56TH AVENUE

ENVIRONMENTAL ASSESSMENT

Quebec Street to Havana Street

AIR QUALITY TECHNICAL REPORT

MARCH 2008

PREPARED FOR:

DENVER
THE MILE HIGH CITY

City and County of Denver
in partnership with

U.S. Department of Transportation
Federal Highway Administration

US Department of Transportation
Federal Highway Administration

DOT
DEPARTMENT OF TRANSPORTATION

Colorado Department of Transportation

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1.0 INTRODUCTION

The City and County of Denver (CCD) is proposing to improve 56th Avenue from Quebec Street to Havana Street (Figures 1 and 2). An Environmental Assessment (EA) is being completed for this project to meet the requirements of the National Environmental Policy Act (NEPA). The Preferred Alternative is the widening of 56th Avenue to six lanes with sidewalks. The exception to this is the section from Quebec Street to Valentia. This section was recently widened to five lanes, and has a more constricted right-of-way. Therefore, the only immediate change would be to add a sidewalk on the south side. However, the EA will fulfill the requirements for the future widening of this section. The remaining eastern portion of project, from Valentia Street to Havana Street, would be widened from two lanes to six lanes with sidewalks. The project has Colorado Department of Transportation (CDOT) and Federal Highway Administration (FHWA) oversight. Pinyon Environmental Engineering Resources, Inc. (Pinyon) was contracted, through URS, to complete the air quality analysis for this project.

2.0 BACKGROUND

The widening of 56th Avenue is included in the conforming State Transportation Improvement Program (STIP) and the 2035 Regional Transportation Plan (RTP), and subject to CDOT and FHWA oversight. The project is in an attainment/maintenance area for carbon monoxide (CO) and particulate matter 10 micrometer in diameter and smaller (PM_{10}). Furthermore, the project is in a nonattainment area for ozone (O_3). Due to the status of these three pollutants in the Denver area, and the fact that there is CDOT and FHWA oversight, this project is subject to a conformity analysis.

Since the project is not exempt from a conformity analysis, a Level of Service (LOS) analysis is required for intersections where traffic could be affected by the project. A hot spot analysis for carbon monoxide must be completed for any of the intersections that operate at LOS grade of D or worse for the no action and proposed action alternatives.

2.1 Regulations

Federal and State

National air quality policies are regulated through the Federal Clean Air Act of 1970 (Act). As required by the Act, the US Environmental Protection Agency (EPA) established national ambient air quality standards (NAAQS) (standards) for seven criteria air pollutants. In addition to O_3, CO, and PM_{10}, the criteria pollutants are $PM_{2.5}$ (particulate matter 2.5 micrometer in diameter and smaller), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and lead (Table 2.1-1). The NAAQS represent levels that allow for avoidance of specific adverse health and welfare effects associated with each pollutant. The Colorado Department of Health and Environment (CDPHE) has adopted the NAAQS, so there are no ambient air quality standards specific to Colorado.

The EPA has delegated authority to the CDPHE to administer many of the requirements of the Act. Within the CDPHE, the Air Pollution Control Division (APCD) oversees air quality policies. The State Implementation Plan (SIP) establishes emission limits for different categories of polluters, such as motor vehicles. In order to achieve the emission reductions necessary for compliance, Metropolitan Planning Organizations are required to demonstrate that transportation plans and programs stay within these budgets. This is done through the transportation conformity process through a Memorandum of Agreement (MOA) with the APCD and CDOT.

If the level of any pollutant in an area exceeds the NAAQS, then it is designated as a nonattainment area for that pollutant by the EPA. The geographic boundaries of nonattainment areas are determined by the EPA in consultation with the CDPHE.

Nonattainment areas are required to prepare implementation plans for attaining the standard for each pollutant. Once an area has attained the NAAQS, a maintenance plan must be prepared to ensure that the standard will be maintained. After the maintenance plan is approved by the EPA, the area is re-designated as an attainment/maintenance area.

Table 2.1-1
National Ambient Air Quality Standards

Pollutant	Averaging Time	NAAQS	
		µg/m^3	ppm
Ozone (O_3)	1 hour[1] 8 hour[2]	235 157	0.12 0.08
Carbon Monoxide	1 hour[3] 8 hour[3]	40,000 10,000	35 9
Sulfur Dioxide (SO_2)	3 hour[3] 24 hour[3] Annual[4]	1,300 365 80	0.5 0.14 0.030
Nitrogen Dioxide	Annual[4]	100	0.053
Particulate Matter (PM_{10}) [5]	24 hour[3] Annual[4]	150 50	
Particulate Matter ($PM_{2.5}$)	24 hour[6] Annual[7]	35 15	
Lead (Pb)	Calendar Quarter	1.5	

Source: CAQCC, 2005 and EPA, 2007a
Notes:
[1](a) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is < 1.
(b) As of June 15, 2005, EPA revoked the 1-hour ozone standard in all areas except the fourteen 8-hour ozone nonattainment Early Action Compact (EAC) Areas.
[2]To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.
[3]Not to be exceeded more than once per year.
[4]The annual arithmetic mean standard is a 3-year average.
[5]Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, the agency revoked the annual PM_{10} standard in 2006 (effective December 17, 2006).
[6]The 24-hour $PM_{2.5}$ standard is based on the three-year average of the 98th percentile.
[7]To attain this standard, the 3-year average of the weighted annual mean concentrations from single, or multiple community-oriented monitors must not exceed 15 µg/m^3.
NAAQS = National Ambient Air Quality Standards
µg/m^3 = micrograms per cubic meter
ppm = parts per million

CDOT Clearance Process

Air quality issues must be addressed as part of the project environmental clearance process for transportation projects. The transportation conformity provisions of the Act require regional transportation plans and programs to show that emissions resulting from planned transportation projects are consistent with emissions estimates and necessary emission reduction goals in the SIP. CDOT and the APCD have developed an air quality clearance process to evaluate potential impacts that may result from construction of transportation projects. This process is based on a Memorandum of Agreement between the two agencies (CDOT, 1995).

1. The first step in the air quality clearance process is to determine whether the project is exempt from a conformity determination. The conformity regulations require that all transportation plans, transportation improvement programs, and transportation projects:

   - Conform to the SIPs purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving timely attainment of such standards (CDOT, 2007a).

   - Ensure that transportation activities will not cause or contribute to any new violation of any standard, increase the frequency, or severity of existing violations of any standard, or delay timely attainment of any standard or any required interim emissions reductions (CDOT, 2007a).

   The FHWA and the Federal Transit Administration control the federal funding of highway and transit projects and activities. Therefore, funding can only be approved for projects that comply with the conformity provision of the Act and the EPA transportation air quality conformity regulations (40 CFR 51 Subpart T and 40 CFR 93 Subpart A).

   In nonattainment and maintenance areas, FHWA projects must be found to conform. This means that the project must be included in a conforming Regional Transportation Plan (RTP) and Statewide Transportation Improvement Plan (STIP). The design concept and scope of the project that was in place at the time of the RTP and STIP conformity findings must be maintained through implementation. The project design concept must be sufficiently defined to determine emissions at the time of the conformity determination.

2. If the project is not exempt from a conformity determination, then the CDOT Environmental Programs Branch air quality specialist and the CDPHE APCD, determine which roadways and signalized intersections will require a Level of Service (LOS) analysis. This typically includes the signalized intersections that will be constructed, reconstructed, or modified as part of the project. Additionally, if the project could result in increased traffic at nearby intersections, those intersections may also be evaluated. A LOS analysis is completed for each intersection based on all project alternatives, including the No-Build alternative. The LOS analysis assesses each intersection based on the average wait time per vehicle and assigns a letter "grade" to each intersection for the AM and PM peak hour periods.

3. An additional analysis, "Hot Spot Modeling," is required for intersections with a LOS of D or worse. Hot spot modeling is a method of calculating the carbon monoxide concentrations along roadways and near intersections. The purpose of

hot spot modeling is to evaluate whether a project could cause, or contribute to, a violation of the carbon monoxide NAAQS.

2.2 Pollutants of Concern

When assessing the impacts of transportation projects, the two main pollutants of concern for the Denver metropolitan area (Denver area) are carbon monoxide and PM_{10}. The Denver area is designated as an attainment/maintenance area for these two pollutants. Carbon monoxide and PM_{10} concentrations can accumulate near areas of heavy traffic congestion where average vehicle speeds are low. These two pollutants are the main focus of this report. Ozone and mobile source air toxics (MSAT) are two more pollutants of concern and are also discussed below. Vehicle exhaust also includes emissions of $PM_{2.5}$ and SO_2; however, these two compounds are not pollutants of concern in the Denver area.

Ozone

The Denver area is currently considered to be in non-attainment for ozone, based on 2007 data. This pollutant is not directly emitted by motor vehicles. However, the reaction of two other motor vehicle emissions, Oxides of Nitrogen (NOx) and Volatile Organic Compounds (VOCs), contribute to ozone formation. Ozone is created by the reaction of NOx and VOCs on hot summer days. This reaction takes place over several hours, which allows for mixing and dispersion in the atmosphere; therefore, ozone is generally a regional, rather than localized, pollutant. A transportation project can negatively affect regional air quality if vehicle emissions of ozone precursors (NOx and VOCs) increase as a result of the project. Ozone levels in the Denver metropolitan area have exceeded the EPA 8-hour standard in the past.

In 1997, the EPA established the current 8-hour standard of 0.08 ppm for ozone. A violation of the standard occurs when the three-year average of the fourth maximum value at a monitor exceeds the federal standard (CAQCC, 2006).

Based on the 2000-2002, three-year average, the Denver area demonstrated compliance with the 8-hour ozone NAAQS. However, in the summer of 2003, elevated values of eight-hour ozone caused the Denver metro region's three-year average to violate the eight-hour ozone NAAQS for 2001-2003. This violation could have caused the Denver metro area to be designated non-attainment by the EPA.

However, the EPA had developed the Early Action Compact (EAC) Protocol prior to the 2003 violation (June 19, 2002, supplemented October 18, 2002) (CAQCC, 2006). The EAC Protocol allows a region to defer the non-attainment designation if it implements the EAC protocol. A keystone piece of the EAC Protocol is submittal of an enforceable SIP outlining steps the area will take to maintain compliance with the ozone standard.

By implementing the EAC following the 2003 violation, EPA deferred the non-attainment designation as long as the Denver area could continue to meet the terms of the agreement and demonstrate attainment by December 31, 2007. Failure to meet the obligations of the agreement would result in immediate reversion to the traditional nonattainment process (CAQCC, 2006)

Subsequently, the Denver area violated the eight-hour ozone standard on July 23, 2007 (CDPHE, 2007c). This data was validated and the EPA designated the Denver area as out of compliance. The area is now considered a nonattainment area for ozone and the CDPHE is required to revise the SIP based on current air quality data (CDPHE, 2007b). The CDPHE must develop a specific plan to address ozone, and submit the plan to EPA in 2008.

Mobile Source Air Toxics

In addition to the NAAQS, EPA also regulates air toxics and CDOT provides guidance on this topic (CDOT, 2007b). Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Act. MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic components are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal toxics result from engine wear or from impurities in oil and gasoline. The EPA has identified six priority MSATs: acetaldehyde, benzene, formaldehyde, diesel exhaust, acrolein, and 1, 3 butadiene (EPA, 2001).

The analysis of air toxics is an emerging field. The U.S. Department of Transportation (DOT) and EPA are currently working to develop and evaluate the technical tools necessary to perform air toxics analysis, including improvements to emissions models and air quality dispersion models. Limitations with the existing modeling tools preclude performing the same level of analysis that is typically performed for other pollutants, such as CO.

Although accurate quantitative methods do not exist to estimate the health impacts of MSATS, it is possible to qualitatively assess future MSAT emissions. However, 40 CFR 1502.22(b) requires FHWA to address four provisions:

1. A statement that such information is incomplete or unavailable;

2. A statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment;

3. A summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment; and

4. The agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.

These provisions are addressed as follows:

1. Project specific MSAT analysis is an emerging field and the science has not been fully developed and is therefore unavailable. FHWA is aware that MSAT released to the environment may cause some level of pollution. What is not scientifically definable is an accurate level of human health or environmental impacts that may result from the construction of new transportation facilities or modification of existing facilities.

   Project level MSAT risk assessment involves four major steps: emissions modeling, dispersion modeling to estimate ambient concentrations resulting from the estimated emissions, exposure modeling to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is currently encumbered by technical shortcomings that prevent a formal determination of the MSAT impacts of this project. The emissions model (MOBILE 6.2) is based on limited data raising concerns over the accuracy of the final estimates. Further, the particulate emissions rates from MOBILE 6.2 are not sensitive to vehicle speed, which is an important determinant of emissions rates (this is a shortcoming for diesel particulate matter, but not the remaining priority MSATs), or acceleration. Given uncertainties in the emissions estimation process, subsequent calculated concentrations would be equally uncertain. However, beyond this, the available dispersion models have not been successfully validated for estimating ambient concentrations of particulate matter or reactive organic MSATs. Available exposure models are not well designed to simulate roadside environments. Finally, the toxicity value of at least one of the priority MSATs, that of diesel particulate matter, has not been nationally established, which would prevent the determination of health impacts of this pollutant even if the other necessary tools were available. Thus, current scientific techniques, tools, and data make it impossible to accurately estimate actual human health or environmental impacts from MSATs that would result from a transportation project.

2. Without this project-specific MSATs analysis, it is impossible to quantitatively evaluate the air toxic impacts at the project level. Therefore, this unavailable or incomplete information is very relevant to understanding the "significant adverse impacts on the human environment," since the significance of the likely MSAT levels cannot be assessed.

3. Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show that some either are statistically associated with negative health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings), or that animals demonstrate negative health outcomes when exposed to large doses. There have been other studies and papers that suggest MSATs have health impacts. However, noting that unresolved issues still remain, the Health Effects Institute, a non-profit organization jointly funded by EPA and industry, has undertaken a major series of studies to determine whether MSAT hot spots exist and what the health implications are if they do. The final summary of these studies is not expected to be completed for several more years.

   Recent studies have been reported to show that close proximity to roadways is related to negative health outcomes, particularly respiratory problems. Yet these studies are often not specific to MSATs. Instead they have encompassed the full spectrum of both criteria pollutants and other pollutants. Thus it is impossible to determine whether MSATs are responsible for the health outcomes.

   There is also considerable literature on the uncertainties associated with the emissions modeling process. The most significant of these is an assessment conducted by the National Research Council of the National Academy of Sciences, entitled "Modeling Mobile-Source Emissions" (2000). This review noted numerous problems associated with the then current models, including the predecessor to the current MOBILE 6.2 model. The review found that "significant resources will be needed to improve mobile source emissions modeling." The improvements cited include model evaluation and validation, and uncertainty analysis to raise confidence in the model's output. While the release of MOBILE 6.2 represents an improvement over its predecessor, the MSAT emission factors have not been fully validated due to limits on dispersion modeling and monitoring data. The MOBILE 6.2 model is currently being updated and its results will not be evaluated and validated for several years.

4. Even though there is no accepted model or accepted science for determining the impacts of project specific MSATs, as noted above, EPA predicts that its national control programs will result in meaningful future reductions in MSAT emissions, as measured on both a per vehicle mile and total fleet basis. FHWA believes that these projections are credible, because the control programs are required by statute and regulation.

2.3 Existing Conditions

Sources

Both local and regional sources may contribute to air pollution. The two main contributors to air pollution in the project vicinity are industrial facilities and traffic. The area along 56th Avenue between Quebec Street and Spruce Street is largely industrial. 56th Avenue is a main east-west corridor with moderate traffic levels. The primary east-west corridor in the Denver area is Interstate 70, which is located approximately 1.5 miles south of the 56th Avenue corridor. There is also heavy traffic on two north-south arterial streets that intersect the project corridor: Quebec and Havana Streets. Therefore, the local industrial air pollution impacts are mostly on the west end of the project corridor, while traffic-related air pollution is concentrated on the south side of the project. The project area is located on the eastern edge of the Denver metropolitan area, so the sources of regional air pollution are mostly to the west of the project.

