green cells

¹ See "Intersection Description" worksheet for descriptions

Project Name:

Cedar Park -204

Through Lanes¹

Major Street¹

NE 132nd St

of Lanes* = 1

Minor Street¹

116th Way NE

of Lanes* = 1

1. May Change without notice, call Thang Nguyen 425-587-3869 with questions

DATE:

6/27/2007

Daily Project Traffic Entering the Intersection

(Total of both approaches divided by two)

Major Street Volume $V_1 =$

Daily Volumes

Entering Leg Volumes *

40

20

60

Major

(Total of both approaches divided by two)

Minor Street Volume $V_2 =$

35

70

0

Minor

*Do not leave cell empty for zero volume

Determine Geometric Factors

Number of Lanes		Geometric Factors			
Major Street	Minor Street	f_1	f_2	f_3	f_4
2	2	1.000	1.330	1.000	1.330
2	1	1.000	1.000	1.000	1.000
1	2	0.833	1.330	0.833	1.330
1	1	0.833	1.000	0.833	1.000

f_1	f_2	f_3	f_4
0.833	1	0.833	1

Calculate Base Percentages

$$P_1 = V_1 / (10,000 \times f_1) = 0.48\%$$

$$P_2 = V_2 / (5,000 \times f_2) = 0.70\%$$

$$P_3 = V_1 / (15,000 \times f_3) = 0.32\%$$

$$P_4 = V_2 / (2,500 \times f_4) = 1.40\%$$

Calculate Proportional Share

$$S_1 = (P_1 + P_2) / 2 = 0.59\%$$

$$S_2 = (P_3 + P_4) / 2 = 0.86\%$$

Intersection Proportional Share = Maximum of S1 and S2 = 0.86%
Significant Intersection? no

1. Number of through lanes. Do not count exclusive turn lanes. Use the smaller number of lanes if the number of lanes is unequal on two legs. For Example, if one minor leg has two lanes and one minor leg has one lane, the number of lanes on the minor leg is one.

Computed By:

VJG

Company:

TraffEx

Proportional Share Impact Worksheet

Input appropriate information in green cells

¹ See "Intersection Description" worksheet for descriptions

Project Name:	Cedar Park-324		Through Lanes ¹
Major Street ¹	116th Way NE	# of Lanes* =	2
Minor Street ¹	NE 128th St	# of Lanes* =	1

1. May Change without notice, call Thang Nguyen 425-587-3869 with questions

DATE: 6/7/27/07

	Daily Volumes	Entering Leg Volumes*			
<i>Daily Project Traffic Entering the Intersection</i> (Total of both approaches divided by two)	Major Street Volume V ₁ =	50	60	40	<i>Major</i>
(Total of both approaches divided by two)	Minor Street Volume V ₂ =	5	10	0	<i>Minor</i>

*Do not leave cell empty for zero volume

Determine Geometric Factors

Number of Lanes		Geometric Factors			
Major Street	Minor Street	f ₁	f ₂	f ₃	f ₄
2	2	1.000	1.330	1.000	1.330
2	1	1.000	1.000	1.000	1.000
1	2	0.833	1.330	0.833	1.330
1	1	0.833	1.000	0.833	1.000

f ₁	f ₂	f ₃	f ₄
1	1	1	1

Calculate Base Percentages

P₁ = V₁ / (10,000 × f₁) = 0.50%

P₂ = V₂ / (5,000 × f₂) = 0.10%

P₃ = V₁ / (15,000 × f₃) = 0.33%

P₄ = V₂ / (2,500 × f₄) = 0.20%

Calculate Proportional Share

S₁ = (P₁ + P₂) / 2 = 0.30%

S₂ = (P₃ + P₄) / 2 = 0.27%

Intersection Proportional Share = Maximum of S₁ and S₂ = 0.30%

Significant Intersection? no

1. Number of through lanes. Do not count exclusive turn lanes. Use the smaller number of lanes if the number of lanes is unequal on two legs. For Example, if one minor leg has two lanes and one minor leg has one lane, the number of lanes on the minor leg is one.

