APPENDIX B WASIST MODEL OUTPUT

Washington State Intersection Screening Tool 1.0

04-04-07

02:49 PM

Bellevue Braided Crossing Project

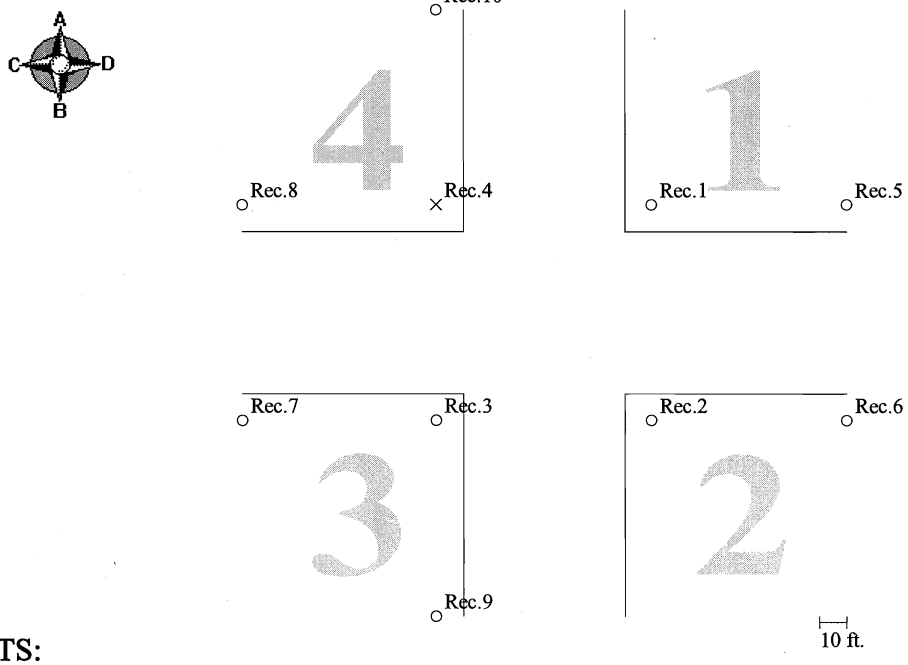
Description: **25: NE 12th & 112th 2005**

Performed by: **Natalie Liljenwall - CH2M HILL**

-

Intersection Type: **Four-Way Intersection, 4 x 4 w/4 Lt Turns**

Street Names: **A-B: 112th C-D: 12th**



RESULTS:

Receptor#	Quadrant	Distance from A-B roadway (feet)	Distance from C-D roadway (feet)	CO 1-hour avg. Conc. (ppm)	CO 8-hour avg. Conc. (ppm)	Pass/Fail*
1	1	10	10	10.0	8.5	Pass
2	2	10	10	10.5	8.8	Pass
3	3	10	10	10.4	8.8	Pass
4	4	10	10	10.9	9.1	Fail
5	1	82	10	10.0	8.5	Pass
6	2	82	10	9.0	7.8	Pass
7	3	82	10	10.2	8.6	Pass
8	4	82	10	9.2	7.9	Pass
9	3	10	82	9.1	7.9	Pass
10	4	10	82	10.2	8.6	Pass

*Project **FAILS** 8-hr NAAQS of 9 ppm. Largest modeled CO concentrations are at **receptor 4**.
Additional refined CO analysis must be performed.

- All CO concentrations include a background concentration of **5.0** ppm.
- 8-hr average CO concentrations are calculated by multiplying the 1-hr average concentrations (without background) by a persistence factor of 0.7 and then adding the background concentration.

Washington State Intersection Screening Tool 1.0

USER INPUTS

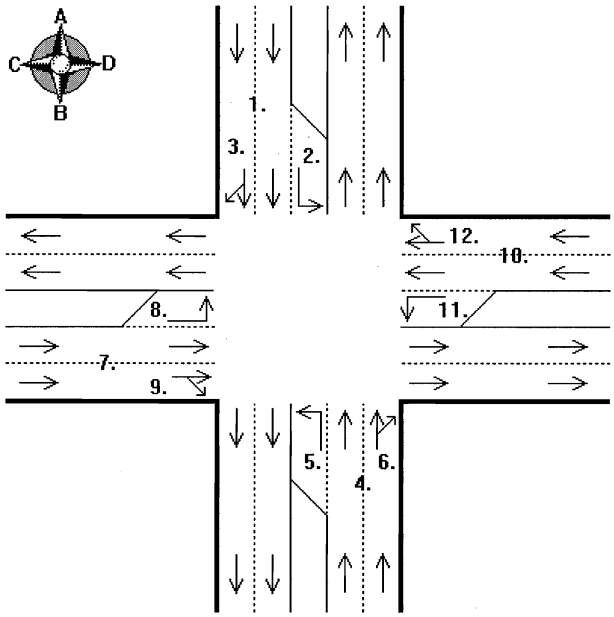
Bellevue Braided Crossing Project

Intersection Data:

Predominant Surroundings: **Offices**

Traffic Volumes:

Vol. Index	Movement	Volume (vph)
1	A-B Thru	500
2	A-D Left Turn	130
3	A-C Right Turn	180
4	B-A Thru	330
5	B-C Left Turn	100
6	B-D Right Turn	200
7	C-D Thru	680
8	C-A Left Turn	170
9	C-B Right Turn	120
10	D-C Thru	1010
11	D-B Left Turn	220
12	D-A Right Turn	170



CO Emission Factors Based On:

Location: **Western Washington - KING County**
CO Maint. Area: **Puget Sound**
I/M Program: **Yes**
Model Year: **2005**
Gasoline sulfur content of 160 ppm for 2005-2006, 60 ppm for 2007, & 30 ppm for 2008-2050.

MOBILE6.2 CO Emission Factors:

Idle Emission Factor (g/hr): **159.78**

Approach	Speed (mph)	EF (g/mile)
Leg A	30	23.09
Leg B	30	23.09
Leg C	30	23.09
Leg D	30	23.09

***Note: Local roadways should be modeled using an approach speed of 15 mph or less. Highway ramps should be modeled using an approach speed of 5 mph.**

Traffic Signal Timing:

Total Cycle Length (sec): **120**

Red Times:

Type of Movement	Red Times (sec)
Leg A Thru & Rt	89
Leg A Left Turn	105
Leg B Thru & Rt	91
Leg B Left Turn	107
Leg C Thru & Rt	75
Leg C Left Turn	102
Leg D Thru & Rt	66
Leg D Left Turn	93

Washington State Intersection Screening Tool 1.0

USER COMMENTS

Bellevue Braided Crossing Project

User Comments:

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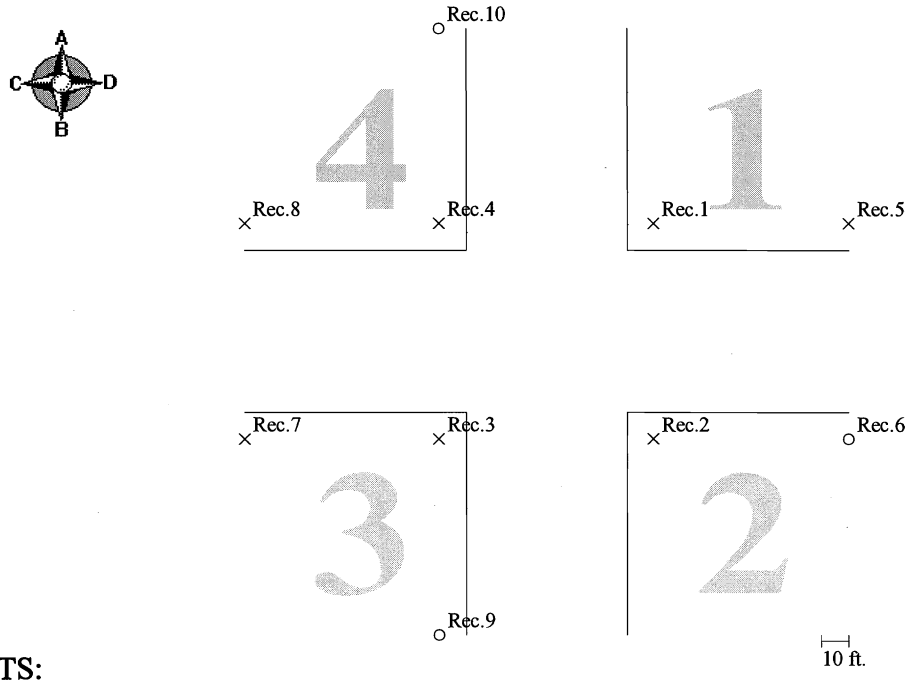
Washington State Intersection Screening Tool 1.0