Weather

The concentration of a pollutant in the atmosphere depends on the amount of pollutant released, the nature of the source, and the ability of the atmosphere to transport and disperse the pollutant. The main determinants of transport and dispersion are wind, atmospheric stability or turbulence, topography, and the existence of inversion layers. Wind in the Denver metro area is predominantly from the north in the day, and from the south during the night (FHWA, 2007). The Denver metro area is prone to inversions that trap warm air beneath heavy layers of cold air. This limits the movement of air and can result in the accumulation of pollutants (EPA, 2007b).

Air Quality Monitoring Stations

The APCD operates a network of ambient air quality monitoring stations within the Denver/Boulder area (Figure 1). The results from air quality stations closest to the project are summarized in Table 2.3-1. Since each station monitors only certain pollutants, stations were selected at increasing distances from the project area until all of the pollutants of concern (CO, PM_{10}, and $O_{3)}$ were covered (Figure 1). Data for $PM_{2.5}$ was also collected at three of the stations and is also included for reference. All of the stations are located closest to the west end of the corridor (56th Avenue and Quebec Street).

The only criteria pollutant that exceeded the standard at these stations was ozone in 2003 at the 2325 Irving Street Station. The standard was also exceeded for $PM_{2.5}$ in 2005 at the 4650 Columbine Street Station. However, since the $PM_{2.5}$ standard is based on a three-year average, this did not result in a violation of the standard (Table 2.3-1).

Sensitive Receptors

People who are very young, very old, or in poor health are more sensitive to air pollution than the general population. Therefore, schools, nursing homes, and hospitals are classified as sensitive receptors for MSATs. Sensitive receptors within 150 meters of a project are considered to be at risk of being impacted by a project. The project corridor is mostly industrial, and there are no sensitive receptors within 150 meters of the project.

Data Source: Colorado Department of Health and Environment, URS Corporation and Pinyon Environmental Engineering Resources, Inc.

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FIGURE 1
Air Pollution Control Division Monitoring Stations

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Table 2.3-1
Results of Air Quality Monitoring near the 56th Avenue Corridor

Monitoring Station[1]	Averaging Time	NAAQS Standard	2002	2003	2004	2005	2006
Carbon Monoxide (ppm)							
Denver-2325 Irving Street	1-hour (2nd Max) 8-hour (2nd Max)	35 9	4.6 2.7	4.5 3.2	4.9 3.4	3.4 2.1	3.5 3.0
Denver-14th and Albion	1-hour (2nd Max) 8-hour (2nd Max)	35 9	6.0 3.1	6.5 3.3	6.8 3.4	3.6 2.4	3.9 2.5
Denver-2105 Broadway	1-hour (2nd Max) 8-hour (2nd Max)	35 9	7.4 3.7	14.9 4.5	8.7 4.1	4.3 2.5	4.6 3.1
Welby-3174 E. 78th Avenue	1-hour (2nd Max) 8-hour (2nd Max)		4.4 2.6	5.2 3.0	4.0 2.8	3.3 2.2	3.8 2.5
PM_{10} ($\mu g/m^3$)[2]							
Welby-3174 East 78th Avenue	24-hour (2nd Max) Annual Arith Mean	150 50	122 35.2	98 32.9	71 28.6	64 29.4	82 27.8
$PM_{2.5}$ ($\mu g/m^3$)[2]							
Denver-2105 Broadway	24-hour (98th percentile) Annual Arith. Mean	35 15	25.7 10.25	26.2 10.41	22.2 9.0	29.4 9.82	24.3 8.99
Denver-4650 Columbine Street[3]	24-hour (98th percentile) Annual Arith Mean	35 15	No Data	No Data	13.2 14.6	**37.40** 10.14	34.80 8.98
Commerce City-7101 Birch Street	24-hour (98th percentile) Annual Arith Mean	35 15	25.8 10.16	27.7 10.3	18.9 9.49	24.2 10.17	26.3 9.85
Ozone (O_3) (ppm)							
Denver-2325 Irving Street	1-hour (Max) 8-hour (4th Max)	0.12 0.08	0.092 0.073	0.096 **0.085**	0.078 0.066	0.087 0.074	0.087 0.072

Data source: EPA, 2007c.
Notes:
1 Station locations are mapped on Figure 1.
2 If a monitoring station has more than one monitor for a pollutant, the highest reading among the monitors was used.
3 $PM_{2.5}$ monitoring data are not available at this station during 2002 and 2003.
NAAQS = National Ambient Air Quality Standards
$\mu g/m^3$ = micrograms per cubic meter
Max. = maximum
O_3 = ozone
PM_{10} = respirable particulate matter less than 10 micron size
$PM_{2.5}$ = respirable particulate matter less than 2.5 micron size
ppm = parts per million
Numbers in **BOLD** exceed NAAQS Standards

3.0 METHODS

3.1 Carbon Monoxide Hot Spot Analysis

Carbon monoxide hot spot modeling was completed for signalized intersections with a 2035 forecast LOS of D or worse, for the build and no-build alternatives during the morning (AM) and evening (PM) peak hours (Figure 2). LOS is measured using a letter designation from A to F, with LOS A being the best operating condition, and LOS F being the worst. The Synchro (Version 6.0) traffic analysis software package was used by URS to complete all detailed traffic analyses of this project. Details on the LOS analysis are included in Appendix A.

The EPA's CAL3QHC computer model was used for hot-spot analysis. CAL3QHC is a computer-based modeling program that predicts CO concentrations from motor vehicles at roadway intersections. The CAL3QHC model accounts for emissions from both moving and idling vehicles. Inputs for the model included projected traffic volumes, motor vehicle emission rates, roadway geometry, traffic signal timing and worst-case meteorological conditions.

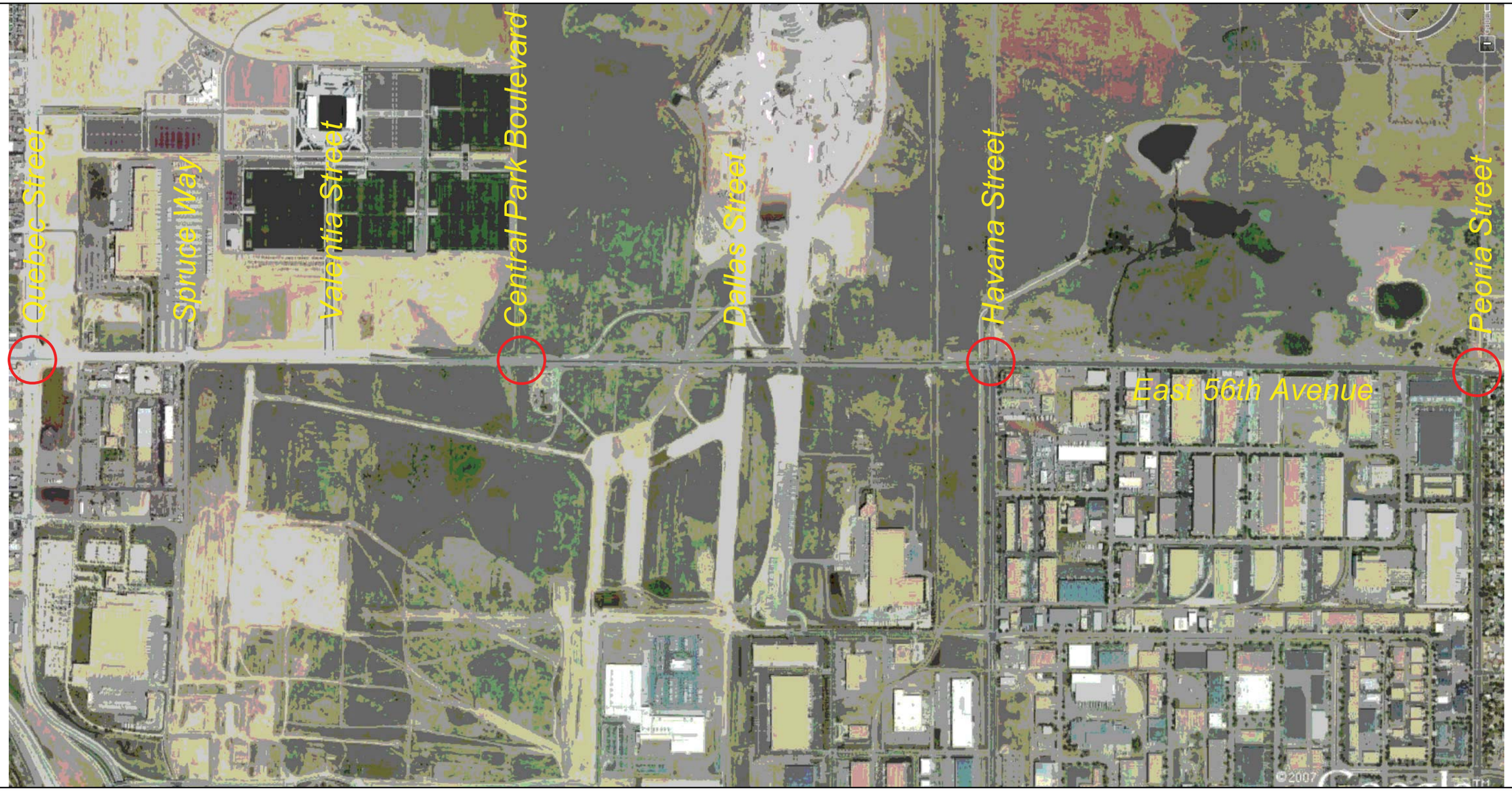
Worst-case meteorological conditions included low wind speed (1 meter/second) and atmospheric stability class D. The CAL3QHC model determines the worst-case wind direction by selecting the wind direction that results in the highest carbon monoxide concentration at each receptor.

The methodology for this air quality analysis was consistent with the two EPA guidance manuals related to intersection "hot-spot" analysis:

1. *"Guidelines for Modeling Carbon Monoxide from Roadway Intersections,"* EPA, November 1992.

2. *"User's Guide to CAL3QHC Version 2.0: A Modeling Methodology for Predicting Pollutant Concentrations near Roadway Intersections,"* EPA, November 1992.

Per EPA guidance, receptors were modeled 10 feet from the edge of the outside travel lane on the queue links at the selected intersections. Receptors located according to EPA guidance represent worst-case locations for modeling possible violations of federal CO standards.



N

LEGEND

Intersection Evaluated Using Hot Spot Model

0 1,080

Scale in feet

Data Source: Colorado Department of Health and Environment, URS Corporation and Pinyon Environmental Engineering Resources, Inc.

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FIGURE 2
Hot Spot Analysis

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The following two formulas were used to convert the modeled 2035 1-hour CO-concentrations (1-hour) to an overall 8-hour CO concentrations (8-hour).

- Modeled 8-hour value = Modeled 1-hour value X Colorado Persistence Factor X Altitude Adjustment Factor
- Overall 8-hour CO concentration = Modeled 8-hour value + Background CO Concentration

The following values were used:

- Colorado Persistence Factor = 0.57
- Altitude Adjustment Factor = 1.13
- Background 8-hour CO Concentration (provided by APCD) = 3.0

Therefore, the formulas used were:

1. Modeled 8-hour value = Modeled 1-hour value X 0.57 X 1.13
2. Overall 8-hour CO concentration = Modeled 8-hour value + 3.0

3.2 PM_{10}

The potential effects of the project were assessed qualitatively by evaluating nearby monitoring station data (EPA, 2007c and CDPHE, 2007a), the CDPHE 2005 Emissions Inventory, weather patterns, and the carbon monoxide hot spot data. Quantitative analysis is not currently required for PM_{10} since EPA has not released monitoring guidance (FHWA, 2006a).

4.0 RESULTS

4.1 Carbon Monoxide Hot Spot Analysis Results

There were three intersections along 56th Avenue in the no-action alternative with LOS of D or worse (Quebec Street, Central Park Boulevard, and Havana Street). This was the case during both the AM and PM. The Peoria Street intersection is east of Havana Street. This intersection was evaluated because it could be indirectly impacted by the Preferred Alternative (build) and had an AM and PM LOS of D. The Preferred Alternative reduced the number of intersection with a forecast LOS of D or worse to two: Quebec Street (AM and PM) and Havana Street (AM only) (Figure 2). Eleven CAL3QHC model runs were completed (Figure 2). Based on the model, none of the intersections are expected to exceed the 8-hour carbon monoxide standard. The results are presented in Table 4.1-1. The no-action and build model data air presented in Appendices B and C.

Table 4.1-1
Carbon Monoxide Hot Spot Analysis Results

Intersection of 56th Ave and:	Level of Service (LOS)[1]				8-hour Carbon Monoxide (ppm)[2, 3]			
	No-Action		Build		No-Action		Build Alt 7 (6 Lanes)	
	AM	PM	AM	PM	AM	PM	AM	PM
Quebec Street	E	D	E	F	5.70	5.64	5.70	5.51
Spruce Street	NS	NS	B	A				
Valentia Street	B	B	B	A				
Central Park Boulevard	D	E	C	C	4.09	4.09		
Dallas Street	NS	NS	B	B				
Havana Street	D	E	D	C	4.29	4.29	4.42	
Peoria Street	E	D	C	C	3.97	4.03		

Notes
1 Hot spot analysis is required for each intersection with a2035 LOS of D or worse
2 The 8-hour maximum for carbon monoxide is 9 ppm
3 Results include a background carbon monoxide level of 3 ppm
AM/PM = morning/evening rush hours
NS = No signal
PPM = parts per million
LOS D or below

4.2 PM_{10}

The study area is in attainment for PM_{10} and there have been no exceedances of NAAQS standards at the nearest air quality stations (Table 4.1-1). According to the CDPHE Emission Inventories for Denver and Adams Counties, the major sources of particulate matter in the study area are construction, road dust, and stationary sources (Table 4.2-1).

Table 4.2-1
Denver and Adams County PM_{10} Emissions for 2005

County	Three Highest Emission Categories Tons per Year (Percent of Total Tons/Year)			Total Tons of PM_{10}/Year
	Construction	Road Dust	Stationary Sources	
Adams	2613 (18%)	3,992 (28%)	2,227 (16%)	14,139
Denver	3,579 (47%)	2,193 (29%)	584 (8%)	7,601

Source: CDPHE, 2008

Nationally, PM_{10} levels have been decreasing over the past 30 years (CDPHE 2007a). The overall levels of this pollutant in the northern Front Range have been fairly constant since 1997 (CDPHE, 2007a). The greatest impact to PM_{10} as a result of this project is expected to occur during construction. Since this a temporary impact, it is not considered part of the analysis (CDOT, 2007a).

Permanent impacts would result from changes in traffic volume and congestion. Since the Preferred Alternative would add capacity along 56th Avenue, it is expected to increase total traffic volume and decrease congestion. These changes in volume and congestion are expected to offset each other, so that traffic-related changes to PM_{10} would be insignificant.

5.0 MITIGATION

Although motor vehicle emissions in the project area may increase, they would not result in any exceedance of the NAAQS; therefore, no direct project air quality mitigation is necessary. However, since the construction of the project will require submittal of an Air Pollution Emission Notice and Application for Construction Permit from the CDPHE APCD, preparation of a Fugitive Dust Control Plan will be required. Adherence to this plan will reduce air pollution resulting from construction.

6.0 CONCLUSIONS

This Preferred Alternative is expected to result in increased traffic volume and decreased congestion. Based on hot spot modeling for carbon monoxide and qualitative analysis of PM_{10} data, no exceedances of the NAAQS are expected as a result of this project.

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APPENDIX A
LOS ANALYSIS METHODS

1.0 TRAFFIC ANALYSIS METHODOLOGIES

1.1 Introduction

This section describes the methodologies that were used to develop and evaluate existing and future traffic conditions for the 56th Avenue corridor. Both the EA and Corridor Study required the development and analysis of a number of alternatives. Existing and No-Action alternatives were used to characterize existing traffic operations and to assess future (2035) conditions if no improvements are made in the corridor. A series of "build" alternatives were then developed and tested to determine whether the proposed improvements will serve forecast traffic demand.

The term "no-action," also frequently referred to as "no-build," represented a future year condition under which the transportation infrastructure in the immediate project area remained the same as existing conditions, but the transportation infrastructure outside of the immediate project area developed as forecast for the 2035 conditions. For "build" alternatives, the project area infrastructure was modeled to reflect the project area conditions that are defined for the specific "build" alternative.