Computed By: VJG

Company: TraffEx

Proportional Share Impact Worksheet

Input appropriate information in green cells

¹ See "Intersection Description" worksheet for descriptions

Project Name:	Cedar Park-312		Through Lanes ¹
Major Street ¹	NE 124th St	# of Lanes* =	2
Minor Street ¹	116th Ave NE	# of Lanes* =	1

1. May Change without notice, call Thang Nguyen 425-587-3869 with questions

DATE: 6/27/2007

	Daily Volumes	Entering Leg Volumes *		
(Total of both approaches divided by two) Major Street Volume $V_1 =$	25	50	0	<i>Major</i>
(Total of both approaches divided by two) Minor Street Volume $V_2 =$	20	10	30	<i>Minor</i>

*Do not leave cell empty for zero volume

Determine Geometric Factors

Number of Lanes		Geometric Factors			
Major Street	Minor Street	f_1	f_2	f_3	f_4
2	2	1.000	1.330	1.000	1.330
2	1	1.000	1.000	1.000	1.000
1	2	0.833	1.330	0.833	1.330
1	1	0.833	1.000	0.833	1.000

f_1	f_2	f_3	f_4
1	1	1	1

Calculate Base Percentages

$P_1 = V_1 / (10,000 \times f_1) =$ 0.25%

$P_2 = V_2 / (5,000 \times f_2) =$ 0.40%

$P_3 = V_1 / (15,000 \times f_3) =$ 0.17%

$P_4 = V_2 / (2,500 \times f_4) =$ 0.80%

Calculate Proportional Share

$S_1 = (P_1 + P_2) / 2 =$ 0.33%

$S_2 = (P_3 + P_4) / 2 =$ 0.48%

Intersection Proportional Share = Maximum of S_1 and $S_2 =$ 0.48%

Significant Intersection? no

1. Number of through lanes. Do not count exclusive turn lanes. Use the smaller number of lanes if the number of lanes is unequal on two legs. For Example, if one minor leg has two lanes and one minor leg has one lane, the number of lanes on the minor leg is one.

Computed By: VJG

Company: TraffEx

Proportional Share Impact Worksheet

Input appropriate information in green cells

¹ See "Intersection Description" worksheet for descriptions

Project Name:	Cedar Park 317		Through Lanes ¹
Major Street ¹	NE 124th St	# of Lanes* =	2
Minor Street ¹	405 SB off ramp	# of Lanes* =	1

1. May Change without notice, call Thang Nguyen 425-587-3869 with questions

DATE:
7/27/2007

	Daily Volumes	Entering Leg Volumes *		
Daily Project Traffic Entering the Intersection (Total of both approaches divided by two)	Major Street Volume $V_1 = 15$	30	0	Major
(Total of both approaches divided by two)	Minor Street Volume $V_2 = 10$	20	0	Minor

*Do not leave cell empty for zero volume

Determine Geometric Factors

Number of Lanes		Geometric Factors			
Major Street	Minor Street	f_1	f_2	f_3	f_4
2	2	1.000	1.330	1.000	1.330
2	1	1.000	1.000	1.000	1.000
1	2	0.833	1.330	0.833	1.330
1	1	0.833	1.000	0.833	1.000

f_1	f_2	f_3	f_4
1	1	1	1

Calculate Base Percentages

$$P_1 = V_1 / (10,000 \times f_1) = 0.15\%$$

$$P_2 = V_2 / (5,000 \times f_2) = 0.20\%$$

$$P_3 = V_1 / (15,000 \times f_3) = 0.10\%$$

$$P_4 = V_2 / (2,500 \times f_4) = 0.40\%$$

Calculate Proportional Share

$$S_1 = (P_1 + P_2) / 2 = 0.18\%$$

$$S_2 = (P_3 + P_4) / 2 = 0.25\%$$

Intersection Proportional Share = Maximum of S1 and S2 = $\frac{0.25\%}{\text{no}}$
Significant Intersection?