04-11-07
11:18 AM
Bellevue Braided Crossing Project

Description: **26: NE 8th and 405 off**
Performed by: **Natalie Liljenwall - CH2M HILL**
-
Intersection Type: **Four-Way Intersection, 4 x 4 w/4 Lt Turns**
Street Names: **A-B: 405 Off C-D: 8th**



RESULTS:

Receptor#	Quadrant	Distance from A-B roadway (feet)	Distance from C-D roadway (feet)	CO 1-hour avg. Conc. (ppm)	CO 8-hour avg. Conc. (ppm)	Pass/Fail*
1	1	10	10	11.7	9.7	Fail
2	2	10	10	12.0	9.9	Fail
3	3	10	10	11.9	9.8	Fail
4	4	10	10	12.9	10.5	Fail
5	1	82	10	11.7	9.7	Fail
6	2	82	10	10.4	8.8	Pass
7	3	82	10	11.6	9.6	Fail
8	4	82	10	10.8	9.1	Fail
9	3	10	82	9.8	8.4	Pass
10	4	10	82	10.6	8.9	Pass

*Project **FAILS** 8-hr NAAQS of 9 ppm. Largest modeled CO concentrations are at **receptor 4.**
Additional refined CO analysis must be performed.
- All CO concentrations include a background concentration of **5.0** ppm.
- 8-hr average CO concentrations are calculated by multiplying the 1-hr average concentrations (without background) by a persistence factor of 0.7 and then adding the background concentration.

Washington State Intersection Screening Tool 1.0

USER INPUTS

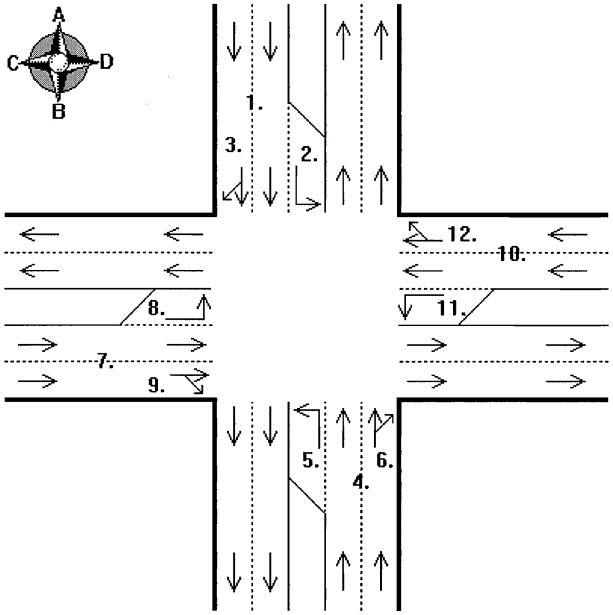
Bellevue Braided Crossing Project

Intersection Data:

Predominant Surroundings: **Offices**

Traffic Volumes:

Vol. Index	Movement	Volume (vph)
1	A-B Thru	630
2	A-D Left Turn	450
3	A-C Right Turn	50
4	B-A Thru	290
5	B-C Left Turn	80
6	B-D Right Turn	230
7	C-D Thru	1080
8	C-A Left Turn	2
9	C-B Right Turn	440
10	D-C Thru	1550
11	D-B Left Turn	150
12	D-A Right Turn	240



CO Emission Factors Based On:

Location: **Western Washington - KING County**
CO Maint. Area: **Puget Sound**
I/M Program: **Yes**
Model Year: **2005**
Gasoline sulfur content of 160 ppm for 2005-2006, 60 ppm for 2007, & 30 ppm for 2008-2050.

MOBILE6.2 CO Emission Factors:

Idle Emission Factor (g/hr): **159.78**

Approach	Speed (mph)	EF (g/mile)
Leg A	30	23.09
Leg B	30	23.09
Leg C	30	23.09
Leg D	30	23.09

***Note: Local roadways should be modeled using an approach speed of 15 mph or less. Highway ramps should be modeled using an approach speed of 5 mph.**

Traffic Signal Timing:

Total Cycle Length (sec): **140**

Red Times:

Type of Movement	Red Times (sec)
Leg A Thru & Rt	93
Leg A Left Turn	107
Leg B Thru & Rt	110
Leg B Left Turn	124
Leg C Thru & Rt	86
Leg C Left Turn	86
Leg D Thru & Rt	101
Leg D Left Turn	121

User Comments:

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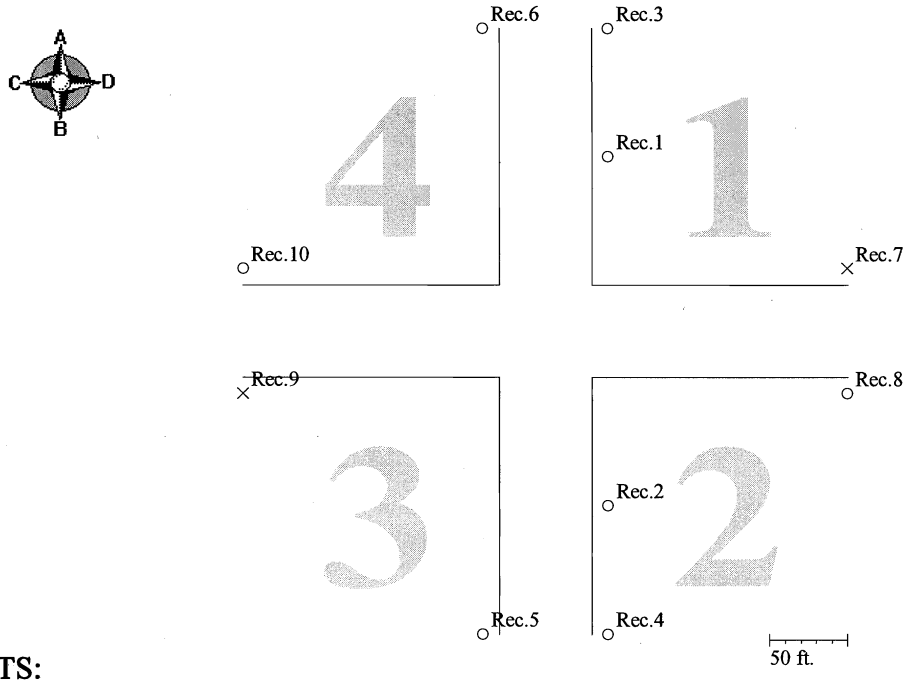
Washington State Intersection Screening Tool 1.0

04-11-07
11:37 AM
Bellevue Braided Crossing Project

Description: **26: NE 8th and 405 off**
Performed by: **Natalie Liljenwall - CH2M HILL**
-
Intersection Type: **Four-Way Intersection, 4 x 4 w/4 Lt Turns**
Street Names: **A-B: 405 Off C-D: 8th**



RESULTS:

Receptor#	Quadrant	Distance from A-B roadway (feet)	Distance from C-D roadway (feet)	CO 1-hour avg. Conc. (ppm)	CO 8-hour avg. Conc. (ppm)	Pass/Fail*
1	1	10	82	9.2	7.9	Pass
2	2	10	82	10.5	8.8	Pass
3	1	10	164	8.8	7.7	Pass
4	2	10	164	10.4	8.8	Pass
5	3	10	164	9.3	8.0	Pass
6	4	10	164	10.6	8.9	Pass
7	1	164	10	12.2	10.0	Fail
8	2	164	10	10.6	8.9	Pass
9	3	164	10	11.7	9.7	Fail
10	4	164	10	10.4	8.8	Pass

*Project **FAILS** 8-hr NAAQS of 9 ppm. Largest modeled CO concentrations are at **receptor 7**.
Additional refined CO analysis must be performed.
- All CO concentrations include a background concentration of **5.0** ppm.
- 8-hr average CO concentrations are calculated by multiplying the 1-hr average concentrations (without background) by a persistence factor of 0.7 and then adding the background concentration.