1.2 Validation of Regional Travel Demand Model

Future year forecasts for the No-Action and "build alternatives were developed using the 2035 DRCOG regional travel demand model. Since this model was developed for regional travel demand forecasting, land use forecasts and the roadway network within the smaller 56th Avenue subarea were reviewed in detail to confirm their adequacy for project-level use.

Review of 2005 and 2035 DRCOG Regional Travel Demand Models

An initial test of the validity of the regional travel demand model to accurately forecast project area conditions was to compare the "existing conditions" model to actual traffic counts. For this analysis, the 2007 traffic counts collected on 56th Avenue for this project were compared with the daily volume forecasts of the 2005 DRCOG regional travel demand model.

In general, the daily traffic forecasts in the 2005 model were less than the 2007 counts, as expected. The daily forecast volumes on the east end of the corridor from Peoria Street to Peña Boulevard however were sixty to eighty percent lower than the 2007 counts. Forecasts for the west end of the corridor from Quebec Street to Peoria street were much closer to the 2007 counts. While large discrepancies between counts and forecasts can be determined "acceptable" for short portions of a roadway, large discrepancies over several miles on a single roadway was not considered acceptable.

The model input and output were analyzed to determine the basis for the discrepancies in traffic forecasts. The primary reason for the discrepancies on the east end of the corridor was determined to be the rapid growth in development east

of Peña Boulevard. Many of the recently constructed developments (both residential and employment) were not included in the 2005 model and, as a result, the overall traffic demand forecast for the corridor was much lower than existing counts.

Since the discrepancies in forecast demand were caused by a lack of land use input, which changes for each forecast horizon, and only occurred on the east end of the corridor, it was concluded that the model was properly forecasting demand on 56th Avenue, given the provided land use data. This information was used to determine that the DRCOG model was the appropriate tool to forecast demand for the corridor.

Review of 2035 Land Use Forecasts for 56th Avenue Project Area

Since it was determined that land use input plays a vital role in the reasonableness of traffic forecasts along 56th Avenue, a review of the 2035 land use forecasts was conducted. Land use data incorporated into the travel demand model is based on forecasts produced by DRCOG using input received from local jurisdictions in the Denver metro area.

In the 56th Avenue corridor, several large redevelopment efforts are expected to be completed by the year 2035. These developments include North Stapleton, Prairie Gateway, and the Rocky Mountain Arsenal National Wildlife Refuge (RMANWR) visitor center. Since many of these developments are still in the planning stages, the model data sets were checked for general consistency with the most current site plans.

North of 56th Avenue, including the area of Prairie Gateway, Dick's Sporting Goods Park, and the RMANWR visitor center, land use forecasts of the 2035 DRCOG regional travel demand model indicates 963 households and 105 jobs. The model's forecast differs from the current land use plan for the Prairie Gateway area. An estimated 2,500 employees is now planned for the area, with no households.

South of 56th Avenue in the area of North Stapleton, the model land use forecast indicates 3,805 households and 7,764 jobs. This area includes the existing warehousing facilities along Quebec Street and Havana Street. The model's forecast is consistent with what is planned for this area.

In addition, the land use at the eastern end of 56th Avenue was reviewed. It was confirmed that the 2035 model included both short-term and long-term land use growth east of Peña Boulevard. The forecast land use growth included both residential and employment development.

Review of 2035 Roadway Network for 56th Avenue Project Area

The transportation network included in the 2035 DRCOG travel demand model is based on the adopted 2035 Regional Transportation Plan (RTP). Like the land use forecasts, the model was verified to determine whether the modeled transportation network for the area was consistent with development plans.

Several new intersections along 56th Avenue are expected by 2035 as part of the Stapleton Redevelopment (Figure 3.1-1). These include Uinta Street (located west of Valentia Street), Verbena Street (located east of Valentia Street), Central Park Boulevard (located between Valentia Street and Havana Street), and Dallas Street (located east of Central Park Boulevard). Both Central Park Boulevard and Dallas Street were included in the DRCOG 2035 demand model. An additional intersection at Airport Way in the Parkfield neighborhood was included in the 2035 demand model as well. This intersection is located just west of the Peña Boulevard interchange.

The remainder of the roadway network adjacent to the 56th Avenue corridor was reviewed for consistency with existing conditions and plans in the RTP. It was determined that the remainder of the roadway network was accurate and no additional changes needed to be made.

Methodology for Project-Level Adjustments to Regional Travel Demand Forecasts

While the regional model was determined by the study team to be valid for forecasting demand along 56th Avenue, the model's forecasts of traffic demand on the north-south streets that intersect 56th Avenue, particularly in the Montbello area, required some manual adjustments. The specific concern was that the regional model was showing a significant increase in traffic demand on the collector streets in the Montbello area. Since this area is substantially developed and lacks regional connectivity, it was considered likely that future demand on the neighborhood's collector streets would be similar to existing demand.

A "screen line" methodology was developed to manually reassign the "excess" forecast traffic from the collector streets —Uvalda Street and Crown Boulevard—within Montbello to the adjacent north-south arterial system. Allowing for a modest traffic increase on the collector street system (two percent annual growth), "excess" traffic demand on Crown Boulevard was assigned to Chambers Road, while the excess demand on Uvalda Street was assigned to Havana and Peoria Streets, based proportionally on each street's existing volume.

One additional manual adjustment to the model forecasts was made on the west end of the 56th Avenue corridor. The 2035 model included a new north-south arterial—Central Park Boulevard—which runs parallel to Quebec Street. The regional model was inappropriately assigning trips to Central Park Boulevard to bypass the portion of Quebec Street from 49th Avenue to 56th Avenue. A select link analysis was performed within the model to determine the magnitude of traffic using this route. The identified traffic was then manually reassigned to Quebec Street and removed from Central Park Boulevard. A similar issue with Spruce Street was also resolved with a manual reassignment.

All of the manual adjustments described above were applied to the 2035 travel demand model runs for the No-Action and "build" alternatives.

1.3 Methodology to Estimate Intersection Turning Movements

AM and PM peak hour turning movement forecasts at each intersection were developed using the adjusted model peak-hour link volumes and the National Cooperative Research Program (NCHRP) Report No. 255 procedures for developing intersection turning movements. This methodology incorporated the recent traffic counts on 56th Avenue as model "seeds" in developing future turning movements.

1.4 Methodology for Level of Service Analysis

Traffic operations analyses of the 56th Avenue study corridor were based on analytical procedures described in the *Highway Capacity Manual, 2000 Edition* (HCM). Synchro 6.0 software, which implements HCM methodology and analytical procedures, was chosen as the primary assessment tool for the corridor.

Level of Service (LOS) was used to characterize peak hour traffic operations. LOS is measured using a letter designation from **A** to **F**, with LOS A being the best operating condition, and LOS F being the worst.

For signalized intersections, LOS is described in terms of traffic control delay. This delay measurement involves speed of travel, and includes initial deceleration delay, stopped delay, vehicle queue start up and lost time, and acceleration delay. The average delay value typically used to measure LOS at an intersection is calculated by also including vehicles that were not required to slow or stop at the intersection. The quality of traffic signal progression in a network as well as individual intersection geometry and the allocated traffic signal green time to critical traffic movements are the primary inputs to determine the LOS of signalized intersections. **Table 3.4-1** provides definitions for the interpretation of signalized intersection operation using the LOS concept.

Table 1.4-1
Signalized Intersections Level of Service Criteria

Level of Service	Interpretation	Average delay (sec/veh)
A	Progression of traffic is extremely favorable. Most vehicles do not stop at all, and delay is low for almost all vehicles.	< 10
B	Good progression of traffic. There are more stopped vehicles and delay is higher than with LOS A.	>10 and <20
C	Fair to poor progression of traffic, the number of stopped vehicles is significant, though many vehicles pass through without stopping.	>20 and <35
D	Fair progression of traffic, the number of stopped vehicles is significantly much higher than vehicles passing through without stopping. High traffic volumes usually occur on all legs of the intersection.	>35 and <55
E	High delays associated with poor progression and high traffic volumes usually occur on all legs of the intersection. The intersection is operating near or at capacity.	>55 and <80
F	Traffic volumes are oversaturated due to poor vehicle progression and vehicle demand exceeding capacity of the intersection.	>80

Source: Highway Capacity Manual, 2000

For stop sign-controlled intersections, level of service (LOS) is also defined in terms of delay. LOS considers the availability of adequate gaps in conflicting traffic movements to perform a desired maneuver. LOS is usually defined for the minor street movements at the intersection that are required to stop before proceeding, as well as left turns from the major street that must wait for gaps in the opposing traffic flow to complete the desired turning movement. **Table 3.4-2** provides definitions for the interpretation of unsignalized intersection operation using the LOS concept.

Table 1.4-2
Stop-Controlled Intersections Level of Service Criteria

Level of Service	Stop-Controlled Delay for Minor Street Traffic	Average delay (sec/veh)
A	Little or no delay	<10
B	Short traffic delays	>10 and <15
C	Average traffic delays	>15 and <25
D	Long traffic delays	>25 and <35
E	Very long traffic delays	>35 and <50
F	Extreme traffic delays	>50

Source: Highway Capacity Manual, 2000

1.5 Additional Traffic Analysis Assumptions

As mentioned previously, the Synchro (Version 6.0) traffic analysis software package was used for all detailed traffic analyses of this study. Traffic system assumptions

that were made for the Synchro analysis are documented in this section. These assumptions include traffic signal phasing and cycle length, pedestrian movements at signalized intersections, and future intersection geometry.

Since all of the current traffic signals on 56th Avenue within the study area are connected to the City of Denver's Icon Traffic Management System, the analyses assumed an actuated/coordinated signal environment that was optimized in the Synchro 6.0 software for future traffic conditions. The signalized intersections were analyzed using a traffic signal cycle length of 120 seconds, which was the optimized cycle length for the corridor during the AM and PM peak hours. The midday peak hour was not analyzed under future conditions since it does not represent the worst peak hour under existing conditions, nor is it expected to represent the worst peak period under future conditions.

Pedestrian crossings of 56th Avenue were assumed at all signalized intersections. The required pedestrian crossing time at each location was determined using a walking speed of 3.5 feet per second and was entered into each intersection's signal timing. Push button pedestrian activation was assumed at each intersection with five calls per hour on each intersection leg.

All "build" alternatives included localized improvements to intersections to maximize performance. Intersection signal timings were optimized and auxiliary (turning) lanes were added as necessary in order to achieve acceptable Level of Service D or better operations. In general, exclusive right-turn lanes (including acceleration lanes) were not included for the six-lane roadway alternatives except at arterial intersections.

APPENDIX B
NO-BUILD
HOT SPOT ANALYSIS DATA

JOB: 56TH AND QUEBEC INTERSECTION RUN: 2035 NO BUILD AM

DATE : 1/ 3/ 8
TIME : 9:10:52

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. Quebec St. NB appr.	*	32.0	-1000.0	32.0	0.0	*	1000.	360.	AG	610.	14.1	0.0	56.0		
2. Quebec St. NB Queue	*	32.0	-80.0	32.0	-174.4	*	94.	180.	AG	550.	100.0	0.0	36.0	0.46	4.8
3. Quebec St. NB Q. Rig	*	64.0	-80.0	64.0	-110.6	*	31.	180.	AG	173.	100.0	0.0	12.0	0.15	1.6
4. Quebec St. NB Q. Lef	*	3.0	-80.0	3.0	-770.9	*	691.	180.	AG	487.	100.0	0.0	24.0	2.49	35.1
5. Quebec St. NB Dep.	*	32.0	0.0	32.0	1000.0	*	1000.	360.	AG	610.	14.1	0.0	56.0		
6. Quebec St. SB appr	*	-32.0	1000.0	-32.0	0.0	*	1000.	180.	AG	2545.	14.1	0.0	56.0		
7. Quebec St. SB Queue.	*	-32.0	80.0	-32.0	391.1	*	311.	360.	AG	349.	100.0	0.0	36.0	0.97	15.8
8. Quebec St. SB Q. Rig	*	-45.0	84.0	-45.0	140.1	*	56.	360.	AG	116.	100.0	0.0	12.0	0.23	2.9
9. Quebec St. SB Q. Lef	*	-3.0	80.0	-3.0	210.9	*	131.	360.	AG	354.	100.0	0.0	24.0	0.64	6.7
10. Quebec St. SB Dep.	*	-32.0	0.0	-32.0	-1000.0	*	1000.	180.	AG	2545.	14.1	0.0	56.0		
11. 56 EB th appr.	*	-1000.0	-24.0	0.0	-24.0	*	1000.	90.	AG	545.	14.1	0.0	44.0		
12. 56 EB Queue	*	-82.0	-24.0	-215.9	-24.0	*	134.	270.	AG	388.	100.0	0.0	24.0	0.74	6.8
13. 56 EB Q. Right	*	-82.0	-40.0	-206.8	-40.0	*	125.	270.	AG	179.	100.0	0.0	12.0	0.63	6.3
14. 56 EB Q. Left	*	-84.0	-3.0	-727.0	-3.1	*	643.	270.	AG	492.	100.0	0.0	24.0	3.08	32.7
15. 56 EB Dep.	*	0.0	-24.0	1000.0	-24.0	*	1000.	90.	AG	545.	14.1	0.0	44.0		
16. 56 WB th appr.	*	1000.0	28.0	0.0	28.0	*	1000.	270.	AG	870.	14.1	0.0	44.0		
17. 56 WB th Queue.	*	74.0	28.0	1167.0	28.3	*	1093.	90.	AG	393.	100.0	0.0	24.0	1.23	55.5
18. 56 WB Q. Right.	*	74.0	50.0	185.6	50.0	*	112.	90.	AG	114.	100.0	0.0	12.0	0.46	5.7
19. 56 WB Q. Left.	*	74.0	3.0	432.4	3.0	*	358.	90.	AG	496.	100.0	0.0	24.0	3.23	18.2
20. 56 WB Dep.	*	0.0	28.0	-1000.0	28.0	*	1000.								