1 Number of through lanes. Do not count exclusive turn lanes. Use the smaller number of lanes if the number of lanes is unequal on two legs. For Example, if one minor leg has two lanes and one minor leg has one lane, the number of lanes on the minor leg is one.

Computed By: VJG
Company: TraffEx

Proportional Share Impact Worksheet

Input appropriate information in green cells

¹ See "Intersection Description" worksheet for descriptions

Project Name:	Cedar Park-316	Through Lanes ¹	
Major Street ¹	NE 132nd St	# of Lanes* =	1
Minor Street ¹	Totem Lk Blvd	# of Lanes* =	1

1. May Change without notice, call Thang Nguyen 425-587-3869 with questions

DATE:

7/27/2007

Daily Project Traffic Entering the Intersection

(Total of both approaches divided by two)

	Daily Volumes	Entering Leg Volumes *	
Major Street Volume $V_1 =$	20	20	20
Minor Street Volume $V_2 =$	0	0	0

Major

Minor

*Do not leave cell empty for zero volume

Determine Geometric Factors

Number of Lanes		Geometric Factors			
Major Street	Minor Street	f_1	f_2	f_3	f_4
2	2	1.000	1.330	1.000	1.330
2	1	1.000	1.000	1.000	1.000
1	2	0.833	1.330	0.833	1.330
1	1	0.833	1.000	0.833	1.000

f_1	f_2	f_3	f_4
0.833	1	0.833	1

Calculate Base Percentages

$P_1 = V_1 / (10,000 \times f_1) =$ 0.24%
 $P_2 = V_2 / (5,000 \times f_2) =$ 0.00%
 $P_3 = V_1 / (15,000 \times f_3) =$ 0.16%
 $P_4 = V_2 / (2,500 \times f_4) =$ 0.00%

Calculate Proportional Share

$S_1 = (P_1 + P_2) / 2 =$ 0.12%
 $S_2 = (P_3 + P_4) / 2 =$ 0.08%

Intersection Proportional Share = Maximum of S1 and S2 = 0.12%
 Significant Intersection? no

1. Number of through lanes. Do not count exclusive turn lanes. Use the smaller number of lanes if the number of lanes is unequal on two legs. For Example, if one minor leg has two lanes and one minor leg has one lane, the number of lanes on the minor leg is one.

Computed By: VJG
 Company: TraffEx

Proportional Share Impact Worksheet

¹ See "Intersection Description" worksheet for descriptions

Input appropriate information in green cells

Project Name:	Cedar Park-301		Through Lanes ¹
Major Street ¹	NE 132nd St	# of Lanes* =	1
Minor Street ¹	120th Ave nE	# of Lanes* =	1

1. May Change without notice, call Thang Nguyen 425-587-3869 with questions

DATE: 7/27/2007

	Daily Volumes	Entering Leg Volumes *		
Daily Project Traffic Entering the Intersection (Total of both approaches divided by two)	Major Street Volume $V_1 =$	20	20	20
(Total of both approaches divided by two)	Minor Street Volume $V_2 =$	0	0	0

*Do not leave cell empty for zero volume

Determine Geometric Factors

Number of Lanes		Geometric Factors			
Major Street	Minor Street	f_1	f_2	f_3	f_4
2	2	1.000	1.330	1.000	1.330
2	1	1.000	1.000	1.000	1.000
1	2	0.833	1.330	0.833	1.330
1	1	0.833	1.000	0.833	1.000

f_1	f_2	f_3	f_4
0.833	1	0.833	1

Calculate Base Percentages

$$P_1 = V_1 / (10,000 \times f_1) = \underline{\hspace{2cm}} \quad 0.24\%$$

$$P_2 = V_2 / (5,000 \times f_2) = \underline{\hspace{2cm}} \quad 0.00\%$$

$$P_3 = V_1 / (15,000 \times f_3) = \underline{\hspace{2cm}} \quad 0.16\%$$

$$P_4 = V_2 / (2,500 \times f_4) = \underline{\hspace{2cm}} \quad 0.00\%$$

Calculate Proportional Share

$$S_1 = (P_1 + P_2) / 2 = \underline{\hspace{2cm}} \quad 0.12\%$$

$$S_2 = (P_3 + P_4) / 2 = \underline{\hspace{2cm}} \quad 0.08\%$$

Intersection Proportional Share = Maximum of S_1 and $S_2 = \underline{\hspace{2cm}} \quad 0.12\%$