Washington State Intersection Screening Tool 1.0

USER INPUTS

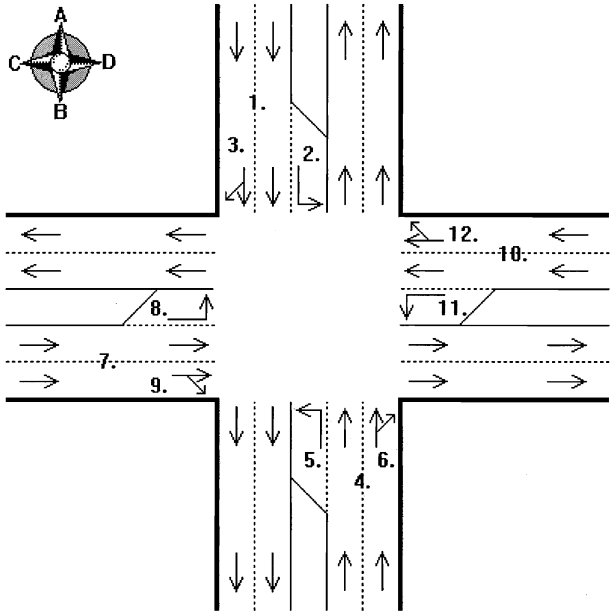
Bellevue Braided Crossing Project

Intersection Data:

Predominant Surroundings: **Offices**

Traffic Volumes:

Vol. Index	Movement	Volume (vph)
1	A-B Thru	630
2	A-D Left Turn	450
3	A-C Right Turn	50
4	B-A Thru	290
5	B-C Left Turn	80
6	B-D Right Turn	230
7	C-D Thru	1080
8	C-A Left Turn	2
9	C-B Right Turn	440
10	D-C Thru	1550
11	D-B Left Turn	150
12	D-A Right Turn	240



CO Emission Factors Based On:

Location: **Western Washington - KING County**
CO Maint. Area: **Puget Sound**
I/M Program: **Yes**
Model Year: **2005**
Gasoline sulfur content of 160 ppm for 2005-2006, 60 ppm for 2007, & 30 ppm for 2008-2050.

MOBILE6.2 CO Emission Factors:

Idle Emission Factor (g/hr): **159.78**

Approach	Speed (mph)	EF (g/mile)
Leg A	30	23.09
Leg B	30	23.09
Leg C	30	23.09
Leg D	30	23.09

***Note: Local roadways should be modeled using an approach speed of 15 mph or less. Highway ramps should be modeled using an approach speed of 5 mph.**

Traffic Signal Timing:

Total Cycle Length (sec): **140**

Red Times:

Type of Movement	Red Times (sec)
Leg A Thru & Rt	93
Leg A Left Turn	107
Leg B Thru & Rt	110
Leg B Left Turn	124
Leg C Thru & Rt	86
Leg C Left Turn	86
Leg D Thru & Rt	101
Leg D Left Turn	121

Washington State Intersection Screening Tool 1.0

USER COMMENTS

Bellevue Braided Crossing Project

User Comments:

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Washington State Intersection Screening Tool 1.0

04-04-07
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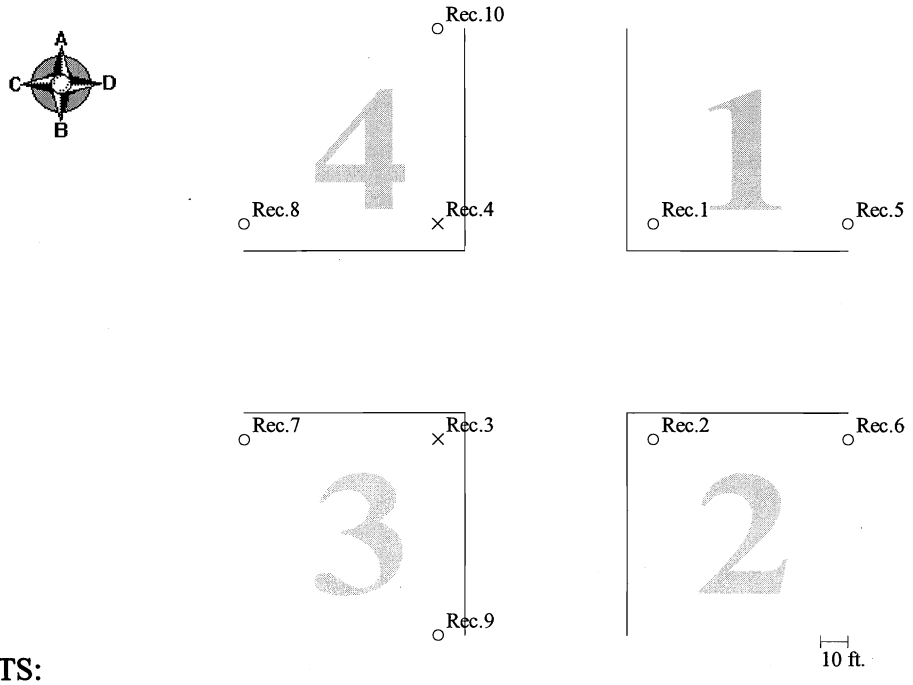
Bellevue Braided Crossing Project

Description: **Bel-Red Road and 116th 2005**
Performed by: **Natalie Liljenwall - CH2M HILL**
-
Intersection Type: **Four-Way Intersection, 4 x 4 w/4 Lt Turns**
Street Names: **A-B: 116th C-D: Belred**



RESULTS:

Receptor#	Quadrant	Distance from A-B roadway (feet)	Distance from C-D roadway (feet)	CO 1-hour avg. Conc. (ppm)	CO 8-hour avg. Conc. (ppm)	Pass/Fail*
1	1	10	10	10.6	8.9	Pass
2	2	10	10	10.7	9.0	Pass
3	3	10	10	11.1	9.3	Fail
4	4	10	10	10.9	9.1	Fail
5	1	82	10	10.2	8.6	Pass
6	2	82	10	9.2	7.9	Pass
7	3	82	10	10.1	8.6	Pass
8	4	82	10	9.4	8.1	Pass
9	3	10	82	9.2	7.9	Pass
10	4	10	82	10.2	8.6	Pass

*Project **FAILS** 8-hr NAAQS of 9 ppm. Largest modeled CO concentrations are at **receptor 3**.
Additional refined CO analysis must be performed.
- All CO concentrations include a background concentration of **5.0** ppm.
- 8-hr average CO concentrations are calculated by multiplying the 1-hr average concentrations (without background) by a persistence factor of 0.7 and then adding the background concentration.

Washington State Intersection Screening Tool 1.0

USER INPUTS

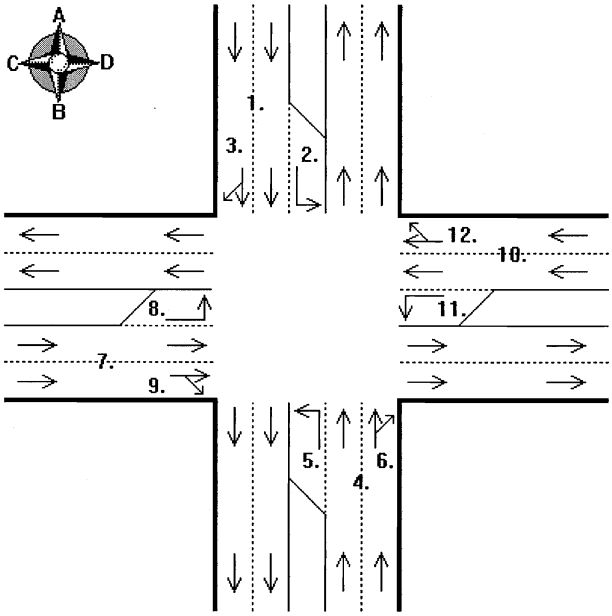
Bellevue Braided Crossing Project

Intersection Data:

Predominant Surroundings: **Offices**

Traffic Volumes:

Vol. Index	Movement	Volume (vph)
1	A-B Thru	470
2	A-D Left Turn	70
3	A-C Right Turn	240
4	B-A Thru	420
5	B-C Left Turn	200
6	B-D Right Turn	360
7	C-D Thru	660
8	C-A Left Turn	190
9	C-B Right Turn	170
10	D-C Thru	990
11	D-B Left Turn	180
12	D-A Right Turn	80



CO Emission Factors Based On:

Location: **Western Washington - KING County**
CO Maint. Area: **Puget Sound**
I/M Program: **Yes**
Model Year: **2005**
Gasoline sulfur content of 160 ppm for 2005-2006, 60 ppm for 2007, & 30 ppm for 2008-2050.