270. AG   870. 14.1   0.0 44.0

DATE : 1/ 3/ 8
TIME : 9:10:52

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. Quebec St. NB Queue	*	120	85	2.0	610	1700	96.50	2	3
3. Quebec St. NB Q. Rig	*	120	80	2.0	70	1600	96.50	2	3
4. Quebec St. NB Q. Lef	*	120	113	2.0	195	1600	96.50	2	3
7. Quebec St. SB Queue.	*	120	54	2.0	2545	1700	96.50	2	3
8. Quebec St. SB Q. Rig	*	120	54	2.0	190	1600	96.50	2	3
9. Quebec St. SB Q. Lef	*	120	82	2.0	585	1600	96.50	2	3
12. 56 EB Queue	*	120	90	2.0	545	1700	96.50	2	3
13. 56 EB Q. Right	*	120	83	2.0	275	1600	96.50	2	3
14. 56 EB Q. Left	*	120	114	2.0	160	1600	96.50	2	3
17. 56 WB th Queue.	*	120	91	2.0	870	1700	96.50	2	3
18. 56 WB Q. Right.	*	120	53	2.0	385	1600	96.50	2	3
19. 56 WB Q. Left.	*	120	115	2.0	85	1600	96.50	2	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT) X	Y	Z
1. REC 1 (SE CORNER #1)	*	80.0	-70.0	6.0
2. REC 2 (SE CORNER #2)	*	80.0	-85.0	6.0
3. REC 3 (SE CORNER #3)	*	80.0	-100.0	6.0
4. REC 4 (SE CORNER #4)	*	80.0	-115.0	6.0
5. REC 5 (SE CORNER #5)	*	80.0	-135.0	6.0
6. REC 6 (SE CORNER #6)	*	80.0	-160.0	6.0
7. REC 7 (SW CORNER #1)	*	-60.0	-58.0	6.0
8. REC 8 (SW CORNER #2)	*	-75.0	-58.0	6.0
9. REC 9 (SW CORNER #3)	*	-90.0	-58.0	6.0
10. REC 10 (SW CORNER #4	*	-105.0	-58.0	6.0
11. REC 11 (SW CORNER #5	*	-125.0	-58.0	6.0
12. REC 12 (SW CORNER #6	*	-150.0	-58.0	6.0
13. REC 13 (NW CORNER #1	*	-63.0	70.0	6.0
14. REC 14 (NW CORNER #2	*	-63.0	85.0	6.0
15. REC 15 (NW CORNER #3	*	-63.0	100.0	6.0

16.	REC 16 (NW CORNER #4 *	-63.0	115.0	6.0	*
17.	REC 17 (NW CORNER #5 *	-63.0	135.0	6.0	*
18.	REC 18 (NW CORNER #6 *	-63.0	160.0	6.0	*
19.	REC 19 (NE CORNER #1 *	80.0	70.0	6.0	*
20.	REC 20 (NE CORNER #2 *	95.0	70.0	6.0	*
21.	REC 21 (NE CORNER #3 *	110.0	70.0	6.0	*
22.	REC 22 (NE CORNER #4 *	125.0	70.0	6.0	*
23.	REC 23 (NE CORNER #5 *	145.0	70.0	6.0	*
24.	REC 24 (NE CORNER #6 *	170.0	70.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) * REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	1.9	1.6	1.4	1.5	1.5	1.4	2.8	2.5	3.1	3.1	3.0	2.8	2.4	2.4	2.3	2.3	2.2	2.2	0.4	0.3
10.	*	1.7	1.5	1.2	1.2	1.2	0.9	3.3	2.7	3.1	3.6	3.6	3.3	3.3	3.2	3.2	3.1	2.9	2.9	0.2	0.0
20.	*	1.5	1.5	1.2	1.1	1.0	0.9	3.0	2.7	2.9	3.4	3.7	3.6	3.7	3.7	3.6	3.5	3.2	3.1	0.0	0.0
30.	*	1.7	1.5	1.3	1.1	1.0	0.9	2.5	2.2	2.4	3.0	3.5	3.8	3.7	3.6	3.5	3.3	3.1	3.0	0.0	0.0
40.	*	1.7	1.6	1.3	1.1	1.1	0.9	2.1	1.8	1.8	2.5	3.1	3.5	3.3	3.4	3.4	3.3	3.0	2.8	0.0	0.0
50.	*	1.7	1.6	1.3	1.3	1.1	0.9	2.2	1.8	1.7	2.0	2.6	3.1	2.9	3.2	3.2	3.0	2.8	2.6	0.0	0.0
60.	*	1.8	1.6	1.5	1.2	1.0	0.9	2.6	2.3	1.9	2.1	2.3	3.0	2.5	3.1	3.1	3.1	2.8	2.6	0.0	0.0
70.	*	1.7	1.5	1.4	1.1	0.9	0.8	2.8	2.6	2.3	2.3	2.3	2.6	2.2	2.8	2.9	2.8	2.7	2.5	0.1	0.1
80.	*	1.4	1.3	0.9	0.7	0.6	0.5	2.9	2.7	2.3	2.2	2.5	2.5	2.2	3.0	3.1	3.0	2.9	2.7	0.5	0.5
90.	*	0.8	0.5	0.5	0.4	0.1	0.1	2.6	2.3	2.4	2.2	2.1	1.9	2.9	3.5	3.7	3.5	3.4	3.0	1.5	1.4
100.	*	0.2	0.1	0.0	0.0	0.0	0.0	2.0	1.8	1.7	1.6	1.5	1.4	3.1	3.6	4.2	4.1	3.9	3.4	2.4	2.3
110.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.9	1.7	1.6	1.5	1.2	2.6	3.1	3.9	4.1	4.1	3.7	2.7	2.7
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.2	1.9	1.7	1.6	1.3	2.2	2.4	3.1	3.7	4.2	4.0	2.7	2.7
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.3	1.9	1.7	1.4	1.3	2.1	2.3	2.8	3.3	3.7	3.9	2.5	2.5
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.3	1.9	1.7	1.3	1.1	2.2	2.3	2.5	3.2	3.6	3.5	2.3	2.3
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.3	1.9	1.5	1.4	1.2	2.6	2.7	2.7	2.9	3.6	3.7	2.3	2.3
160.	*	0.0	0.0	0.0	0.0	0.0	0.0	3.1	2.4	1.8	1.6	1.3	1.1	3.2	3.0	3.0	3.2	3.2	3.5	2.1	2.2

170.	*	0.3	0.3	0.3	0.3	0.3	0.3	3.0	2.1	1.7	1.4	1.1	0.9
3.2	3.1	3.0	3.3	3.4	3.6	2.3	2.5						
180.	*	1.0	0.9	0.8	0.8	0.7	0.7	2.3	1.4	1.0	0.7	0.5	0.3
2.7	2.7	2.6	2.6	2.8	2.9	2.7	2.7						
190.	*	2.0	1.8	1.6	1.6	1.5	1.4	1.1	0.5	0.3	0.3	0.1	0.1
1.9	1.8	1.8	1.8	1.8	1.8	2.9	3.4						
200.	*	2.7	2.4	2.1	1.9	1.8	1.7	0.4	0.1	0.0	0.0	0.0	0.0
1.5	1.4	1.4	1.4	1.4	1.1	2.6	3.2						
210.	*	3.0	2.8	2.5	2.2	1.9	1.7	0.2	0.0	0.0	0.0	0.0	0.0
1.6	1.5	1.3	1.3	1.2	1.0	2.0	2.5						
220.	*	3.1	3.1	2.6	2.4	2.0	1.6	0.1	0.0	0.0	0.0	0.0	0.0
1.7	1.6	1.4	1.3	1.2	1.0	1.6	1.9						
230.	*	2.8	3.0	2.7	2.4	2.1	1.5	0.1	0.0	0.0	0.0	0.0	0.0
1.9	1.6	1.3	1.2	1.0	1.0	1.5	1.7						
240.	*	2.5	3.0	2.9	2.5	2.3	1.7	0.1	0.0	0.0	0.0	0.0	0.0
1.8	1.4	1.2	1.0	0.8	0.8	1.8	1.8						
250.	*	2.1	2.8	2.8	2.4	2.3	1.8	0.0	0.0	0.0	0.0	0.0	0.0
1.5	1.3	1.1	0.9	0.8	0.7	2.2	1.9						
260.	*	2.1	2.6	2.9	2.6	2.5	2.2	0.5	0.5	0.5	0.5	0.4	0.3
1.2	1.0	0.8	0.7	0.6	0.3	2.1	2.0						
270.	*	2.2	3.0	3.3	3.0	2.9	2.5	1.5	1.5	1.3	1.3	1.1	1.0
0.8	0.6	0.3	0.3	0.2	0.2	2.0	1.8						
280.	*	2.3	3.0	3.5	3.5	3.2	3.1	2.5	2.4	2.3	2.2	2.0	1.8
0.2	0.2	0.1	0.0	0.0	0.0	1.5	1.3						
290.	*	2.0	2.5	3.2	3.5	3.4	3.3	2.9	3.0	2.9	2.8	2.6	2.4
0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.2						
300.	*	1.5	1.8	2.6	3.1	3.1	3.4	2.9	3.0	2.9	2.9	2.8	2.5
0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5						
310.	*	1.4	1.4	1.9	2.4	2.6	3.2	2.6	3.0	3.0	3.0	2.9	2.8
0.1	0.1	0.1	0.1	0.1	0.1	1.6	1.5						
320.	*	1.6	1.4	1.7	1.9	2.3	2.6	2.0	2.5	2.7	2.7	2.7	2.7
0.1	0.1	0.1	0.1	0.1	0.1	1.7	1.4						
330.	*	1.7	1.7	1.8	2.0	2.1	2.2	1.5	2.2	2.6	2.6	2.6	2.5
0.1	0.1	0.1	0.1	0.1	0.1	1.6	1.3						
340.	*	2.0	1.7	1.8	2.0	2.1	1.9	1.4	1.9	2.5	2.5	2.5	2.5
0.4	0.4	0.4	0.4	0.4	0.4	1.3	1.0						
350.	*	1.9	1.8	1.7	1.7	1.7	1.8	1.8	1.9	2.6	2.8	2.6	2.6
1.1	1.1	1.1	1.1	1.1	0.9	0.9	0.7						
360.	*	1.9	1.6	1.4	1.5	1.5	1.4	2.8	2.5	3.1	3.1	3.0	2.8
2.4	2.4	2.3	2.3	2.2	2.2	0.4	0.3						

------*----------

MAX	*	3.1	3.1	3.5	3.5	3.4	3.4	3.3	3.0	3.1	3.6	3.7	3.8
3.7	3.7	4.2	4.1	4.2	4.0	2.9	3.4						
DEGR.	*	220	220	280	290	290	300	10	290	0	10	20	30
20	20	100	100	120	120	190	190						

JOB: 56TH AND QUEBEC INTERSECTION RUN: 2035 NO BUILD AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	*	REC21	REC22	REC23	REC24
0.	*	0.3	0.2	0.2	0.1
10.	*	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0
70.	*	0.1	0.1	0.1	0.1
80.	*	0.5	0.5	0.4	0.4
90.	*	1.4	1.4	1.3	1.3
100.	*	2.3	2.2	2.2	1.9
110.	*	2.6	2.5	2.4	2.3
120.	*	2.7	2.7	2.5	2.3
130.	*	2.5	2.5	2.4	2.3
140.	*	2.3	2.3	2.3	2.1
150.	*	2.3	2.3	2.3	2.2
160.	*	2.2	2.2	2.2	2.1
170.	*	2.3	2.2	2.2	2.1
180.	*	2.9	2.8	2.6	2.4
190.	*	3.4	3.3	3.1	2.8
200.	*	3.5	3.6	3.4	3.2
210.	*	3.1	3.3	3.5	3.3
220.	*	2.3	2.6	3.0	3.2
230.	*	2.1	2.6	2.5	2.7
240.	*	1.8	2.0	2.6	2.7
250.	*	1.9	1.9	2.4	2.3
260.	*	2.1	1.9	1.9	1.9
270.	*	1.7	1.6	1.6	1.7
280.	*	1.2	1.1	1.1	1.0
290.	*	1.2	1.1	1.0	0.9
300.	*	1.4	1.1	1.1	0.9
310.	*	1.4	1.1	1.0	0.8
320.	*	1.3	1.1	0.9	0.8
330.	*	1.1	1.1	0.7	0.7
340.	*	0.9	0.7	0.6	0.5
350.	*	0.7	0.4	0.4	0.3
360.	*	0.3	0.2	0.2	0.1
MAX	*	3.5	3.6	3.5	3.3
DEGR.	*	200	200	210	210

THE HIGHEST CONCENTRATION OF 4.20 PPM OCCURRED AT RECEPTOR REC15.

JOB: 56TH AND QUEBEC INTERSECTION RUN: 2035 NO BUILD AM

DATE : 1/ 3/ 8
TIME : 9:10:52

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM)											
	*	ANGLE (DEGREES)											
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12
REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20						
LINK #	*	220	220	280	290	290	300	10	290	0	10	20	30
20	20	100	100	120	120	190	190						

1 *	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2						
2 *	1.1	1.1	0.9	1.0	1.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3						
3 *	0.4	0.4	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
4 *	0.8	0.8	0.4	0.4	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6						
5 *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.1
0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0						
6 *	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.6	0.8	0.7	0.6
1.7	1.7	1.0	1.0	1.1	1.1	0.0	0.0						
7 *	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3	0.4	0.4	0.3
1.2	1.3	0.9	0.9	1.0	1.0	0.0	0.0						
8 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.3	0.2	0.3	0.3	0.3	0.1	0.0	0.0						
9 *	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.2
0.3	0.3	0.4	0.5	0.5	0.5	0.0	0.0						
10 *	0.6	0.6	0.5	0.5	0.5	0.5	0.8	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4						
11 *	0.0	0.0	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
12 *	0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.9	0.7	0.8	0.9	0.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
13 *	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.5	0.4	0.4	0.4	0.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
14 *	0.0	0.0	0.5	0.5	0.5	0.4	0.0	1.1	0.5	0.6	0.7	0.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
15 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1						
16 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.3	0.2	0.2	0.2	0.3	0.3						
17 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.6	0.6	0.4	0.4	0.4	0.7						
18 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3						
19 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.4	0.3	0.4	0.4	0.3	0.5						
20 *	0.0	0.0	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

DATE : 1/ 3/ 8
TIME : 9:10:52

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	CO/LINK (PPM) ANGLE (DEGREES)			
	REC21	REC22	REC23	REC24
LINK #	200	200	210	210
1	0.2	0.2	0.1	0.1
2	0.3	0.3	0.3	0.2
3	0.0	0.0	0.0	0.0
4	0.6	0.5	0.5	0.4
5	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0

9	*	0.0	0.0	0.0	0.0
10	*	0.5	0.5	0.4	0.4
11	*	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.1	0.1	0.1	0.1
16	*	0.3	0.3	0.3	0.3
17	*	0.7	0.8	0.8	0.8
18	*	0.3	0.3	0.3	0.3
19	*	0.5	0.6	0.7	0.7
20	*	0.0	0.0	0.0	0.0

JOB: 56TH AND QUEBEC INTERSECTION RUN: 2035 NO BUILD PM

DATE : 1/ 3/ 8
TIME : 9:11:35

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. Quebec St. NB appr.	*	32.0	-1000.0	32.0	0.0	*	1000.	360.	AG	2165.	14.1	0.0	56.0		
2. Quebec St. NB Queue	*	32.0	-80.0	32.0	-560.6	*	481.	180.	AG	427.	100.0	0.0	36.0	1.02	24.4
3. Quebec St. NB Q. Rig	*	64.0	-80.0	64.0	-115.6	*	36.	180.	AG	134.	100.0	0.0	12.0	0.15	1.8
4. Quebec St. NB Q. Lef	*	3.0	-80.0	3.0	-159.8	*	80.	180.	AG	444.	100.0	0.0	24.0	0.78	4.1
5. Quebec St. NB Dep.	*	32.0	0.0	32.0	1000.0	*	1000.	360.	AG	2165.	14.1	0.0	56.0		
6. Quebec St. SB appr	*	-32.0	1000.0	-32.0	0.0	*	1000.	180.	AG	1295.	14.1	0.0	56.0		
7. Quebec St. SB Queue.	*	-32.0	80.0	-32.0	240.3	*	160.	360.	AG	440.	100.0	0.0	36.0	0.63	8.1
8. Quebec St. SB Q. Rig	*	-45.0	84.0	-45.0	124.9	*	41.	360.	AG	147.	100.0	0.0	12.0	0.17	2.1
9. Quebec St. SB Q. Lef	*	-3.0	80.0	-3.0	679.2	*	599.	360.	AG	453.	100.0	0.0	24.0	1.30	30.4
10. Quebec St. SB Dep.	*	-32.0	0.0	-32.0	-1000.0	*	1000.	180.	AG	1295.	14.1	0.0	56.0		
11. 56 EB th appr.	*	-1000.0	-24.0	0.0	-24.0	*	1000.	90.	AG	910.	14.1	0.0	44.0		
12. 56 EB Queue	*	-82.0	-24.0	-524.8	-24.1	*	443.	270.	AG	367.	100.0	0.0	24.0	1.04	22.5
13. 56 EB Q. Right	*	-82.0	-40.0	-139.6	-40.0	*	58.	270.	AG	147.	100.0	0.0	12.0	0.24	2.9
14. 56 EB Q. Left	*	-84.0	-3.0	-357.3	-3.1	*	273.	270.	AG	466.	100.0	0.0	24.0	1.15	13.9
15. 56 EB Dep.	*	0.0	-24.0	1000.0	-24.0	*	1000.	90.	AG	910.	14.1	0.0	44.0		
16. 56 WB th appr.	*	1000.0	28.0	0.0	28.0	*	1000.	270.	AG	620.	14.1	0.0	44.0		
17. 56 WB th Queue.	*	74.0	28.0	269.9	28.0	*	196.	90.	AG	401.	100.0	0.0	24.0	0.95	9.9
18. 56 WB Q. Right.	*	74.0	50.0	297.2	50.0	*	223.	90.	AG	168.	100.0	0.0	12.0	0.92	11.3
19. 56 WB Q. Left.	*	74.0	3.0	235.6	3.0	*	162.	90.	AG	496.	100.0	0.0	24.0	1.92	8.2
20. 56 WB Dep.	*	0.0	28.0	-1000.0	28.0	*	1000.								