Significant Intersection? no

1. Number of through lanes. Do not count exclusive turn lanes. Use the smaller number of lanes if the number of lanes is unequal on two legs. For Example, if one minor leg has two lanes and one minor leg has one lane, the number of lanes on the minor leg is one.

Computed By: VJG
 Company: TraffEx

Proportional Share Impact Worksheet

Input appropriate information in green cells

¹ See "Intersection Description" worksheet for descriptions

Project Name:	Cedar Park-303		Through Lanes ¹
Major Street ¹	120th Ave NE	# of Lanes* =	1
Minor Street ¹	NE 128th St	# of Lanes* =	1

1. May Change without notice, call Thang Nguyen 425-587-3869 with questions

DATE:
7/27/2007

Daily Project Traffic Entering the Intersection

(Total of both approaches divided by two)	Major Street Volume $V_1 =$	0	0	0	
(Total of both approaches divided by two)	Minor Street Volume $V_2 =$	5	10	0	Major Minor

*Do not leave cell empty for zero volume

Determine Geometric Factors

Number of Lanes		Geometric Factors			
Major Street	Minor Street	f_1	f_2	f_3	f_4
2	2	1.000	1.330	1.000	1.330
2	1	1.000	1.000	1.000	1.000
1	2	0.833	1.330	0.833	1.330
1	1	0.833	1.000	0.833	1.000

f_1	f_2	f_3	f_4
0.833	1	0.833	1

Calculate Base Percentages

$P_1 = V_1 / (10,000 \times f_1) =$ 0.00%
 $P_2 = V_2 / (5,000 \times f_2) =$ 0.10%
 $P_3 = V_1 / (15,000 \times f_3) =$ 0.00%
 $P_4 = V_2 / (2,500 \times f_4) =$ 0.20%

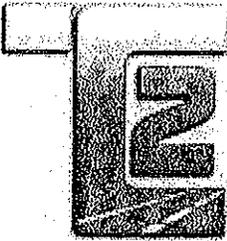
Calculate Proportional Share

$S_1 = (P_1 + P_2) / 2 =$ 0.05%
 $S_2 = (P_3 + P_4) / 2 =$ 0.10%

Intersection Proportional Share = Maximum of S1 and S2 = 0.10%
Significant Intersection? no

1. Number of through lanes. Do not count exclusive turn lanes. Use the smaller number of lanes if the number of lanes is unequal on two legs. For Example, if one minor leg has two lanes and one minor leg has one lane, the number of lanes on the minor leg is one.

Computed By: VJG
 Company: TraffEx



Prepared for: **Traffex**
Traffic Count Consultants, Inc.