MOBILE6.2 CO Emission Factors:

Idle Emission Factor (g/hr): **159.78**

Approach	Speed (mph)	EF (g/mile)
Leg A	30	23.09
Leg B	30	23.09
Leg C	30	23.09
Leg D	30	23.09

***Note: Local roadways should be modeled using an approach speed of 15 mph or less. Highway ramps should be modeled using an approach speed of 5 mph.**

Traffic Signal Timing:

Total Cycle Length (sec): **120**

Red Times:

Type of Movement	Red Times (sec)
Leg A Thru & Rt	96
Leg A Left Turn	109
Leg B Thru & Rt	85
Leg B Left Turn	98
Leg C Thru & Rt	72
Leg C Left Turn	99
Leg D Thru & Rt	71
Leg D Left Turn	98

Washington State Intersection Screening Tool 1.0

USER COMMENTS

Bellevue Braided Crossing Project

User Comments:

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Washington State Intersection Screening Tool 1.0

04-04-07

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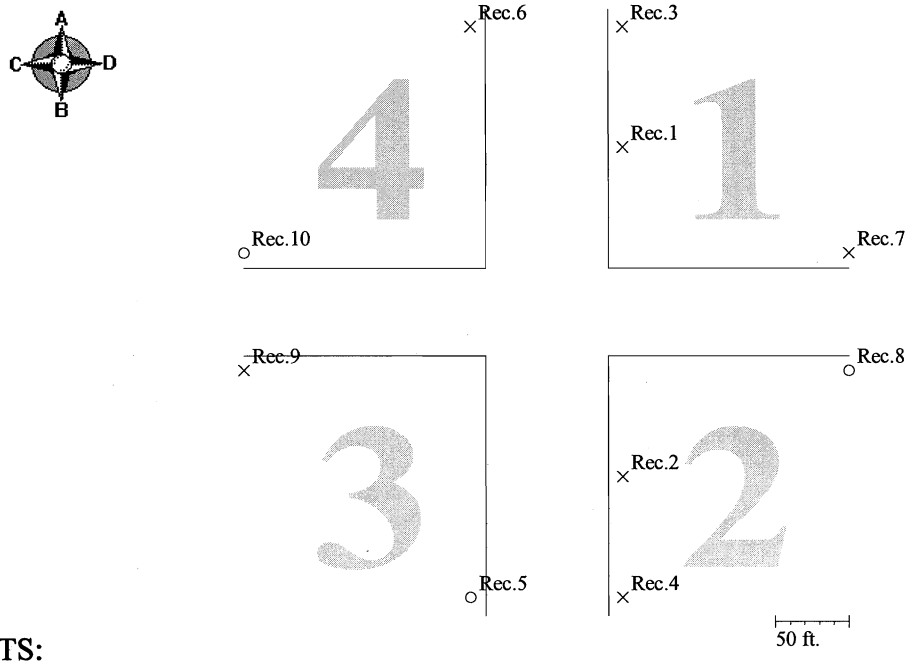
Bellevue Braided Crossing Project

Description: **30: NE 8th & 116th Exist**
Performed by: **Natalie Liljenwall - CH2M HILL**
-
Intersection Type: **Four-Way Intersection, 6 x 4 w/4 Lt Turns**
Street Names: **A-B: 8th C-D: 116th**



RESULTS:

Receptor#	Quadrant	Distance from A-B roadway (feet)	Distance from C-D roadway (feet)	CO 1-hour avg. Conc. (ppm)	CO 8-hour avg. Conc. (ppm)	Pass/Fail*
1	1	10	82	11.0	9.2	Fail
2	2	10	82	12.0	9.9	Fail
3	1	10	164	10.8	9.1	Fail
4	2	10	164	12.4	10.2	Fail
5	3	10	164	10.2	8.6	Pass
6	4	10	164	12.5	10.3	Fail
7	1	164	10	11.4	9.5	Fail
8	2	164	10	9.6	8.2	Pass
9	3	164	10	11.4	9.5	Fail
10	4	164	10	10.0	8.5	Pass

*Project **FAILS** 8-hr NAAQS of 9 ppm. Largest modeled CO concentrations are at **receptor 6**.
Additional refined CO analysis must be performed.
- All CO concentrations include a background concentration of **5.0** ppm.
- 8-hr average CO concentrations are calculated by multiplying the 1-hr average concentrations (without background) by a persistence factor of 0.7 and then adding the background concentration.

Washington State Intersection Screening Tool 1.0

USER INPUTS

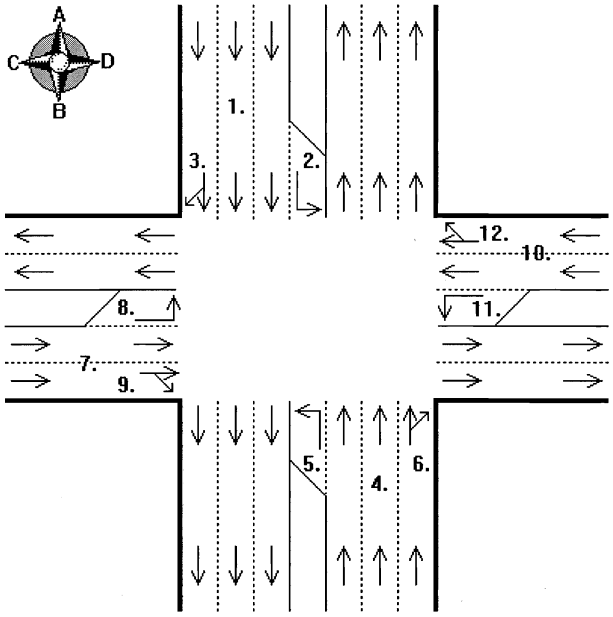
Bellevue Braided Crossing Project

Intersection Data:

Predominant Surroundings: **Offices**

Traffic Volumes:

Vol. Index	Movement	Volume (vph)
1	A-B Thru	1140
2	A-D Left Turn	200
3	A-C Right Turn	260
4	B-A Thru	1380
5	B-C Left Turn	270
6	B-D Right Turn	90
7	C-D Thru	470
8	C-A Left Turn	200
9	C-B Right Turn	300
10	D-C Thru	570
11	D-B Left Turn	160
12	D-A Right Turn	650



CO Emission Factors Based On:

Location: **Western Washington - KING County**
CO Maint. Area: **Puget Sound**
I/M Program: **Yes**
Model Year: **2005**
Gasoline sulfur content of 160 ppm for 2005-2006, 60 ppm for 2007, & 30 ppm for 2008-2050.

MOBILE6.2 CO Emission Factors:

Idle Emission Factor (g/hr): **159.78**

Approach	Speed (mph)	EF (g/mile)
Leg A	30	23.09
Leg B	30	23.09
Leg C	30	23.09
Leg D	30	23.09

***Note: Local roadways should be modeled using an approach speed of 15 mph or less. Highway ramps should be modeled using an approach speed of 5 mph.**

Traffic Signal Timing:

Total Cycle Length (sec): **180**

Red Times:

Type of Movement	Red Times (sec)
Leg A Thru & Rt	112
Leg A Left Turn	150
Leg B Thru & Rt	118
Leg B Left Turn	156
Leg C Thru & Rt	143
Leg C Left Turn	155
Leg D Thru & Rt	121
Leg D Left Turn	133

Washington State Intersection Screening Tool 1.0

USER COMMENTS

Bellevue Braided Crossing Project

User Comments:

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Washington State Intersection Screening Tool 1.0

10-02-07

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Bellevue Braided Crossing Project

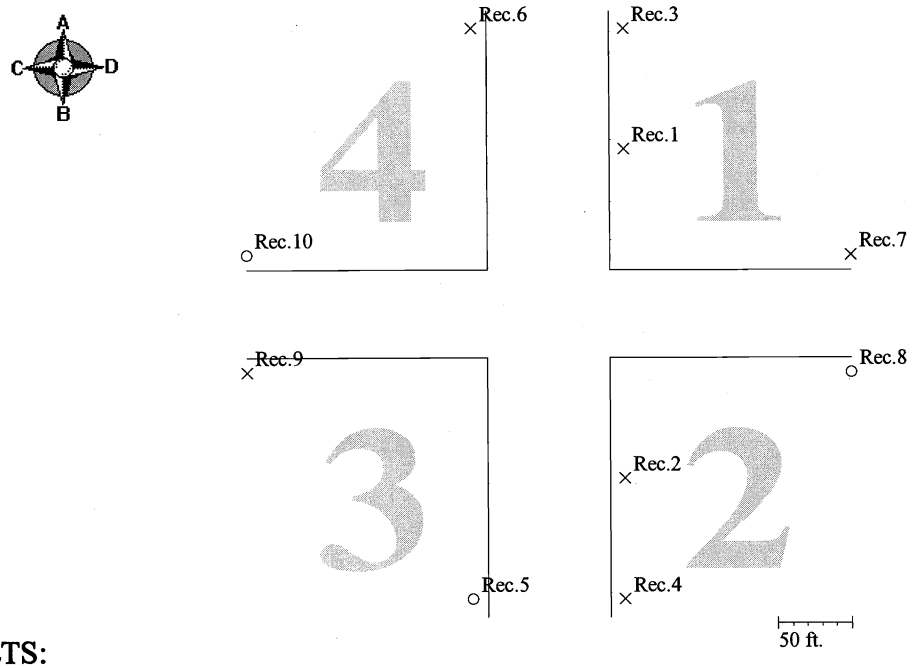
Description: **30: NE 8th & 116th 2005**

Performed by: **Natalie Liljenwall - CH2M HILL**

-

Intersection Type: **Four-Way Intersection, 6 x 4 w/4 Lt Turns**

Street Names: **A-B: 8th C-D: 116th**



RESULTS:

Receptor#	Quadrant	Distance from A-B roadway (feet)	Distance from C-D roadway (feet)	CO 1-hour avg. Conc. (ppm)	CO 8-hour avg. Conc. (ppm)	Pass/Fail*
1	1	10	82	11.0	9.2	Fail
2	2	10	82	12.0	9.9	Fail
3	1	10	164	10.8	9.1	Fail
4	2	10	164	12.4	10.2	Fail
5	3	10	164	10.2	8.6	Pass
6	4	10	164	12.5	10.3	Fail
7	1	164	10	11.4	9.5	Fail
8	2	164	10	9.6	8.2	Pass
9	3	164	10	11.4	9.5	Fail
10	4	164	10	10.0	8.5	Pass

*Project **FAILS** 8-hr NAAQS of 9 ppm. Largest modeled CO concentrations are at **receptor 6**.
Additional refined CO analysis must be performed.