270. AG   620. 14.1   0.0 44.0

JOB: 56TH AND QUEBEC INTERSECTION RUN: 2035 NO BUILD PM

DATE : 1/ 3/ 8
TIME : 9:11:35

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. Quebec St. NB Queue	120	66	2.0	2165	1700	96.50	2	3
3. Quebec St. NB Q. Rig	120	62	2.0	105	1600	96.50	2	3
4. Quebec St. NB Q. Lef	120	103	2.0	270	1600	96.50	2	3
7. Quebec St. SB Queue.	120	68	2.0	1295	1700	96.50	2	3
8. Quebec St. SB Q. Rig	120	68	2.0	110	1600	96.50	2	3
9. Quebec St. SB Q. Lef	120	105	2.0	380	1600	96.50	2	3
12. 56 EB Queue	120	85	2.0	910	1700	96.50	2	3
13. 56 EB Q. Right	120	68	2.0	155	1600	96.50	2	3
14. 56 EB Q. Left	120	108	2.0	245	1600	96.50	2	3
17. 56 WB th Queue.	120	93	2.0	620	1700	96.50	2	3
18. 56 WB Q. Right.	120	78	2.0	465	1600	96.50	2	3
19. 56 WB Q. Left.	120	115	2.0	50	1600	96.50	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (SE CORNER #1)	80.0	-70.0	6.0
2. REC 2 (SE CORNER #2)	80.0	-85.0	6.0
3. REC 3 (SE CORNER #3)	80.0	-100.0	6.0
4. REC 4 (SE CORNER #4)	80.0	-115.0	6.0
5. REC 5 (SE CORNER #5)	80.0	-135.0	6.0
6. REC 6 (SE CORNER #6)	80.0	-160.0	6.0
7. REC 7 (SW CORNER #1)	-60.0	-58.0	6.0
8. REC 8 (SW CORNER #2)	-75.0	-58.0	6.0
9. REC 9 (SW CORNER #3)	-90.0	-58.0	6.0
10. REC 10 (SW CORNER #4	-105.0	-58.0	6.0
11. REC 11 (SW CORNER #5	-125.0	-58.0	6.0
12. REC 12 (SW CORNER #6	-150.0	-58.0	6.0
13. REC 13 (NW CORNER #1	-63.0	70.0	6.0
14. REC 14 (NW CORNER #2	-63.0	85.0	6.0
15. REC 15 (NW CORNER #3	-63.0	100.0	6.0

16.	REC 16 (NW CORNER #4 *	-63.0	115.0	6.0	*
17.	REC 17 (NW CORNER #5 *	-63.0	135.0	6.0	*
18.	REC 18 (NW CORNER #6 *	-63.0	160.0	6.0	*
19.	REC 19 (NE CORNER #1 *	80.0	70.0	6.0	*
20.	REC 20 (NE CORNER #2 *	95.0	70.0	6.0	*
21.	REC 21 (NE CORNER #3 *	110.0	70.0	6.0	*
22.	REC 22 (NE CORNER #4 *	125.0	70.0	6.0	*
23.	REC 23 (NE CORNER #5 *	145.0	70.0	6.0	*
24.	REC 24 (NE CORNER #6 *	170.0	70.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	2.2	2.1	2.1	2.1	2.2	2.0	2.7	2.2	2.9	3.1	3.1	2.4	2.3	1.9	1.9	1.8	1.8	1.6	1.1	0.8
10.	*	1.9	1.7	1.5	1.5	1.4	1.2	3.0	2.8	3.3	3.7	3.5	2.9	3.5	3.3	3.2	3.1	3.0	2.7	0.4	0.2
20.	*	1.6	1.6	1.4	1.3	1.2	1.1	2.8	2.6	3.2	3.6	3.9	3.4	4.0	4.0	3.8	3.7	3.5	3.3	0.1	0.0
30.	*	1.7	1.5	1.4	1.3	1.1	1.1	2.3	2.2	2.5	3.1	3.6	3.6	4.0	4.1	3.9	3.7	3.6	3.5	0.0	0.0
40.	*	1.7	1.5	1.3	1.2	1.1	0.9	2.1	2.0	2.0	2.5	3.2	3.4	3.5	3.8	3.7	3.5	3.4	3.3	0.0	0.0
50.	*	1.6	1.5	1.1	0.9	0.8	0.5	2.1	1.8	1.9	2.0	2.6	3.0	3.2	3.6	3.5	3.3	3.2	3.2	0.0	0.0
60.	*	1.6	1.2	1.0	0.6	0.5	0.4	2.4	2.0	1.9	2.2	2.5	3.0	2.7	3.3	3.3	3.1	2.9	2.9	0.0	0.0
70.	*	1.1	0.7	0.6	0.4	0.3	0.3	2.5	2.4	2.2	2.1	2.2	2.5	2.3	3.1	3.3	3.1	2.9	2.9	0.0	0.0
80.	*	0.7	0.5	0.3	0.3	0.3	0.2	2.4	2.4	2.1	2.0	2.2	2.1	2.1	3.2	3.3	3.2	2.9	2.9	0.3	0.3
90.	*	0.4	0.3	0.1	0.1	0.1	0.1	2.0	1.9	1.8	1.7	1.7	1.7	2.4	3.1	3.8	3.7	3.2	3.0	0.9	0.8
100.	*	0.1	0.1	0.0	0.0	0.0	0.0	1.7	1.6	1.4	1.3	1.2	1.2	2.5	3.2	3.9	3.9	3.6	3.3	1.6	1.5
110.	*	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.6	1.4	1.3	1.2	1.1	2.3	2.8	3.7	4.1	3.9	3.5	2.2	2.2
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.9	1.7	1.6	1.3	1.1	2.0	2.2	3.3	3.9	4.0	3.8	2.5	2.5
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.1	1.7	1.6	1.3	1.1	1.9	2.0	2.7	3.3	3.8	3.8	2.7	2.6
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.1	1.9	1.5	1.3	1.0	1.9	2.0	2.1	3.0	3.5	3.7	2.4	2.4
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.9	1.7	1.4	1.1	1.1	2.2	2.2	2.4	2.9	3.4	3.7	2.4	2.4
160.	*	0.1	0.1	0.1	0.1	0.1	0.1	2.3	1.9	1.5	1.2	1.1	0.9	2.6	2.5	2.5	2.8	3.1	3.5	2.4	2.3

170.	*	0.5	0.5	0.5	0.5	0.5	0.5	2.1	1.5	1.2	0.9	0.8	0.5
2.6	2.5	2.3	2.3	2.7	2.9	2.6	2.6						
180.	*	1.5	1.4	1.4	1.3	1.2	1.2	1.4	0.8	0.6	0.4	0.3	0.2
2.0	2.0	1.9	1.8	2.0	2.0	3.0	3.2						
190.	*	2.4	2.3	2.2	2.2	2.1	2.1	0.6	0.3	0.1	0.1	0.0	0.0
1.5	1.5	1.5	1.2	1.2	1.3	3.3	3.6						
200.	*	2.8	2.6	2.4	2.4	2.4	2.4	0.2	0.1	0.0	0.0	0.0	0.0
1.4	1.4	1.3	1.2	1.0	0.9	2.9	3.4						
210.	*	2.9	2.8	2.5	2.4	2.4	2.4	0.1	0.0	0.0	0.0	0.0	0.0
1.4	1.4	1.3	1.1	1.0	1.0	2.2	2.9						
220.	*	2.8	2.7	2.5	2.3	2.2	2.2	0.1	0.0	0.0	0.0	0.0	0.0
1.6	1.4	1.4	1.2	1.0	0.9	1.7	2.2						
230.	*	2.7	2.8	2.6	2.3	2.1	2.1	0.1	0.0	0.0	0.0	0.0	0.0
1.7	1.5	1.4	1.3	0.9	0.9	1.9	1.9						
240.	*	2.6	2.9	2.7	2.3	2.1	2.0	0.0	0.0	0.0	0.0	0.0	0.0
1.7	1.5	1.3	1.2	0.9	0.8	2.2	1.9						
250.	*	2.2	2.7	2.7	2.5	2.2	2.0	0.1	0.1	0.1	0.1	0.1	0.0
1.6	1.3	1.1	1.0	0.6	0.5	2.3	2.3						
260.	*	2.1	2.7	3.0	2.5	2.3	2.1	0.7	0.6	0.6	0.6	0.5	0.4
1.2	0.9	0.7	0.4	0.4	0.3	2.3	2.2						
270.	*	2.5	3.1	3.2	3.1	2.7	2.4	1.6	1.5	1.5	1.3	1.3	1.3
0.6	0.4	0.3	0.2	0.1	0.0	2.1	1.9						
280.	*	2.5	2.9	3.5	3.6	3.3	2.8	2.4	2.4	2.4	2.2	2.1	1.9
0.1	0.1	0.0	0.0	0.0	0.0	1.8	1.6						
290.	*	2.3	2.6	3.1	3.6	3.4	3.3	3.0	2.9	2.9	2.8	2.6	2.5
0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.6						
300.	*	1.9	2.1	2.7	3.0	3.2	3.3	2.9	3.0	2.9	2.9	2.7	2.6
0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.8						
310.	*	1.8	1.9	2.4	2.6	2.9	3.1	2.6	2.8	2.9	2.8	2.6	2.5
0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.0						
320.	*	2.0	1.9	2.3	2.4	2.7	2.7	1.9	2.4	2.6	2.5	2.4	2.2
0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.9						
330.	*	2.3	2.2	2.4	2.4	2.5	2.8	1.6	2.1	2.6	2.5	2.4	2.1
0.1	0.1	0.1	0.1	0.1	0.1	2.3	1.9						
340.	*	2.7	2.6	2.7	2.6	2.4	2.4	1.2	1.7	2.3	2.4	2.3	2.0
0.2	0.2	0.1	0.1	0.1	0.1	2.1	1.8						
350.	*	2.9	2.6	2.6	2.7	2.7	2.5	1.7	1.8	2.6	2.6	2.4	2.0
0.8	0.8	0.8	0.8	0.7	0.7	1.8	1.4						
360.	*	2.2	2.1	2.1	2.1	2.2	2.0	2.7	2.2	2.9	3.1	3.1	2.4
2.3	1.9	1.9	1.8	1.8	1.6	1.1	0.8						

MAX	*	2.9	3.1	3.5	3.6	3.4	3.3	3.0	3.0	3.3	3.7	3.9	3.6
4.0	4.1	3.9	4.1	4.0	3.8	3.3	3.6						
DEGR.	*	210	270	280	290	290	300	290	300	10	10	20	30
20	30	30	110	120	120	190	190						

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	*	REC21	REC22	REC23	REC24
0.	*	0.7	0.5	0.3	0.1
10.	*	0.1	0.1	0.1	0.0
20.	*	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0
80.	*	0.3	0.2	0.2	0.2
90.	*	0.8	0.8	0.6	0.6
100.	*	1.5	1.4	1.2	1.1
110.	*	2.0	1.9	1.7	1.5
120.	*	2.4	2.2	2.1	1.8
130.	*	2.6	2.5	2.4	2.1
140.	*	2.4	2.3	2.3	2.1
150.	*	2.3	2.3	2.3	2.2
160.	*	2.3	2.3	2.3	2.3
170.	*	2.5	2.5	2.4	2.3
180.	*	3.1	2.9	2.8	2.6
190.	*	3.6	3.5	3.2	3.0
200.	*	3.6	3.6	3.6	3.3
210.	*	3.3	3.3	3.5	3.4
220.	*	2.6	2.8	3.1	3.3
230.	*	2.1	2.5	2.8	3.0
240.	*	2.2	2.6	2.4	2.7
250.	*	2.1	2.2	2.4	2.7
260.	*	2.2	2.2	2.1	2.2
270.	*	1.8	1.9	1.9	1.9
280.	*	1.5	1.5	1.4	1.4
290.	*	1.6	1.5	1.3	1.2
300.	*	1.7	1.5	1.3	1.3
310.	*	1.7	1.5	1.3	1.2
320.	*	1.7	1.4	1.3	1.1
330.	*	1.7	1.4	1.3	1.0
340.	*	1.4	1.3	1.1	0.9
350.	*	1.2	1.0	0.7	0.6
360.	*	0.7	0.5	0.3	0.1
MAX	*	3.6	3.6	3.6	3.4
DEGR.	*	190	200	200	210

THE HIGHEST CONCENTRATION OF 4.10 PPM OCCURRED AT RECEPTOR REC14.

JOB: 56TH AND QUEBEC INTERSECTION RUN: 2035 NO BUILD PM

DATE : 1/ 3/ 8
TIME : 9:11:35

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM)											
	*	ANGLE (DEGREES)											
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12
REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20						
LINK #	*	210	270	280	290	290	300	290	300	10	10	20	30
20	30	30	110	120	120	190	190						

```
      1  *   1.0   0.7   0.7   0.7   0.7   0.8   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.9   0.7
      2  *   1.1   0.6   0.7   0.8   0.9   0.9   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.6   0.6
      3  *   0.3   0.3   0.3   0.3   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
      4  *   0.2   0.4   0.4   0.4   0.5   0.5   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.1
      5  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.4   0.3   0.4   0.4
 0.6   0.6   0.6   0.5   0.5   0.5   0.1   0.0
      6  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.5   0.4   0.4   0.3
 0.9   0.8   0.8   0.5   0.5   0.5   0.0   0.0
      7  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.4   0.3   0.3   0.3
 1.3   1.5   1.4   1.1   1.2   1.2   0.0   0.0
      8  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.3   0.3   0.2   0.4   0.2   0.0   0.0   0.0
      9  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.5   0.5   0.5   0.4
 0.9   0.9   0.9   0.5   0.6   0.7   0.0   0.0
     10  *   0.3   0.3   0.3   0.3   0.3   0.2   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.3   0.2
     11  *   0.0   0.2   0.3   0.2   0.2   0.2   0.5   0.5   0.3   0.3   0.3   0.4
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
     12  *   0.0   0.3   0.4   0.4   0.4   0.3   1.1   1.0   0.5   0.8   0.8   0.8
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
     13  *   0.0   0.0   0.0   0.0   0.0   0.0   0.3   0.4   0.3   0.4   0.4   0.2
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
     14  *   0.0   0.2   0.3   0.4   0.3   0.3   0.9   0.9   0.3   0.6   0.7   0.7
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
     15  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.2   0.2   0.1   0.2   0.2
     16  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.2   0.1   0.1   0.2   0.2
     17  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.3   0.3   0.3   0.4   0.7
     18  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.1   0.1   0.1   0.2   0.4
     19  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.3   0.3   0.3   0.3   0.5
     20  *   0.0   0.1   0.1   0.1   0.1   0.1   0.2   0.2   0.1   0.1   0.1   0.1
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
```


DATE : 1/ 3/ 8
TIME : 9:11:35

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	CO/LINK (PPM) ANGLE (DEGREES) REC21	REC22	REC23	REC24
	190	200	200	210
1	0.6	0.6	0.5	0.4
2	0.5	0.5	0.5	0.4
3	0.0	0.0	0.0	0.0
4	0.1	0.1	0.1	0.1
5	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0

9	*	0.0	0.0	0.0	0.0
10	*	0.2	0.2	0.2	0.2
11	*	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.2	0.2	0.2	0.2
16	*	0.2	0.2	0.2	0.2
17	*	0.8	0.8	0.8	0.8
18	*	0.4	0.4	0.4	0.4
19	*	0.6	0.6	0.7	0.7
20	*	0.0	0.0	0.0	0.0