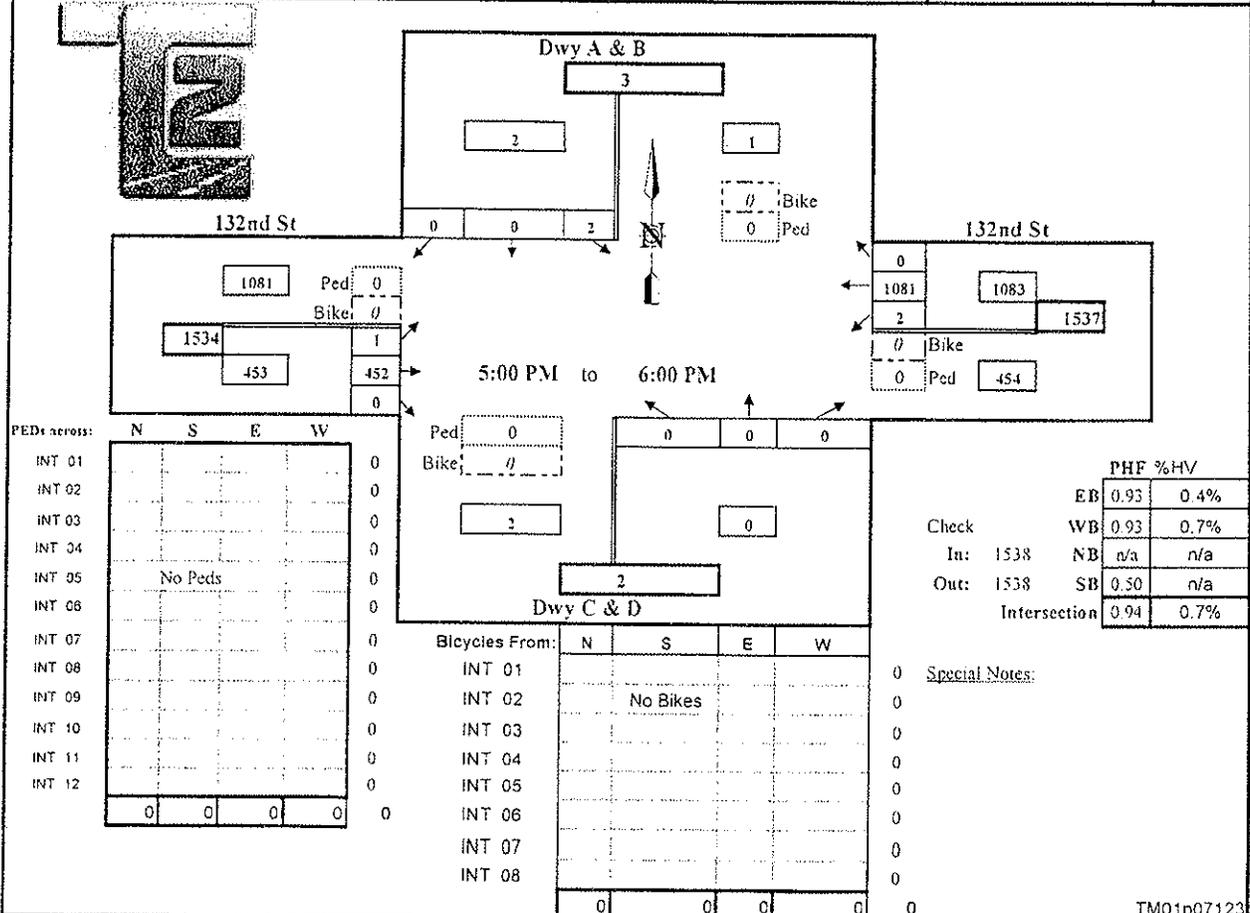
Phone: (425) 861-8366 FAX: (425) 861-8877 E-Mail: TC2inc@aol.com

WBE/DBE

Intersection: Dwys @ 132nd St near 112th Ave
 Location: Kirkland

Date of Count: Wed 6/27/07
 Checked By: LBP

Time Interval Ending at	From North on (SB) Dwy A & B				From South on (NB) Dwy C & D				From East on (WB) 132nd St				From West on (EB) 132nd St				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	1	0	0	1	0	0	0	1	0	0	257	0	0	0	120	0	379
4:30 P	0	0	0	1	0	0	0	0	8	0	250	0	3	1	113	0	365
4:45 P	0	0	0	0	0	0	0	0	0	0	241	0	0	1	104	0	346
5:00 P	0	0	0	0	0	0	0	0	2	0	261	0	1	0	128	0	389
5:15 P	0	0	0	0	0	0	0	0	2	0	246	0	0	0	96	0	342
5:30 P	0	1	0	0	0	0	0	0	1	2	289	0	1	1	116	0	409
5:45 P	0	0	0	0	0	0	0	0	3	0	274	0	0	0	118	0	392
6:00 P	0	1	0	0	0	0	0	0	2	0	272	0	1	0	122	0	395
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	1	2	0	2	0	0	0	1	18	2	2090	0	6	3	917	0	3017
Peak Hour: 5:00 PM to 6:00 PM																	
Total	0	2	0	0	0	0	0	0	8	2	1081	0	2	1	452	0	1538
Approach	2				0				1083				453				1538
%HV	n/a				n/a				0.7%				0.4%				0.7%
PHF	0.50				n/a				0.93				0.93				0.94



TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst				Intersection				
Agency/Co.				Jurisdiction				
Date Performed	7/2/2007			Analysis Year	2007 Existing			
Analysis Time Period								
Project Description								
East/West Street: NE 132nd St				North/South Street: Cedar Park Access				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	1	452	0	2	1081	0		
Peak-Hour Factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94		
Hourly Flow Rate, HFR	1	480	0	2	1150	0		
Percent Heavy Vehicles	1	--	--	1	--	--		
Median Type	Two Way Left Turn Lane							
RT Channelized			0			0		
Lanes	1	1	0	1	1	0		
Configuration	L		TR	L		TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	0	0	0	2	0	0		
Peak-Hour Factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94		
Hourly Flow Rate, HFR	0	0	0	2	0	0		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	LTR			LTR		
v (vph)	1	2	0			2		
C (m) (vph)	611	1088				237		
v/c	0.00	0.00				0.01		
95% queue length	0.00	0.01				0.03		
Control Delay	10.9	8.3				20.3		
LOS	B	A				C		
Approach Delay	--	--				20.3		
Approach LOS	--	--				C		

TWO-WAY STOP CONTROL SUMMARY

General Information			Site Information					
Analyst			Intersection					
Agency/Co.			Jurisdiction					
Date Performed	7/2/2007		Analysis Year	2009 without Project				
Analysis Time Period								
Project Description								
East/West Street: NE 132nd St			North/South Street: Cedar Park Access					
Intersection Orientation: East-West			Study Period (hrs): 1.00					
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	1	466	0	2	1114	0		
Peak-Hour Factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94		
Hourly Flow Rate, HFR	1	495	0	2	1185	0		
Percent Heavy Vehicles	1	--	--	1	--	--		
Median Type	Two Way Left Turn Lane							
RT Channelized			0			0		
Lanes	1	1	0	1	1	0		
Configuration	L		TR	L		TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	0	0	0	2	0	0		
Peak-Hour Factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94		
Hourly Flow Rate, HFR	0	0	0	2	0	0		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	1	2		0			2	
C (m) (vph)	593	1074					227	
v/c	0.00	0.00					0.01	
95% queue length	0.01	0.01					0.03	
Control Delay	11.1	8.4					21.0	
LOS	B	A					C	
Approach Delay	--	--					21.0	
Approach LOS	--	--					C	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst				Intersection				
Agency/Co.				Jurisdiction				
Date Performed	7/2/2007			Analysis Year	2009 with Project			
Analysis Time Period								
Project Description								
East/West Street: NE 132nd St				North/South Street: Cedar Park Access				
Intersection Orientation: East-West				Study Period (hrs): 1.00				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	1	466	5	10	1114	0		
Peak-Hour Factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94		
Hourly Flow Rate, HFR	1	495	5	10	1185	0		
Percent Heavy Vehicles	1	--	--	1	--	--		
Median Type	Two Way Left Turn Lane							
RT Channelized			0				0	
Lanes	1	1	0	1	1	0		
Configuration	L		TR	L		TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	3	0	6	2	0	0		
Peak-Hour Factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94		
Hourly Flow Rate, HFR	3	0	6	2	0	0		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	LTR			LTR		
v (vph)	1	10	9			2		
C (m) (vph)	593	1069	374			221		
v/c	0.00	0.01	0.02			0.01		
95% queue length	0.01	0.03	0.07			0.03		
Control Delay	11.1	8.4	14.9			21.4		
LOS	B	A	B			C		
Approach Delay	--	--	14.9			21.4		
Approach LOS	--	--	B			C		