- All CO concentrations include a background concentration of **5.0** ppm.
- 8-hr average CO concentrations are calculated by multiplying the 1-hr average concentrations (without background) by a persistence factor of 0.7 and then adding the background concentration.

Washington State Intersection Screening Tool 1.0

USER INPUTS

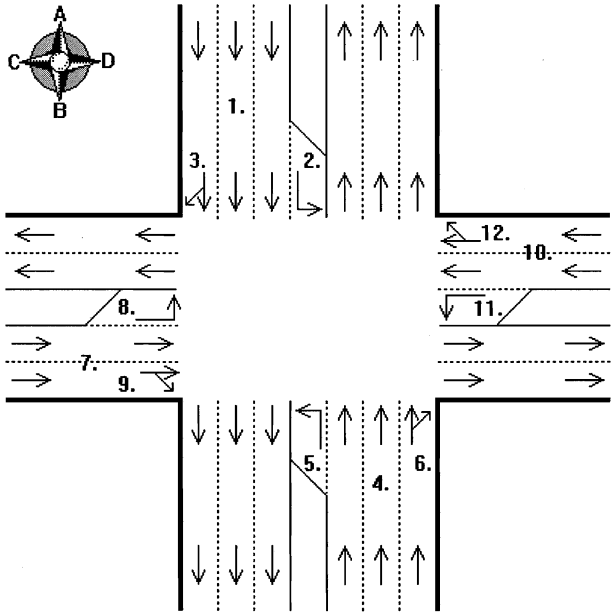
Bellevue Braided Crossing Project

Intersection Data:

Predominant Surroundings: **Offices**

Traffic Volumes:

Vol. Index	Movement	Volume (vph)
1	A-B Thru	1140
2	A-D Left Turn	200
3	A-C Right Turn	260
4	B-A Thru	1380
5	B-C Left Turn	270
6	B-D Right Turn	90
7	C-D Thru	470
8	C-A Left Turn	200
9	C-B Right Turn	300
10	D-C Thru	570
11	D-B Left Turn	160
12	D-A Right Turn	650



CO Emission Factors Based On:

Location: **Western Washington - KING County**
CO Maint. Area: **Puget Sound**
I/M Program: **Yes**
Model Year: **2005**
Gasoline sulfur content of 160 ppm for 2005-2006, 60 ppm for 2007, & 30 ppm for 2008-2050.

MOBILE6.2 CO Emission Factors:

Idle Emission Factor (g/hr): **159.78**

Approach	Speed (mph)	EF (g/mile)
Leg A	30	23.09
Leg B	30	23.09
Leg C	30	23.09
Leg D	30	23.09

***Note: Local roadways should be modeled using an approach speed of 15 mph or less. Highway ramps should be modeled using an approach speed of 5 mph.**

Traffic Signal Timing:

Total Cycle Length (sec): **180**

Red Times:

Type of Movement	Red Times (sec)
Leg A Thru & Rt	112
Leg A Left Turn	150
Leg B Thru & Rt	118
Leg B Left Turn	156
Leg C Thru & Rt	143
Leg C Left Turn	155
Leg D Thru & Rt	121
Leg D Left Turn	133

User Comments:

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Washington State Intersection Screening Tool 1.0

10-02-07
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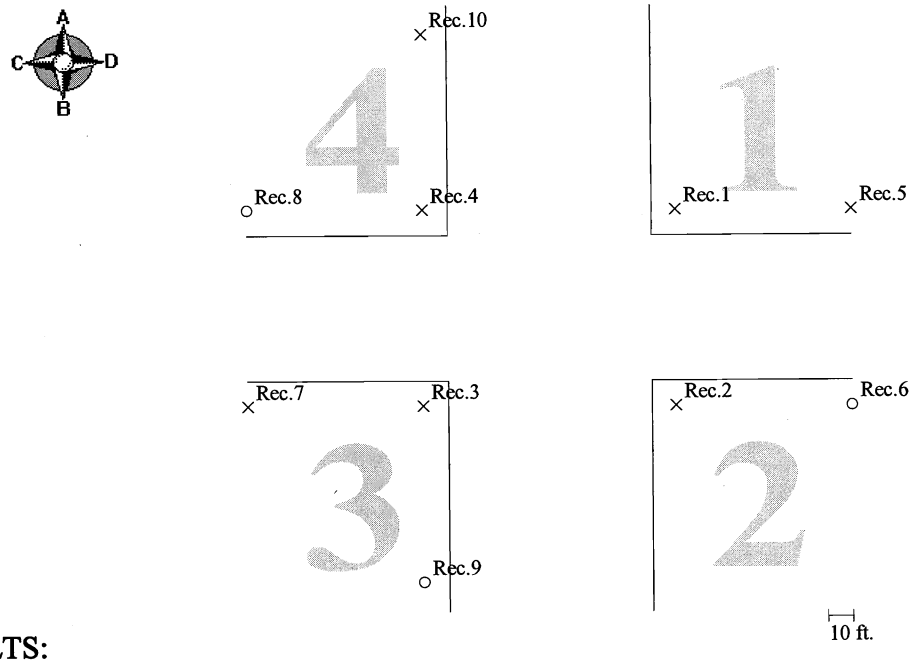
Bellevue Braided Crossing Project

Description: **30: NE 8th & 116th 2005**
Performed by: **Natalie Liljenwall - CH2M HILL**
-
Intersection Type: **Four-Way Intersection, 6 x 4 w/4 Lt Turns**
Street Names: **A-B: 8th C-D: 116th**



RESULTS:

Receptor#	Quadrant	Distance from A-B roadway (feet)	Distance from C-D roadway (feet)	CO 1-hour avg. Conc. (ppm)	CO 8-hour avg. Conc. (ppm)	Pass/Fail*
1	1	10	10	13.5	10.9	Fail
2	2	10	10	12.3	10.1	Fail
3	3	10	10	12.8	10.5	Fail
4	4	10	10	12.4	10.2	Fail
5	1	82	10	11.4	9.5	Fail
6	2	82	10	10.0	8.5	Pass
7	3	82	10	11.5	9.6	Fail
8	4	82	10	10.6	8.9	Pass
9	3	10	82	10.5	8.8	Pass
10	4	10	82	11.9	9.8	Fail

*Project **FAILS** 8-hr NAAQS of 9 ppm. Largest modeled CO concentrations are at **receptor 1**.
Additional refined CO analysis must be performed.
- All CO concentrations include a background concentration of **5.0** ppm.
- 8-hr average CO concentrations are calculated by multiplying the 1-hr average concentrations (without background) by a persistence factor of 0.7 and then adding the background concentration.

Washington State Intersection Screening Tool 1.0

USER INPUTS

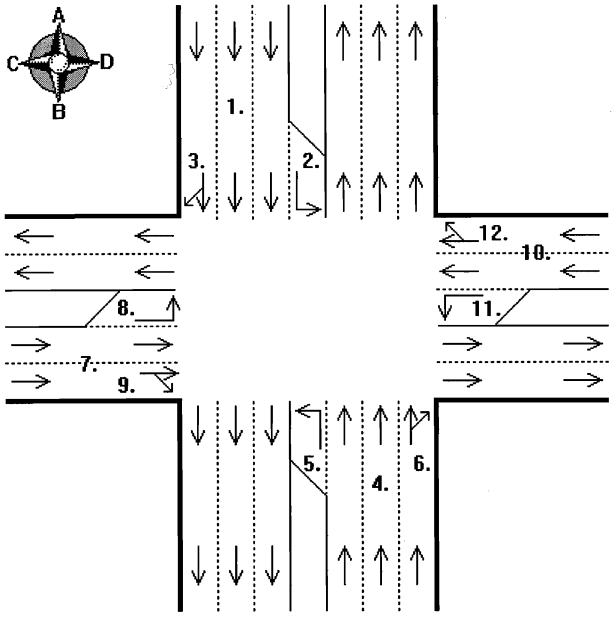
Bellevue Braided Crossing Project

Intersection Data:

Predominant Surroundings: **Offices**

Traffic Volumes:

Vol. Index	Movement	Volume (vph)
1	A-B Thru	1140
2	A-D Left Turn	200
3	A-C Right Turn	260
4	B-A Thru	1380
5	B-C Left Turn	270
6	B-D Right Turn	90
7	C-D Thru	470
8	C-A Left Turn	200
9	C-B Right Turn	300
10	D-C Thru	570
11	D-B Left Turn	160
12	D-A Right Turn	650



CO Emission Factors Based On:

Location: **Western Washington - KING County**
CO Maint. Area: **Puget Sound**
I/M Program: **Yes**
Model Year: **2005**
Gasoline sulfur content of 160 ppm for 2005-2006, 60 ppm for 2007, & 30 ppm for 2008-2050.