JOB: 56TH AND Central Park BLVD INTERSECTION RUN: 2035 NO BUILD AM

DATE : 1/ 3/ 8
TIME : 9: 6:30

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. CP Blvd. NB appr.	*	8.0	-1000.0	8.0	0.0	*	1000.	360.	AG	15.	14.1	0.0	32.0		
2. CP Blvd. NB Queue	*	8.0	-50.0	8.0	-57.8	*	8.	180.	AG	205.	100.0	0.0	12.0	0.05	0.4
3. CP Blvd. NB Q. Right	*	20.0	-50.0	20.0	-86.4	*	36.	180.	AG	205.	100.0	0.0	12.0	0.25	1.8
4. CP Blvd. NB Q. Left	*	-6.0	-50.0	-6.0	-160.5	*	111.	180.	AG	186.	100.0	0.0	12.0	0.59	5.6
5. CP Blvd. NB Dep.	*	8.0	0.0	8.0	1000.0	*	1000.	360.	AG	15.	14.1	0.0	32.0		
6. CP Blvd. SB appr	*	-8.0	1000.0	-8.0	0.0	*	1000.	180.	AG	50.	14.1	0.0	32.0		
7. CP Blvd. SB Queue.	*	-8.0	50.0	-8.0	79.0	*	29.	360.	AG	229.	100.0	0.0	12.0	0.35	1.5
8. CP Blvd. SB Q. Right	*	-20.0	50.0	-20.0	1425.5	*	1376.	360.	AG	229.	100.0	0.0	12.0	1.88	69.9
9. CP Blvd. SB Q. Left	*	6.0	50.0	6.0	80.1	*	30.	360.	AG	216.	100.0	0.0	12.0	0.26	1.5
10. CP Blvd. SB Dep.	*	-8.0	0.0	-8.0	-1000.0	*	1000.	180.	AG	50.	14.1	0.0	32.0		
11. 56 EB th appr.	*	-1000.0	-18.0	0.0	-18.0	*	1000.	90.	AG	655.	14.1	0.0	32.0		
12. 56 EB Queue	*	-65.0	-18.0	-265.6	-18.0	*	201.	270.	AG	121.	100.0	0.0	12.0	0.77	10.2
13. 56 EB Q. Right	*	-65.0	-18.0	-141.6	-18.0	*	77.	270.	AG	121.	100.0	0.0	12.0	0.31	3.9
14. 56 EB Q. Left	*	-65.0	-6.0	-93.9	-6.0	*	29.	270.	AG	99.	100.0	0.0	12.0	0.12	1.5
15. 56 EB Dep.	*	0.0	-18.0	1000.0	-18.0	*	1000.	90.	AG	655.	14.1	0.0	32.0		
16. 56 WB th appr.	*	1000.0	18.0	0.0	18.0	*	1000.	270.	AG	800.	14.1	0.0	32.0		
17. 56 WB th Queue.	*	45.0	18.0	287.6	18.0	*	243.	90.	AG	114.	100.0	0.0	12.0	0.90	12.3
18. 56 WB Q. Right.	*	45.0	18.0	53.7	18.0	*	9.	90.	AG	114.	100.0	0.0	12.0	0.04	0.4
19. 56 WB Q. Left.	*	45.0	6.0	80.0	6.0	*	35.	90.	AG	86.	100.0	0.0	12.0	0.16	1.8
20. 56 WB Dep.	*	0.0	18.0	-1000.0	18.0	*	1000.								

270. AG   800. 14.1   0.0 32.0

DATE : 1/ 3/ 8
TIME : 9: 6:30

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	*	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. CP Blvd. NB Queue	*	120	95	2.0	15	1700	96.50	2	3
3. CP Blvd. NB Q. Right	*	120	95	2.0	70	1600	96.50	2	3
4. CP Blvd. NB Q. Left	*	120	86	2.0	235	1600	96.50	2	3
7. CP Blvd. SB Queue.	*	120	106	2.0	50	1700	96.50	2	3
8. CP Blvd. SB Q. Right	*	120	106	2.0	250	1600	96.50	2	3
9. CP Blvd. SB Q. Left	*	120	100	2.0	55	1600	96.50	2	3
12. 56 EB Queue	*	120	56	2.0	655	1700	96.50	2	3
13. 56 EB Q. Right	*	120	56	2.0	250	1600	96.50	2	3
14. 56 EB Q. Left	*	120	46	2.0	115	1600	96.50	2	3
17. 56 WB th Queue.	*	120	53	2.0	800	1700	96.50	2	3
18. 56 WB Q. Right.	*	120	53	2.0	30	1600	96.50	2	3
19. 56 WB Q. Left.	*	120	40	2.0	160	1600	96.50	2	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT) X	Y	Z
1. REC 1 (SE CORNER #1)	*	40.0	-35.0	6.0
2. REC 2 (SE CORNER #2)	*	40.0	-50.0	6.0
3. REC 3 (SE CORNER #3)	*	40.0	-65.0	6.0
4. REC 4 (SE CORNER #4)	*	40.0	-80.0	6.0
5. REC 5 (SE CORNER #5)	*	40.0	-100.0	6.0
6. REC 6 (SE CORNER #6)	*	40.0	-125.0	6.0
7. REC 7 (SW CORNER #1)	*	-50.0	-35.0	6.0
8. REC 8 (SW CORNER #2)	*	-65.0	-35.0	6.0
9. REC 9 (SW CORNER #3)	*	-80.0	-35.0	6.0
10. REC 10 (SW CORNER #4	*	-95.0	-35.0	6.0
11. REC 11 (SW CORNER #5	*	-115.0	-35.0	6.0
12. REC 12 (SW CORNER #6	*	-140.0	-35.0	6.0
13. REC 13 (NW CORNER #1	*	-45.0	35.0	6.0
14. REC 14 (NW CORNER #2	*	-45.0	50.0	6.0
15. REC 15 (NW CORNER #3	*	-45.0	65.0	6.0

16. REC 16 (NW CORNER #4 *	-45.0	80.0	6.0	*
17. REC 17 (NW CORNER #5 *	-45.0	100.0	6.0	*
18. REC 18 (NW CORNER #6 *	-45.0	125.0	6.0	*
19. REC 19 (NE CORNER #1 *	40.0	35.0	6.0	*
20. REC 20 (NE CORNER #2 *	55.0	35.0	6.0	*
21. REC 21 (NE CORNER #3 *	70.0	35.0	6.0	*
22. REC 22 (NE CORNER #4 *	85.0	35.0	6.0	*
23. REC 23 (NE CORNER #5 *	105.0	35.0	6.0	*
24. REC 24 (NE CORNER #6 *	130.0	35.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) * REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	0.9	0.8	0.7	0.6	0.6	0.5	0.9	1.3	1.6	1.4	1.3	1.1	0.6	0.6	0.6	0.6	0.6	0.3	0.2
10.	*	0.8	0.7	0.7	0.5	0.4	0.4	1.1	1.2	1.7	1.5	1.4	1.2	0.7	0.7	0.7	0.7	0.7	0.1	0.1
20.	*	0.7	0.6	0.6	0.4	0.3	0.3	1.0	0.9	1.5	1.5	1.4	1.4	0.8	0.7	0.7	0.7	0.7	0.0	0.0
30.	*	0.7	0.6	0.5	0.4	0.3	0.3	0.9	0.9	1.3	1.5	1.4	1.3	0.7	0.6	0.6	0.6	0.6	0.0	0.0
40.	*	0.9	0.6	0.5	0.5	0.3	0.3	0.7	0.9	1.2	1.5	1.4	1.3	0.8	0.7	0.6	0.6	0.6	0.0	0.0
50.	*	0.9	0.6	0.5	0.5	0.4	0.3	0.8	0.6	1.0	1.6	1.5	1.5	0.7	0.8	0.6	0.5	0.5	0.0	0.0
60.	*	1.0	0.6	0.5	0.5	0.5	0.3	0.7	0.9	1.1	1.1	1.4	1.7	0.6	0.9	0.7	0.5	0.5	0.1	0.1
70.	*	1.0	0.6	0.6	0.5	0.4	0.2	0.9	1.0	0.9	1.1	1.4	1.6	0.6	0.9	0.8	0.5	0.5	0.1	0.1
80.	*	1.0	0.6	0.4	0.4	0.3	0.2	1.0	1.0	0.9	1.1	1.2	1.4	0.8	0.9	1.1	0.8	0.5	0.5	0.6	0.6
90.	*	0.7	0.3	0.3	0.2	0.2	0.1	0.8	0.8	0.9	0.8	1.0	1.0	0.9	1.0	1.4	1.2	0.7	0.6	1.0	0.9
100.	*	0.4	0.1	0.1	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.5	1.1	1.0	1.5	1.3	1.0	0.7	1.3	1.3
110.	*	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.3	0.3	0.2	1.0	0.8	1.2	1.6	1.1	0.9	1.2	1.2
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.1	0.1	0.8	0.7	1.1	1.2	1.3	1.0	1.3	1.2
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.2	0.1	0.1	0.7	0.4	0.7	1.1	1.3	1.1	1.2	1.1
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.1	0.1	0.0	0.8	0.6	0.5	0.7	0.9	1.0	1.1	1.0
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.1	0.0	0.0	0.7	0.7	0.7	0.6	0.8	0.9	1.0	1.0
160.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.9	0.6	0.5	0.5	0.6	1.0	1.0	1.0

 170. *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.0   0.0   0.0   0.0   0.0
0.8   0.5   0.4   0.4   0.4   0.6   0.9   1.2
 180. *   0.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.7   0.5   0.4   0.4   0.4   0.4   1.0   1.1
 190. *   0.3   0.2   0.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.6   0.5   0.4   0.5   0.4   0.2   0.8   1.2
 200. *   0.5   0.4   0.2   0.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.9   0.7   0.5   0.5   0.5   0.4   0.9   1.2
 210. *   0.7   0.5   0.3   0.2   0.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.9   0.8   0.6   0.5   0.5   0.4   0.7   1.1
 220. *   0.7   0.7   0.5   0.2   0.2   0.1   0.0   0.0   0.0   0.0   0.0   0.0
1.0   0.8   0.5   0.5   0.5   0.3   0.7   0.9
 230. *   0.7   0.7   0.6   0.4   0.2   0.1   0.0   0.0   0.0   0.0   0.0   0.0
1.1   0.8   0.7   0.4   0.4   0.4   0.7   0.9
 240. *   0.5   0.8   0.7   0.4   0.3   0.2   0.0   0.0   0.0   0.0   0.0   0.0
1.1   0.8   0.6   0.4   0.4   0.3   1.0   0.8
 250. *   0.4   0.7   0.8   0.5   0.3   0.2   0.1   0.1   0.1   0.1   0.1   0.1
1.1   0.7   0.6   0.5   0.3   0.3   1.0   1.1
 260. *   0.6   0.7   0.9   0.6   0.3   0.3   0.6   0.5   0.5   0.5   0.5   0.5
1.0   0.7   0.4   0.3   0.3   0.2   1.1   1.0
 270. *   0.9   0.9   1.2   0.9   0.5   0.4   1.1   1.0   1.0   1.0   0.9   0.9
0.7   0.4   0.3   0.2   0.2   0.1   1.0   1.2
 280. *   1.1   1.0   1.3   1.1   0.7   0.5   1.5   1.5   1.5   1.3   1.2   1.2
0.5   0.1   0.1   0.1   0.0   0.0   0.7   0.7
 290. *   1.1   0.9   1.2   1.3   0.9   0.6   1.6   1.5   1.5   1.4   1.3   1.2
0.1   0.0   0.0   0.0   0.0   0.0   0.7   0.6
 300. *   0.7   0.6   1.1   1.4   1.0   0.6   1.5   1.6   1.5   1.5   1.4   1.2
0.1   0.0   0.0   0.0   0.0   0.0   0.6   0.5
 310. *   0.8   0.5   0.8   1.0   0.8   0.7   1.1   1.5   1.3   1.3   1.2   1.0
0.0   0.0   0.0   0.0   0.0   0.0   0.7   0.6
 320. *   0.7   0.6   0.5   0.9   0.7   0.5   1.1   1.3   1.2   1.2   1.2   0.9
0.0   0.0   0.0   0.0   0.0   0.0   0.6   0.4
 330. *   1.0   0.7   0.7   0.7   0.9   0.7   0.8   1.2   1.2   1.1   1.1   0.8
0.0   0.0   0.0   0.0   0.0   0.0   0.6   0.3
 340. *   1.0   0.8   0.9   0.8   0.8   0.8   0.7   1.3   1.2   1.1   1.1   0.9
0.1   0.1   0.1   0.1   0.1   0.1   0.5   0.3
 350. *   1.0   0.9   0.8   0.6   0.7   0.7   0.7   1.1   1.4   1.2   1.2   0.9
0.3   0.3   0.3   0.3   0.3   0.3   0.4   0.3
 360. *   0.9   0.8   0.7   0.6   0.6   0.5   0.9   1.3   1.6   1.4   1.3   1.1
0.6   0.6   0.6   0.6   0.6   0.6   0.3   0.2

------*---

 MAX   *   1.1   1.0   1.3   1.4   1.0   0.8   1.6   1.6   1.7   1.6   1.5   1.7
1.1   1.0   1.5   1.6   1.3   1.1   1.3   1.3
 DEGR. * 280   280   280   300   300   340   290   300   10   50   50   60
100   90   100   110   120   130   120   100

      JOB: 56TH AND Central Park BLVD INTERSECTION   RUN: 2035 NO BUILD
AM

       MODEL RESULTS

       REMARKS : In search of the angle corresponding to
                 the maximum concentration, only the first
                 angle, of the angles with same maximum
                 concentrations, is indicated as maximum.

 WIND ANGLE RANGE: 0.-360.

 WIND * CONCENTRATION
 ANGLE *   (PPM)

(DEGR)	*	REC21	REC22	REC23	REC24
0.	*	0.2	0.1	0.1	0.1
10.	*	0.1	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0
60.	*	0.1	0.1	0.1	0.1
70.	*	0.1	0.1	0.1	0.1
80.	*	0.6	0.6	0.6	0.6
90.	*	0.9	0.9	0.9	0.9
100.	*	1.3	1.2	1.2	1.2
110.	*	1.2	1.2	1.2	1.2
120.	*	1.2	1.2	1.2	1.2
130.	*	1.0	1.0	1.0	1.0
140.	*	0.9	0.9	0.9	0.9
150.	*	0.9	0.9	0.9	0.9
160.	*	1.0	0.9	0.9	0.9
170.	*	1.0	0.9	0.9	0.9
180.	*	1.0	0.9	0.9	0.9
190.	*	1.2	1.0	0.9	0.9
200.	*	1.2	1.2	0.9	0.9
210.	*	1.3	1.2	1.1	1.0
220.	*	1.3	1.2	1.2	1.0
230.	*	1.2	1.2	1.3	1.2
240.	*	1.2	1.2	1.1	1.3
250.	*	1.2	1.3	1.4	1.3
260.	*	1.0	1.1	1.2	1.3
270.	*	1.2	1.1	1.1	0.9
280.	*	0.8	0.8	0.8	0.8
290.	*	0.6	0.6	0.5	0.3
300.	*	0.4	0.4	0.4	0.3
310.	*	0.4	0.3	0.2	0.2
320.	*	0.3	0.2	0.2	0.2
330.	*	0.3	0.3	0.2	0.2
340.	*	0.3	0.3	0.2	0.2
350.	*	0.3	0.3	0.2	0.2
360.	*	0.2	0.1	0.1	0.1
MAX	*	1.3	1.3	1.4	1.3
DEGR.	*	210	250	250	240

THE HIGHEST CONCENTRATION OF 1.70 PPM OCCURRED AT RECEPTOR REC9 .