MOBILE6.2 CO Emission Factors:

Idle Emission Factor (g/hr): **159.78**

Approach	Speed (mph)	EF (g/mile)
Leg A	30	23.09
Leg B	30	23.09
Leg C	30	23.09
Leg D	30	23.09

***Note: Local roadways should be modeled using an approach speed of 15 mph or less. Highway ramps should be modeled using an approach speed of 5 mph.**

Traffic Signal Timing:

Total Cycle Length (sec): **180**

Red Times:

Type of Movement	Red Times (sec)
Leg A Thru & Rt	112
Leg A Left Turn	150
Leg B Thru & Rt	118
Leg B Left Turn	156
Leg C Thru & Rt	143
Leg C Left Turn	155
Leg D Thru & Rt	121
Leg D Left Turn	133

Washington State Intersection Screening Tool 1.0

USER COMMENTS

Bellevue Braided Crossing Project

User Comments:

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Washington State Intersection Screening Tool 1.0

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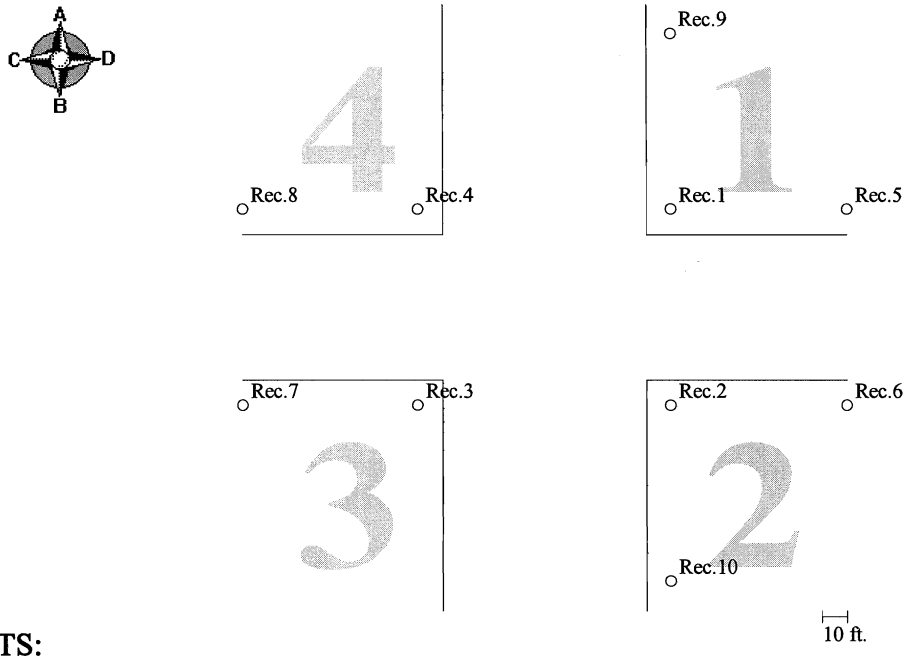
Bellevue Braided Crossing Project

Description: **72: NE 4th and 112th: 2005**
Performed by: **Natalie Liljenwall - CH2M HILL**
-
Intersection Type: **Four-Way Intersection, 6 x 4 w/4 Lt Turns**
Street Names: **A-B: 4th C-D: 112th**



RESULTS:

Receptor#	Quadrant	Distance from A-B roadway (feet)	Distance from C-D roadway (feet)	CO 1-hour avg. Conc. (ppm)	CO 8-hour avg. Conc. (ppm)	Pass/Fail*
1	1	10	10	9.6	8.2	Pass
2	2	10	10	9.8	8.4	Pass
3	3	10	10	9.9	8.4	Pass
4	4	10	10	9.7	8.3	Pass
5	1	82	10	9.7	8.3	Pass
6	2	82	10	8.3	7.3	Pass
7	3	82	10	9.6	8.2	Pass
8	4	82	10	8.4	7.4	Pass
9	1	10	82	8.0	7.1	Pass
10	2	10	82	10.0	8.5	Pass

*Project **PASSES** 1-hr and 8-hr NAAQS of 35 ppm and 9 ppm, respectively.
Largest modeled CO concentrations are at **receptor 10**.
- All CO concentrations include a background concentration of **5.0** ppm.
- 8-hr average CO concentrations are calculated by multiplying the 1-hr average concentrations (without background) by a persistence factor of 0.7 and then adding the background concentration.

Washington State Intersection Screening Tool 1.0

USER INPUTS

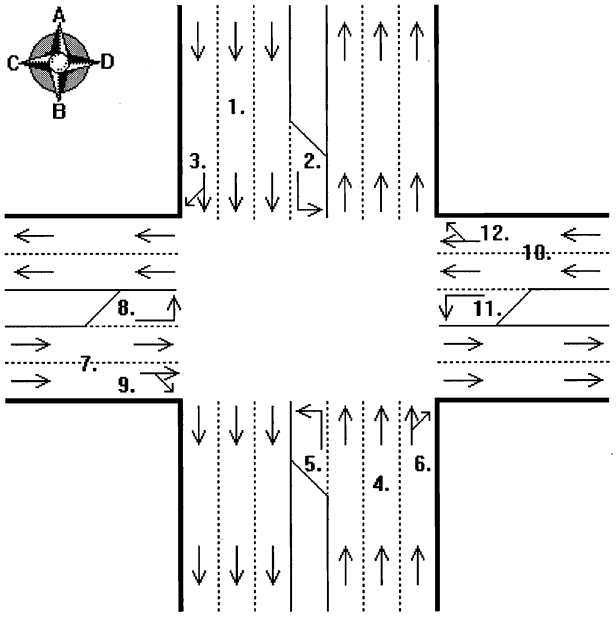
Bellevue Braided Crossing Project

Intersection Data:

Predominant Surroundings: **Offices**

Traffic Volumes:

Vol. Index	Movement	Volume (vph)
1	A-B Thru	900
2	A-D Left Turn	20
3	A-C Right Turn	130
4	B-A Thru	520
5	B-C Left Turn	2
6	B-D Right Turn	100
7	C-D Thru	500
8	C-A Left Turn	90
9	C-B Right Turn	270
10	D-C Thru	550
11	D-B Left Turn	100
12	D-A Right Turn	40



CO Emission Factors Based On:

Location: **Western Washington - KING County**
CO Maint. Area: **Puget Sound**
I/M Program: **Yes**
Model Year: **2005**
Gasoline sulfur content of 160 ppm for 2005-2006, 60 ppm for 2007, & 30 ppm for 2008-2050.

MOBILE6.2 CO Emission Factors:

Idle Emission Factor (g/hr): **159.78**

Approach	Speed (mph)	EF (g/mile)
Leg A	30	23.09
Leg B	30	23.09
Leg C	30	23.09
Leg D	30	23.09

***Note: Local roadways should be modeled using an approach speed of 15 mph or less. Highway ramps should be modeled using an approach speed of 5 mph.**

Traffic Signal Timing:

Total Cycle Length (sec): **140**

Red Times:

Type of Movement	Red Times (sec)
Leg A Thru & Rt	79
Leg A Left Turn	124
Leg B Thru & Rt	96
Leg B Left Turn	96
Leg C Thru & Rt	83
Leg C Left Turn	113
Leg D Thru & Rt	91
Leg D Left Turn	121

Washington State Intersection Screening Tool 1.0

USER COMMENTS

Bellevue Braided Crossing Project

User Comments:

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Washington State Intersection Screening Tool 1.0

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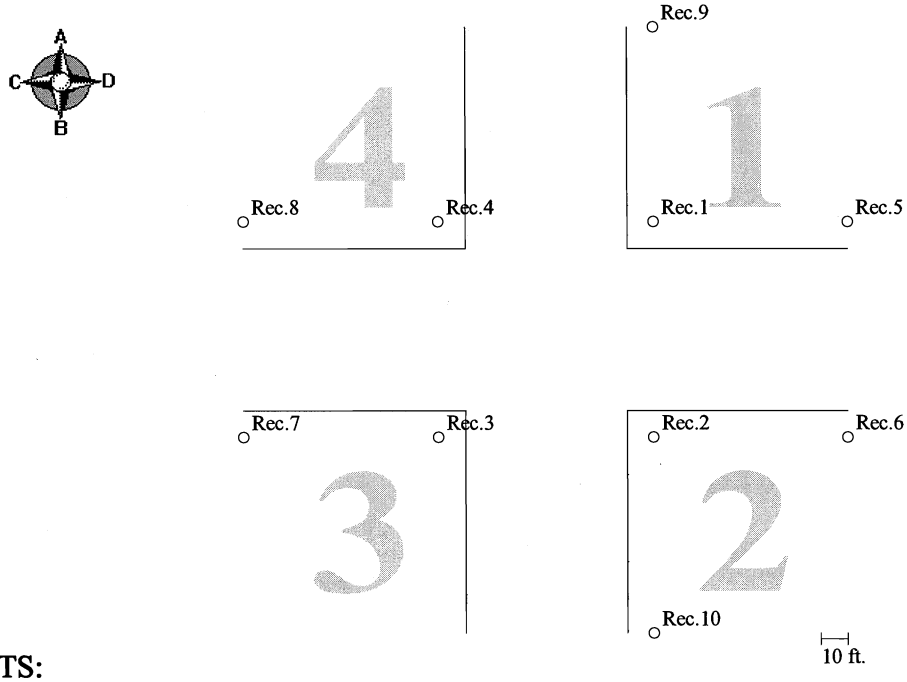
Bellevue Braided Crossing Project

Description: **Main St. and 112th 2005**
Performed by: **Natalie Liljenwall - CH2M HILL**
-
Intersection Type: **Four-Way Intersection, 4 x 4 w/4 Lt Turns**
Street Names: **A-B: 112th C-D: Main**



RESULTS:

Receptor#	Quadrant	Distance from A-B roadway (feet)	Distance from C-D roadway (feet)	CO 1-hour avg. Conc. (ppm)	CO 8-hour avg. Conc. (ppm)	Pass/Fail*
1	1	10	10	10.0	8.5	Pass
2	2	10	10	10.3	8.7	Pass
3	3	10	10	10.5	8.8	Pass
4	4	10	10	9.9	8.4	Pass
5	1	82	10	9.9	8.4	Pass
6	2	82	10	8.7	7.6	Pass
7	3	82	10	9.9	8.4	Pass
8	4	82	10	8.9	7.7	Pass
9	1	10	82	8.6	7.5	Pass
10	2	10	82	9.9	8.4	Pass

*Project **PASSES** 1-hr and 8-hr NAAQS of 35 ppm and 9 ppm, respectively.
Largest modeled CO concentrations are at **receptor 3**.
- All CO concentrations include a background concentration of **5.0** ppm.
- 8-hr average CO concentrations are calculated by multiplying the 1-hr average concentrations (without background) by a persistence factor of 0.7 and then adding the background concentration.

Washington State Intersection Screening Tool 1.0

USER INPUTS

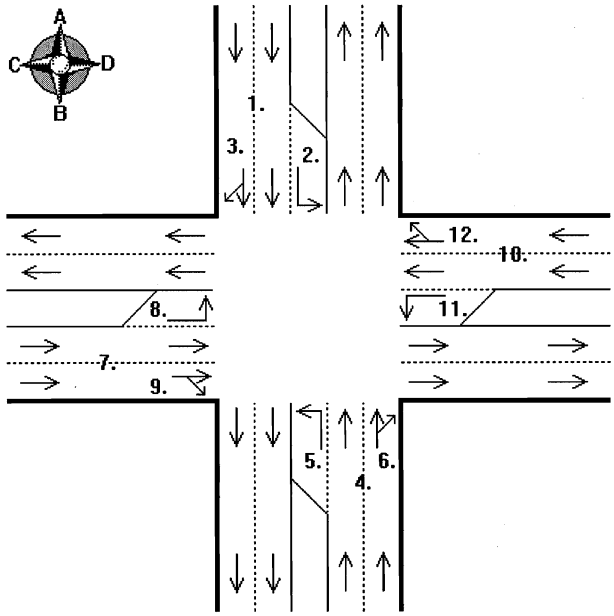
Bellevue Braided Crossing Project

Intersection Data:

Predominant Surroundings: **Offices**

Traffic Volumes:

Vol. Index	Movement	Volume (vph)
1	A-B Thru	740
2	A-D Left Turn	140
3	A-C Right Turn	60
4	B-A Thru	380
5	B-C Left Turn	230
6	B-D Right Turn	110
7	C-D Thru	580
8	C-A Left Turn	100
9	C-B Right Turn	310
10	D-C Thru	530
11	D-B Left Turn	200
12	D-A Right Turn	50



CO Emission Factors Based On:

Location: **Western Washington - KING County**
CO Maint. Area: **Puget Sound**
I/M Program: **Yes**
Model Year: **2005**
Gasoline sulfur content of 160 ppm for 2005-2006, 60 ppm for 2007, & 30 ppm for 2008-2050.

MOBILE6.2 CO Emission Factors:

Idle Emission Factor (g/hr): **159.78**

Approach	Speed (mph)	EF (g/mile)
Leg A	30	23.09
Leg B	30	23.09
Leg C	30	23.09
Leg D	30	23.09

***Note: Local roadways should be modeled using an approach speed of 15 mph or less.**
Highway ramps should be modeled using an approach speed of 5 mph.

Traffic Signal Timing:

Total Cycle Length (sec): **130**

Red Times:

Type of Movement	Red Times (sec)
Leg A Thru & Rt	90
Leg A Left Turn	111
Leg B Thru & Rt	87
Leg B Left Turn	108
Leg C Thru & Rt	87
Leg C Left Turn	109
Leg D Thru & Rt	87
Leg D Left Turn	109

Washington State Intersection Screening Tool 1.0

USER COMMENTS

Bellevue Braided Crossing Project

User Comments:

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Washington State Intersection Screening Tool 1.0

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Bellevue Braided Crossing Project

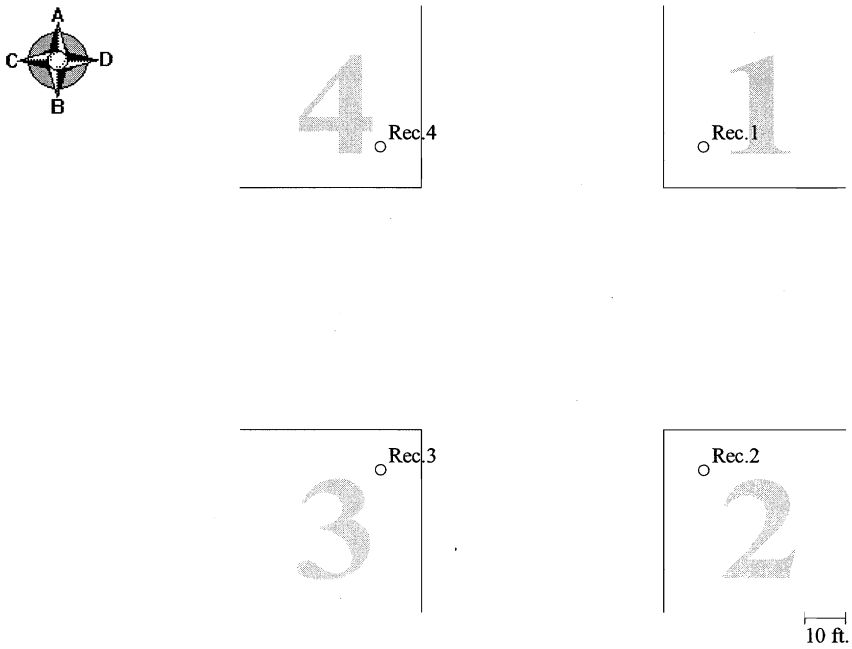
Description: **NE 12th & 112th 2014 NB**

Performed by: **Natalie Liljenwall - CH2M HILL**

-

Intersection Type: **Four-Way Intersection, 4 x 4 w/4 Lt Turns**

Street Names: **A-B: 112th C-D: 12th**



RESULTS:

Receptor#	Quadrant	Distance from A-B roadway (feet)	Distance from C-D roadway (feet)	CO 1-hour avg. Conc. (ppm)	CO 8-hour avg. Conc. (ppm)	Pass/Fail*
1	1	10	10	8.3	7.3	Pass
2	2	10	10	8.3	7.3	Pass
3	3	10	10	8.3	7.3	Pass
4	4	10	10	8.5	7.4	Pass

*Project **PASSES** 1-hr and 8-hr NAAQS of 35 ppm and 9 ppm, respectively.

Largest modeled CO concentrations are at **receptor 4**.

- All CO concentrations include a background concentration of **5.0** ppm.
- 8-hr average CO concentrations are calculated by multiplying the 1-hr average concentrations (without background) by a persistence factor of 0.7 and then adding the background concentration.