JOB: 56TH AND Central Park BLVD INTERSECTION RUN: 2035 NO BUILD AM

DATE : 1/ 3/ 8
TIME : 9: 6:30

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

CO/LINK (PPM)
ANGLE (DEGREES)

	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
LINK #	*	280	280	280	300	300	340	290	300	10	50	50	60	100	90	100	110	120	130	120	100

1 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
2 *	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
3 *	0.0	0.1	0.4	0.5	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
4 *	0.0	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
5 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
6 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
7 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	
0.0	0.2	0.3	0.3	0.2	0.1	0.0	0.0						
8 *	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.4	0.1	0.1	0.1	
0.0	0.2	0.4	0.5	0.5	0.5	0.0	0.0						
9 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.1	0.2	0.2	0.2	0.1	0.0	0.0						
10 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
11 *	0.4	0.3	0.2	0.2	0.2	0.1	0.5	0.5	0.3	0.4	0.4	0.4	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
12 *	0.1	0.1	0.1	0.1	0.1	0.0	0.4	0.4	0.3	0.3	0.3	0.4	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
13 *	0.1	0.1	0.1	0.1	0.1	0.0	0.3	0.4	0.3	0.3	0.3	0.4	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
14 *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.1	0.1	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
15 *	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	
0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2						
16 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	
0.4	0.3	0.3	0.3	0.2	0.2	0.6	0.7						
17 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.2	0.1	0.1	0.1	0.1	0.1	0.4	0.4						
18 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
19 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0						
20 *	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.3	0.2	0.2	0.2	0.2	
0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

DATE : 1/ 3/ 8
TIME : 9: 6:30

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	* CO/LINK (PPM)			
	* ANGLE (DEGREES)			
	* REC21	REC22	REC23	REC24
LINK #	* 210	250	250	240
1	* 0.0	0.0	0.0	0.0
2	* 0.0	0.0	0.0	0.0
3	* 0.1	0.0	0.0	0.0
4	* 0.1	0.0	0.0	0.1
5	* 0.0	0.0	0.0	0.0
6	* 0.0	0.0	0.0	0.0
7	* 0.0	0.0	0.0	0.0
8	* 0.0	0.0	0.0	0.0

9	*	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0
11	*	0.0	0.2	0.2	0.1
12	*	0.0	0.1	0.1	0.0
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.2	0.1	0.1	0.2
16	*	0.4	0.5	0.5	0.5
17	*	0.3	0.2	0.3	0.3
18	*	0.1	0.0	0.0	0.0
19	*	0.1	0.0	0.1	0.1
20	*	0.0	0.2	0.1	0.0

JOB: 56TH AND Central Park BLVD INTERSECTION RUN: 2035 NO BUILD PM

DATE : 1/ 3/ 8
TIME : 9: 7:41

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT) X1	Y1	X2	Y2	*	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C QUEUE (VEH)
1. CP Blvd. NB appr.	*	8.0	-1000.0	8.0	0.0	*	1000.	360.	AG	50.	14.1	0.0	32.0	
2. CP Blvd. NB Queue	*	8.0	-50.0	8.0	-77.1	*	27.	180.	AG	214.	100.0	0.0	12.0	0.21 1.4
3. CP Blvd. NB Q. Right	*	20.0	-50.0	20.0	-139.3	*	89.	180.	AG	214.	100.0	0.0	12.0	0.73 4.5
4. CP Blvd. NB Q. Left	*	-6.0	-50.0	-6.0	-126.3	*	76.	180.	AG	194.	100.0	0.0	12.0	0.45 3.9
5. CP Blvd. NB Dep.	*	8.0	0.0	8.0	1000.0	*	1000.	360.	AG	50.	14.1	0.0	32.0	
6. CP Blvd. SB appr	*	-8.0	1000.0	-8.0	0.0	*	1000.	180.	AG	20.	14.1	0.0	32.0	
7. CP Blvd. SB Queue.	*	-8.0	50.0	-8.0	61.9	*	12.	360.	AG	235.	100.0	0.0	12.0	0.20 0.6
8. CP Blvd. SB Q. Right	*	-20.0	50.0	-20.0	866.5	*	817.	360.	AG	235.	100.0	0.0	12.0	1.72 41.5
9. CP Blvd. SB Q. Left	*	6.0	50.0	6.0	83.8	*	34.	360.	AG	222.	100.0	0.0	12.0	0.35 1.7
10. CP Blvd. SB Dep.	*	-8.0	0.0	-8.0	-1000.0	*	1000.	180.	AG	20.	14.1	0.0	32.0	
11. 56 EB th appr.	*	-1000.0	-18.0	0.0	-18.0	*	1000.	90.	AG	830.	14.1	0.0	32.0	
12. 56 EB Queue	*	-65.0	-18.0	-298.0	-18.1	*	233.	270.	AG	108.	100.0	0.0	12.0	0.89 11.8
13. 56 EB Q. Right	*	-65.0	-18.0	-125.1	-18.0	*	60.	270.	AG	108.	100.0	0.0	12.0	0.25 3.1
14. 56 EB Q. Left	*	-65.0	-6.0	-113.2	-6.0	*	48.	270.	AG	78.	100.0	0.0	12.0	0.23 2.5
15. 56 EB Dep.	*	0.0	-18.0	1000.0	-18.0	*	1000.	90.	AG	830.	14.1	0.0	32.0	
16. 56 WB th appr.	*	1000.0	18.0	0.0	18.0	*	1000.	270.	AG	720.	14.1	0.0	32.0	
17. 56 WB th Queue.	*	45.0	18.0	298.4	18.0	*	253.	90.	AG	129.	100.0	0.0	12.0	0.91 12.9
18. 56 WB Q. Right.	*	45.0	18.0	71.2	18.0	*	26.	90.	AG	129.	100.0	0.0	12.0	0.11 1.3
19. 56 WB Q. Left.	*	45.0	6.0	72.3	6.0	*	27.	90.	AG	108.	100.0	0.0	12.0	0.11 1.4
20. 56 WB Dep.	*	0.0	18.0	-1000.0	18.0	*	1000.							

270. AG   720. 14.1   0.0 32.0

DATE : 1/ 3/ 8
TIME : 9: 7:41

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. CP Blvd. NB Queue	120	99	2.0	50	1700	96.50	2	3
3. CP Blvd. NB Q. Right	120	99	2.0	165	1600	96.50	2	3
4. CP Blvd. NB Q. Left	120	90	2.0	155	1600	96.50	2	3
7. CP Blvd. SB Queue.	120	109	2.0	20	1700	96.50	2	3
8. CP Blvd. SB Q. Right	120	109	2.0	160	1600	96.50	2	3
9. CP Blvd. SB Q. Left	120	103	2.0	60	1600	96.50	2	3
12. 56 EB Queue	120	50	2.0	830	1700	96.50	2	3
13. 56 EB Q. Right	120	50	2.0	220	1600	96.50	2	3
14. 56 EB Q. Left	120	36	2.0	245	1600	96.50	2	3
17. 56 WB th Queue.	120	60	2.0	720	1700	96.50	2	3
18. 56 WB Q. Right.	120	60	2.0	80	1600	96.50	2	3
19. 56 WB Q. Left.	120	50	2.0	100	1600	96.50	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (SE CORNER #1)	40.0	-35.0	6.0
2. REC 2 (SE CORNER #2)	40.0	-50.0	6.0
3. REC 3 (SE CORNER #3)	40.0	-65.0	6.0
4. REC 4 (SE CORNER #4)	40.0	-80.0	6.0
5. REC 5 (SE CORNER #5)	40.0	-100.0	6.0
6. REC 6 (SE CORNER #6)	40.0	-125.0	6.0
7. REC 7 (SW CORNER #1)	-50.0	-35.0	6.0
8. REC 8 (SW CORNER #2)	-65.0	-35.0	6.0
9. REC 9 (SW CORNER #3)	-80.0	-35.0	6.0
10. REC 10 (SW CORNER #4	-95.0	-35.0	6.0
11. REC 11 (SW CORNER #5	-115.0	-35.0	6.0
12. REC 12 (SW CORNER #6	-140.0	-35.0	6.0
13. REC 13 (NW CORNER #1	-45.0	35.0	6.0
14. REC 14 (NW CORNER #2	-45.0	50.0	6.0
15. REC 15 (NW CORNER #3	-45.0	65.0	6.0

16. REC 16 (NW CORNER #4 *	-45.0	80.0	6.0	*
17. REC 17 (NW CORNER #5 *	-45.0	100.0	6.0	*
18. REC 18 (NW CORNER #6 *	-45.0	125.0	6.0	*
19. REC 19 (NE CORNER #1 *	40.0	35.0	6.0	*
20. REC 20 (NE CORNER #2 *	55.0	35.0	6.0	*
21. REC 21 (NE CORNER #3 *	70.0	35.0	6.0	*
22. REC 22 (NE CORNER #4 *	85.0	35.0	6.0	*
23. REC 23 (NE CORNER #5 *	105.0	35.0	6.0	*
24. REC 24 (NE CORNER #6 *	130.0	35.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) * REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	1.1	0.9	0.6	0.6	0.6	0.6	1.0	1.2	1.5	1.5	1.4	1.0	0.5	0.5	0.5	0.5	0.5	0.2	0.2
10.	*	1.0	0.9	0.7	0.5	0.5	0.5	1.0	1.2	1.7	1.6	1.5	1.1	0.7	0.7	0.7	0.7	0.7	0.7	0.1	0.1
20.	*	0.9	0.8	0.6	0.4	0.4	0.3	1.0	0.9	1.4	1.6	1.6	1.1	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.0
30.	*	1.0	0.7	0.4	0.4	0.4	0.3	0.9	0.9	1.4	1.6	1.6	1.2	0.7	0.6	0.6	0.6	0.6	0.6	0.0	0.0
40.	*	0.9	0.7	0.6	0.4	0.4	0.4	0.8	0.9	1.2	1.6	1.5	1.3	0.7	0.7	0.6	0.6	0.6	0.6	0.0	0.0
50.	*	0.9	0.8	0.6	0.4	0.4	0.4	0.7	0.7	1.1	1.5	1.6	1.4	0.7	0.6	0.5	0.5	0.5	0.5	0.0	0.0
60.	*	1.0	0.8	0.6	0.6	0.4	0.4	0.9	1.0	1.1	1.3	1.5	1.5	0.5	0.8	0.6	0.5	0.5	0.5	0.1	0.1
70.	*	1.2	0.7	0.6	0.6	0.4	0.3	1.0	1.0	1.1	1.3	1.5	1.6	0.6	0.7	0.7	0.6	0.5	0.5	0.1	0.1
80.	*	1.0	0.7	0.6	0.3	0.3	0.2	1.0	1.1	1.0	1.3	1.2	1.6	0.8	0.9	0.9	0.6	0.5	0.5	0.5	0.5
90.	*	0.9	0.4	0.3	0.3	0.2	0.1	1.0	1.1	1.0	1.1	1.3	1.1	1.0	0.9	1.2	1.0	0.7	0.6	1.1	1.1
100.	*	0.5	0.1	0.1	0.1	0.0	0.0	0.7	0.8	0.8	0.8	0.8	0.6	1.2	1.0	1.3	1.3	1.0	0.7	1.4	1.3
110.	*	0.2	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.5	0.5	0.4	0.3	1.0	0.8	1.2	1.3	1.1	0.9	1.6	1.3
120.	*	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.6	0.4	0.3	0.3	0.8	0.6	1.0	1.2	1.2	1.0	1.5	1.3
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.3	0.2	0.2	0.1	0.9	0.5	0.8	1.1	1.2	0.9	1.5	1.3
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.2	0.2	0.0	0.0	0.9	0.6	0.5	0.7	0.9	0.9	1.3	1.3
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.9	0.8	0.6	0.7	1.0	0.9	1.2	1.2
160.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.8	0.8	0.5	0.7	0.7	1.0	1.0	1.2

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 170.  *   0.1   0.1   0.1   0.0   0.0   0.0   0.1   0.0   0.0   0.0   0.0   0.0
0.7   0.7   0.5   0.5   0.5   0.6   0.9   1.3
 180.  *   0.2   0.2   0.2   0.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.7   0.6   0.5   0.4   0.3   0.3   1.1   1.5
 190.  *   0.5   0.4   0.3   0.2   0.1   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.5   0.5   0.4   0.3   0.2   0.2   0.9   1.5
 200.  *   0.7   0.6   0.6   0.4   0.2   0.0   0.0   0.0   0.0   0.0   0.0   0.0
0.7   0.7   0.6   0.5   0.4   0.3   0.8   1.4
 210.  *   0.8   0.9   0.6   0.6   0.4   0.1   0.0   0.0   0.0   0.0   0.0   0.0
0.8   0.8   0.7   0.6   0.4   0.3   0.9   1.3
 220.  *   0.9   0.9   0.8   0.6   0.5   0.1   0.0   0.0   0.0   0.0   0.0   0.0
0.9   0.8   0.7   0.5   0.4   0.3   0.7   1.1
 230.  *   0.8   1.0   0.8   0.7   0.6   0.2   0.0   0.0   0.0   0.0   0.0   0.0
1.1   0.8   0.5   0.5   0.5   0.3   0.8   0.9
 240.  *   0.6   1.1   0.9   0.7   0.6   0.3   0.1   0.1   0.1   0.1   0.1   0.1
1.2   0.6   0.6   0.5   0.5   0.4   0.9   0.9
 250.  *   0.5   0.9   1.0   0.8   0.7   0.4   0.2   0.2   0.2   0.2   0.2   0.2
1.1   0.7   0.6   0.5   0.4   0.3   1.1   1.0
 260.  *   0.8   1.0   1.2   1.0   0.7   0.6   0.6   0.6   0.6   0.6   0.6   0.6
1.0   0.7   0.5   0.4   0.3   0.2   1.0   1.0
 270.  *   1.0   1.0   1.4   1.2   1.0   0.8   1.1   1.1   1.1   1.0   1.0   1.0
0.8   0.4   0.3   0.2   0.2   0.1   1.0   0.9
 280.  *   1.2   1.1   1.6   1.5   1.2   1.0   1.4   1.4   1.3   1.3   1.2   1.2
0.4   0.1   0.1   0.0   0.0   0.0   0.7   0.7
 290.  *   1.0   0.8   1.4   1.6   1.3   1.1   1.6   1.7   1.6   1.5   1.4   1.3
0.1   0.0   0.0   0.0   0.0   0.0   0.6   0.7
 300.  *   0.8   0.6   1.2   1.5   1.3   1.2   1.4   1.6   1.5   1.4   1.2   1.2
0.1   0.0   0.0   0.0   0.0   0.0   0.6   0.5
 310.  *   0.9   0.6   0.8   1.0   1.3   1.3   1.2   1.4   1.4   1.2   1.1   1.0
0.0   0.0   0.0   0.0   0.0   0.0   0.7   0.5
 320.  *   0.7   0.7   0.5   1.0   1.0   1.1   0.9   1.3   1.3   1.3   1.0   0.9
0.0   0.0   0.0   0.0   0.0   0.0   0.5   0.4
 330.  *   0.9   0.8   0.8   0.8   1.1   1.1   0.9   1.3   1.3   1.3   1.0   0.9
0.0   0.0   0.0   0.0   0.0   0.0   0.6   0.4
 340.  *   1.0   0.8   0.7   1.0   1.0   1.2   0.6   1.1   1.3   1.3   1.1   0.9
0.1   0.1   0.1   0.1   0.1   0.1   0.5   0.3
 350.  *   1.1   0.8   0.7   0.8   0.7   0.9   0.8   1.2   1.4   1.4   1.1   0.9
0.2   0.2   0.2   0.2   0.2   0.2   0.4   0.3
 360.  *   1.1   0.9   0.6   0.6   0.6   0.6   1.0   1.2   1.5   1.5   1.4   1.0
0.5   0.5   0.5   0.5   0.5   0.5   0.2   0.2

------*-------------------------------------------------------------------------
----------------------------------------
 MAX   *   1.2   1.1   1.6   1.6   1.3   1.3   1.6   1.7   1.7   1.6   1.6   1.6
1.2   1.0   1.3   1.3   1.2   1.0   1.6   1.5
 DEGR. *   70   280   280   290   290   310   290   290    10    10    20    70
100   100   100   100   120   160   110   190
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MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	*	REC21	REC22	REC23	REC24
0.	*	0.1	0.1	0.1	0.1
10.	*	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0
60.	*	0.1	0.1	0.1	0.1
70.	*	0.1	0.1	0.1	0.1
80.	*	0.5	0.5	0.5	0.5
90.	*	1.1	1.1	1.1	0.9
100.	*	1.3	1.3	1.3	1.3
110.	*	1.3	1.3	1.3	1.3
120.	*	1.2	1.2	1.2	1.2
130.	*	1.1	1.1	1.1	1.1
140.	*	1.0	1.0	1.0	1.0
150.	*	0.8	0.8	0.8	0.8
160.	*	0.9	0.8	0.8	0.8
170.	*	1.0	0.8	0.8	0.8
180.	*	1.3	0.9	0.9	0.9
190.	*	1.3	0.9	0.8	0.8
200.	*	1.6	1.2	0.9	0.8
210.	*	1.6	1.2	1.0	0.9
220.	*	1.7	1.5	1.3	1.2
230.	*	1.2	1.5	1.5	1.2
240.	*	1.2	1.4	1.3	1.5
250.	*	1.2	1.3	1.5	1.6
260.	*	1.1	1.3	1.2	1.5
270.	*	1.1	1.3	1.2	1.1
280.	*	0.6	0.7	0.6	0.7
290.	*	0.5	0.5	0.4	0.3
300.	*	0.3	0.3	0.3	0.2
310.	*	0.3	0.3	0.2	0.2
320.	*	0.4	0.2	0.2	0.2
330.	*	0.3	0.3	0.2	0.2
340.	*	0.3	0.3	0.2	0.2
350.	*	0.3	0.2	0.2	0.1
360.	*	0.1	0.1	0.1	0.1
MAX	*	1.7	1.5	1.5	1.6
DEGR.	*	220	220	250	250

THE HIGHEST CONCENTRATION OF 1.70 PPM OCCURRED AT RECEPTOR REC9 .