Washington State Intersection Screening Tool 1.0

USER INPUTS

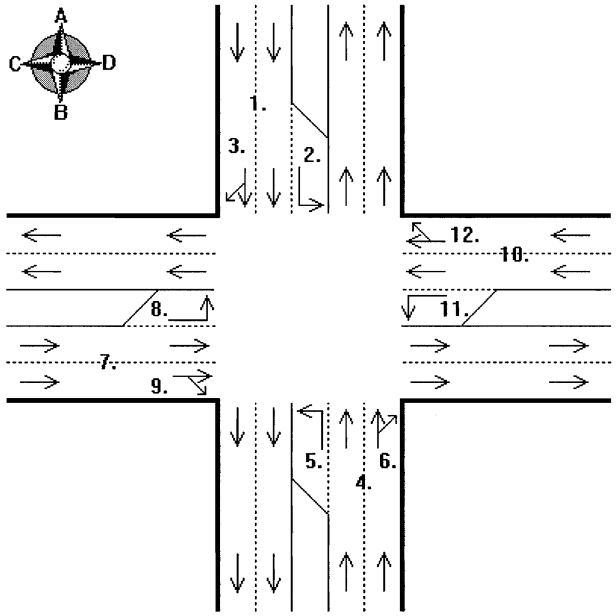
Bellevue Braided Crossing Project

Intersection Data:

Predominant Surroundings: **Offices**

Traffic Volumes:

Vol. Index	Movement	Volume (vph)
1	A-B Thru	680
2	A-D Left Turn	100
3	A-C Right Turn	230
4	B-A Thru	540
5	B-C Left Turn	160
6	B-D Right Turn	200
7	C-D Thru	690
8	C-A Left Turn	270
9	C-B Right Turn	180
10	D-C Thru	1020
11	D-B Left Turn	170
12	D-A Right Turn	180



CO Emission Factors Based On:

Location: **Western Washington - KING County**
CO Maint. Area: **Puget Sound**
I/M Program: **Yes**
Model Year: **2014**
Gasoline sulfur content of 160 ppm for 2005-2006, 60 ppm for 2007, & 30 ppm for 2008-2050.

MOBILE6.2 CO Emission Factors:

Idle Emission Factor (g/hr): **79.16**

Approach	Speed (mph)	EF (g/mile)
Leg A	30	13.20
Leg B	30	13.20
Leg C	30	13.20
Leg D	30	13.20

***Note: Local roadways should be modeled using an approach speed of 15 mph or less. Highway ramps should be modeled using an approach speed of 5 mph.**

Traffic Signal Timing:

Total Cycle Length (sec): **130**

Red Times:

Type of Movement	Red Times (sec)
Leg A Thru & Rt	93
Leg A Left Turn	117
Leg B Thru & Rt	90
Leg B Left Turn	114
Leg C Thru & Rt	77
Leg C Left Turn	107
Leg D Thru & Rt	80
Leg D Left Turn	110

User Comments:

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Washington State Intersection Screening Tool 1.0

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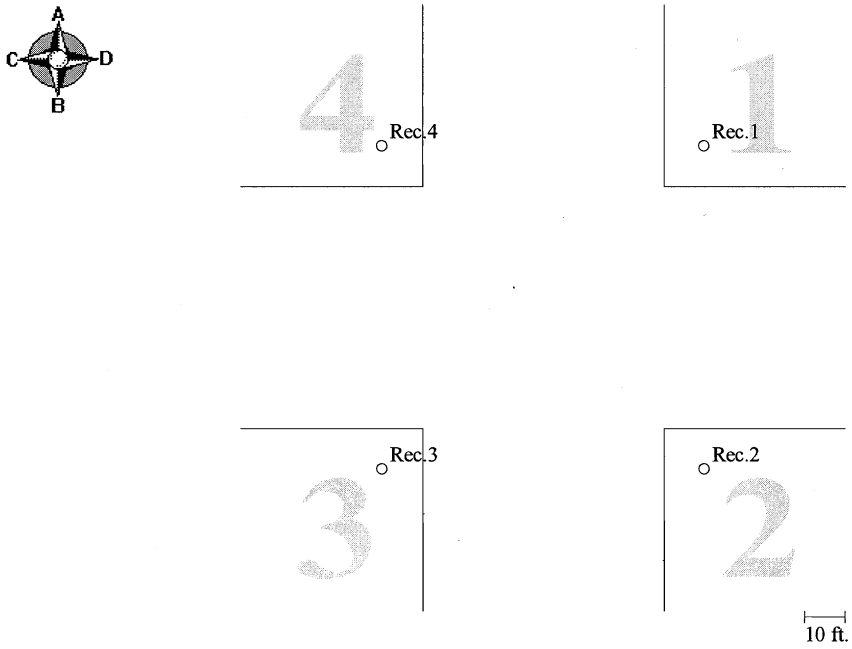
Bellevue Braided Crossing Project

Description: **26: NE 8th and 405 off Nb 2014**
Performed by: **Natalie Liljenwall - CH2M HILL**
-
Intersection Type: **Four-Way Intersection, 4 x 4 w/4 Lt Turns**
Street Names: **A-B: 405 Off C-D: 8th**



RESULTS:

Receptor#	Quadrant	Distance from A-B roadway (feet)	Distance from C-D roadway (feet)	CO 1-hour avg. Conc. (ppm)	CO 8-hour avg. Conc. (ppm)	Pass/Fail*
1	1	10	10	9.0	7.8	Pass
2	2	10	10	9.1	7.9	Pass
3	3	10	10	9.3	8.0	Pass
4	4	10	10	9.6	8.2	Pass

*Project **PASSES** 1-hr and 8-hr NAAQS of 35 ppm and 9 ppm, respectively.
Largest modeled CO concentrations are at **receptor 4**.
- All CO concentrations include a background concentration of **5.0** ppm.
- 8-hr average CO concentrations are calculated by multiplying the 1-hr average concentrations (without background) by a persistence factor of 0.7 and then adding the background concentration.

Washington State Intersection Screening Tool 1.0

USER INPUTS

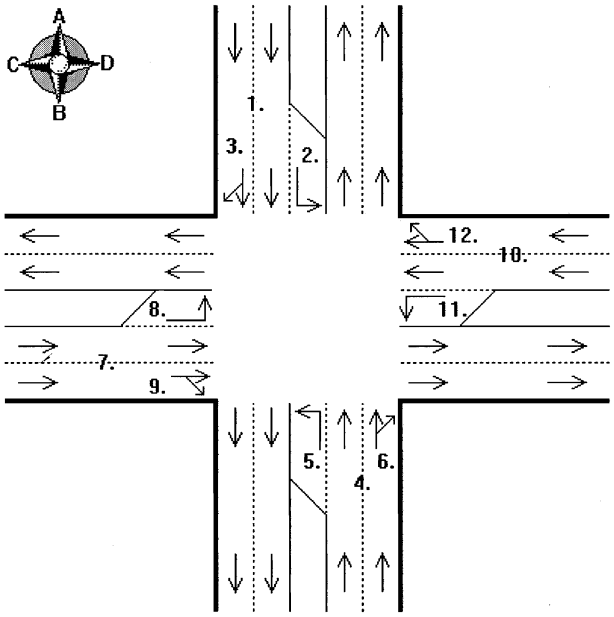
Bellevue Braided Crossing Project

Intersection Data:

Predominant Surroundings: **Offices**

Traffic Volumes:

Vol. Index	Movement	Volume (vph)
1	A-B Thru	720
2	A-D Left Turn	440
3	A-C Right Turn	100
4	B-A Thru	470
5	B-C Left Turn	140
6	B-D Right Turn	270
7	C-D Thru	1190
8	C-A Left Turn	2
9	C-B Right Turn	480
10	D-C Thru	1790
11	D-B Left Turn	200
12	D-A Right Turn	250



CO Emission Factors Based On:

Location: **Western Washington - KING County**
CO Maint. Area: **Puget Sound**
I/M Program: **Yes**
Model Year: **2014**
Gasoline sulfur content of 160 ppm for 2005-2006, 60 ppm for 2007, & 30 ppm for 2008-2050.

MOBILE6.2 CO Emission Factors:

Idle Emission Factor (g/hr): **79.16**

Approach	Speed (mph)	EF (g/mile)
Leg A	30	13.20
Leg B	30	13.20
Leg C	30	13.20
Leg D	30	13.20

***Note: Local roadways should be modeled using an approach speed of 15 mph or less. Highway ramps should be modeled using an approach speed of 5 mph.**

Traffic Signal Timing:

Total Cycle Length (sec): **130**

Red Times:

Type of Movement	Red Times (sec)
Leg A Thru & Rt	89
Leg A Left Turn	105
Leg B Thru & Rt	96
Leg B Left Turn	112
Leg C Thru & Rt	83
Leg C Left Turn	83
Leg D Thru & Rt	94
Leg D Left Turn	110