JOB: 56TH AND Central Park BLVD INTERSECTION RUN: 2035 NO BUILD PM

DATE : 1/ 3/ 8
TIME : 9: 7:41

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM)											
	*	ANGLE (DEGREES)											
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12
REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20						
LINK #	*	70	280	280	290	290	310	290	290	10	10	20	70
100	100	100	100	120	160	110	190						

```
      1  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
      2  *   0.0   0.1   0.3   0.3   0.1   0.1   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
      3  *   0.0   0.1   0.5   0.5   0.5   0.5   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.1   0.0   0.2
      4  *   0.0   0.1   0.2   0.2   0.3   0.3   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.1   0.0   0.1
      5  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
      6  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
      7  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.1   0.1   0.1   0.0   0.0   0.0   0.0
      8  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.4   0.3   0.3   0.0
 0.0   0.1   0.4   0.5   0.5   0.4   0.0   0.0
      9  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.1   0.2   0.2   0.2   0.1   0.0   0.0
     10  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
     11  *   0.0   0.4   0.3   0.3   0.2   0.2   0.7   0.7   0.4   0.4   0.4   0.6
 0.0   0.0   0.0   0.0   0.0   0.1   0.0   0.0
     12  *   0.0   0.1   0.1   0.1   0.1   0.1   0.3   0.4   0.3   0.3   0.3   0.3
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
     13  *   0.0   0.1   0.0   0.0   0.0   0.0   0.2   0.2   0.3   0.3   0.3   0.2
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
     14  *   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.1   0.1   0.1   0.1   0.1
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
     15  *   0.7   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 0.3   0.2   0.2   0.2   0.2   0.1   0.3   0.2
     16  *   0.3   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 0.4   0.3   0.3   0.2   0.2   0.0   0.6   0.3
     17  *   0.2   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
 0.2   0.2   0.1   0.1   0.1   0.0   0.5   0.3
     18  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.2   0.3
     19  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
     20  *   0.0   0.2   0.2   0.2   0.1   0.1   0.3   0.3   0.2   0.2   0.2   0.1
 0.3   0.0   0.0   0.0   0.0   0.1   0.0   0.0
```


DATE : 1/ 3/ 8
TIME : 9: 7:41

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	CO/LINK (PPM) ANGLE (DEGREES) REC21	REC22	REC23	REC24
	220	220	250	250
1	0.0	0.0	0.0	0.0
2	0.1	0.1	0.0	0.0
3	0.1	0.1	0.0	0.0
4	0.1	0.1	0.0	0.0
5	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0

9	*	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0
11	*	0.1	0.0	0.2	0.2
12	*	0.0	0.0	0.1	0.1
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.2	0.2	0.1	0.1
16	*	0.4	0.4	0.5	0.5
17	*	0.3	0.3	0.3	0.4
18	*	0.3	0.2	0.1	0.1
19	*	0.1	0.1	0.1	0.1
20	*	0.0	0.0	0.1	0.1

JOB: 56TH AND Havana INTERSECTION RUN: 2035 NO BUILD AM

DATE : 1/ 3/ 8
TIME : 9: 8:42

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. Havana St. NB appr.	*	25.0	-1000.0	25.0	0.0	*	1000.	360.	AG	35.	14.1	0.0	32.0		
2. Havana St. NB Queue	*	25.0	-25.0	25.0	-42.0	*	17.	180.	AG	192.	100.0	0.0	12.0	0.09	0.9
3. Havana St. NB Q. Rig	*	40.0	-25.0	40.0	-106.1	*	81.	180.	AG	114.	100.0	0.0	12.0	0.33	4.1
4. Havana St. NB Q. Lef	*	20.0	-40.0	20.0	-92.7	*	53.	180.	AG	341.	100.0	0.0	24.0	0.25	2.7
5. Havana St. NB Dep.	*	25.0	0.0	25.0	1000.0	*	1000.	360.	AG	35.	14.1	0.0	32.0		
6. Havana St. SB appr	*	-15.0	1000.0	-15.0	0.0	*	1000.	180.	AG	40.	14.1	0.0	32.0		
7. Havana St. SB Queue.	*	-15.0	40.0	-15.0	64.3	*	24.	360.	AG	239.	100.0	0.0	12.0	0.57	1.2
8. Havana St. SB Q. Rig	*	-15.0	40.0	-15.0	49.1	*	9.	360.	AG	239.	100.0	0.0	12.0	0.23	0.5
9. Havana St. SB Q. Lef	*	-5.0	40.0	-5.0	65.6	*	26.	360.	AG	224.	100.0	0.0	12.0	0.28	1.3
10. Havana St. SB Dep.	*	-15.0	0.0	-15.0	-1000.0	*	1000.	180.	AG	40.	14.1	0.0	32.0		
11. 56 EB th appr.	*	-1000.0	-5.0	0.0	-5.0	*	1000.	90.	AG	405.	14.1	0.0	32.0		
12. 56 EB Queue	*	-40.0	-5.0	-270.7	-5.0	*	231.	270.	AG	186.	100.0	0.0	10.0	0.95	11.7
13. 56 EB Q. Right	*	-40.0	-20.0	-190.5	-20.0	*	150.	270.	AG	186.	100.0	0.0	12.0	0.80	7.6
14. 56 EB Q. Left	*	-40.0	5.0	-44.7	4.7	*	5.	266.	AG	186.	100.0	0.0	12.0	0.03	0.2
15. 56 EB Dep.	*	0.0	-5.0	1000.0	-5.0	*	1000.	90.	AG	405.	14.1	0.0	32.0		
16. 56 WB th appr.	*	1000.0	16.0	0.0	16.0	*	1000.	270.	AG	855.	14.1	0.0	32.0		
17. 56 WB th Queue.	*	50.0	16.0	371.8	16.1	*	322.	90.	AG	116.	100.0	0.0	12.0	0.97	16.3
18. 56 WB Q. Right.	*	50.0	30.0	70.7	30.0	*	21.	90.	AG	116.	100.0	0.0	12.0	0.08	1.1
19. 56 WB Q. Left.	*	50.0	5.0	190.3	5.0	*	140.	90.	AG	116.	100.0	0.0	12.0	0.58	7.1
20. 56 WB Dep.	*	0.0	16.0	-1000.0	16.0	*	1000.								

270. AG   855. 14.1   0.0 32.0

JOB: 56TH AND Havana INTERSECTION RUN: 2035 NO BUILD AM

DATE : 1/ 3/ 8
TIME : 9: 8:42

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. Havana St. NB Queue	120	89	2.0	35	1700	96.50	2	3
3. Havana St. NB Q. Rig	120	53	2.0	280	1600	96.50	2	3
4. Havana St. NB Q. Lef	120	79	2.0	245	1600	96.50	2	3
7. Havana St. SB Queue.	120	111	2.0	40	1700	96.50	2	3
8. Havana St. SB Q. Rig	120	111	2.0	15	1600	96.50	2	3
9. Havana St. SB Q. Lef	120	104	2.0	45	1600	96.50	2	3
12. 56 EB Queue	120	86	2.0	405	1700	96.50	2	3
13. 56 EB Q. Right	120	86	2.0	320	1600	96.50	2	3
14. 56 EB Q. Left	120	86	2.0	10	1600	96.50	2	3
17. 56 WB th Queue.	120	54	2.0	855	1700	96.50	2	3
18. 56 WB Q. Right.	120	54	2.0	70	1600	96.50	2	3
19. 56 WB Q. Left.	120	54	2.0	475	1600	96.50	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (SE CORNER #1)	55.0	-30.0	6.0
2. REC 2 (SE CORNER #2)	55.0	-45.0	6.0
3. REC 3 (SE CORNER #3)	55.0	-60.0	6.0
4. REC 4 (SE CORNER #4)	55.0	-75.0	6.0
5. REC 5 (SE CORNER #5)	55.0	-95.0	6.0
6. REC 6 (SE CORNER #6)	55.0	-125.0	6.0
7. REC 7 (SW CORNER #1)	-35.0	-50.0	6.0
8. REC 8 (SW CORNER #2)	-50.0	-50.0	6.0
9. REC 9 (SW CORNER #3)	-65.0	-50.0	6.0
10. REC 10 (SW CORNER #4	-80.0	-50.0	6.0
11. REC 11 (SW CORNER #5	-100.0	-50.0	6.0
12. REC 12 (SW CORNER #6	-125.0	-50.0	6.0
13. REC 13 (NW CORNER #1	-30.0	50.0	6.0
14. REC 14 (NW CORNER #2	-30.0	65.0	6.0
15. REC 15 (NW CORNER #3	-30.0	80.0	6.0

16. REC 16 (NW CORNER #4 *	-30.0	95.0	6.0	*
17. REC 17 (NW CORNER #5 *	-30.0	115.0	6.0	*
18. REC 18 (NW CORNER #6 *	-30.0	140.0	6.0	*
19. REC 19 (NE CORNER #1 *	30.0	45.0	6.0	*
20. REC 20 (NE CORNER #2 *	45.0	45.0	6.0	*
21. REC 21 (NE CORNER #3 *	60.0	45.0	6.0	*
22. REC 22 (NE CORNER #4 *	75.0	45.0	6.0	*
23. REC 23 (NE CORNER #5 *	95.0	45.0	6.0	*
24. REC 24 (NE CORNER #6 *	120.0	45.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	0.7	0.5	0.6	0.6	0.5	0.6	0.6	0.8	0.8	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	*	0.9	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	0.9	0.5	0.5	0.5	0.4	0.4	0.5	0.8	0.9	0.8	0.8	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	0.9	0.6	0.5	0.5	0.4	0.4	0.3	0.6	0.9	1.0	0.9	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	0.9	0.7	0.5	0.5	0.5	0.4	0.5	0.3	0.6	1.0	1.0	1.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50.	*	0.9	0.8	0.5	0.5	0.5	0.3	0.5	0.5	0.5	0.6	0.9	0.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.	*	0.9	0.9	0.5	0.5	0.4	0.3	0.7	0.5	0.7	0.8	0.9	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	*	1.0	0.8	0.5	0.4	0.4	0.2	1.1	0.8	0.7	0.7	1.0	1.0	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
80.	*	0.9	0.7	0.4	0.4	0.2	0.2	1.1	1.0	0.8	0.7	0.7	0.7	1.4	0.4	0.1	0.0	0.0	0.0	0.3	0.3
90.	*	0.6	0.4	0.2	0.2	0.1	0.0	1.0	0.8	0.8	0.7	0.7	0.7	1.9	0.9	0.4	0.1	0.1	0.1	0.8	0.7
100.	*	0.2	0.2	0.0	0.0	0.0	0.0	0.7	0.6	0.5	0.5	0.4	0.3	2.0	1.4	0.6	0.4	0.4	0.2	1.1	1.1
110.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.4	0.3	0.2	0.1	2.0	1.6	0.8	0.5	0.4	0.4	1.3	1.3
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.2	0.1	0.1	0.1	1.6	1.7	0.9	0.6	0.5	0.4	1.1	1.2
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.1	0.0	0.0	1.1	1.6	1.0	0.7	0.5	0.5	1.0	1.2
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.0	1.5	1.1	0.7	0.6	0.4	0.9	1.1
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.3	1.2	1.0	0.5	0.4	0.6	1.0
160.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.1	1.1	0.9	0.5	0.4	0.7	0.9

170.	*	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.5	0.6	0.8	0.6	0.4	0.5	0.7	0.9						
180.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.7	0.6	0.8	0.7	0.7	0.5	0.8	1.0						
190.	*	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.6	0.5	0.5	0.6	0.5	0.4	0.9	0.8						
200.	*	0.6	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.8	0.7	0.5	0.5	0.4	0.4	0.6	0.8						
210.	*	0.9	0.6	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.8	0.7	0.7	0.6	0.5	0.4	0.7	0.5						
220.	*	1.0	0.9	0.6	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.8	0.8	0.7	0.6	0.5	0.4	0.5	0.8						
230.	*	1.0	1.0	0.8	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.0	0.8	0.6	0.6	0.5	0.5	0.7	0.7						
240.	*	1.0	1.0	0.9	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.0	0.7	0.7	0.5	0.4	0.4	0.9	0.9						
250.	*	0.9	1.0	1.0	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.8	0.7	0.5	0.4	0.4	0.3	1.4	1.0						
260.	*	1.2	1.4	1.0	0.9	0.5	0.0	0.1	0.1	0.1	0.0	0.0	0.0
0.6	0.5	0.4	0.3	0.3	0.1	1.3	1.2						
270.	*	1.4	1.5	1.4	1.4	0.8	0.1	0.4	0.4	0.4	0.4	0.4	0.2
0.5	0.3	0.3	0.1	0.1	0.1	1.1	0.9						
280.	*	1.4	1.7	1.7	1.5	1.3	0.2	0.9	0.8	0.8	0.8	0.7	0.6
0.1	0.1	0.1	0.0	0.0	0.0	0.8	0.6						
290.	*	1.0	1.4	1.6	1.7	1.4	0.5	1.2	1.2	1.1	1.1	1.0	0.9
0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3						
300.	*	0.8	1.2	1.3	1.6	1.6	0.6	1.1	1.1	1.1	1.1	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2						
310.	*	0.7	0.9	1.2	1.4	1.5	0.8	1.0	1.0	1.0	1.0	1.0	0.9
0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0						
320.	*	0.7	0.8	0.8	1.0	1.4	1.1	1.0	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0						
330.	*	0.6	0.8	0.9	0.9	1.1	0.8	0.8	1.0	1.0	1.0	1.0	1.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
340.	*	0.4	0.4	0.5	0.7	0.8	0.9	0.7	0.9	0.9	0.9	0.9	0.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
350.	*	0.6	0.5	0.4	0.4	0.5	0.7	0.6	0.8	0.9	0.8	0.8	0.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
360.	*	0.7	0.5	0.6	0.6	0.5	0.6	0.6	0.8	0.8	0.9	0.9	0.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

------*----------

MAX	*	1.4	1.7	1.7	1.7	1.6	1.1	1.2	1.2	1.1	1.1	1.0	1.0
2.0	1.7	1.2	1.0	0.7	0.5	1.4	1.3						
DEGR.	*	270	280	280	290	300	320	290	290	290	290	40	30
100	120	150	150	180	130	250	110						

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE	*	CONCENTRATION (PPM)

(DEGR)	*	REC21	REC22	REC23	REC24
0.	*	0.0	0.0	0.0	0.0
10.	*	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0
80.	*	0.3	0.3	0.3	0.3
90.	*	0.6	0.6	0.5	0.5
100.	*	1.0	0.9	0.9	0.8
110.	*	1.2	1.1	1.1	1.1
120.	*	1.1	1.0	1.0	0.9
130.	*	1.1	1.0	1.0	1.0
140.	*	1.0	0.9	0.9	0.9
150.	*	1.0	0.8	0.8	0.8
160.	*	1.0	0.8	0.8	0.8
170.	*	1.1	0.8	0.8	0.8
180.	*	1.2	0.9	0.8	0.8
190.	*	1.2	1.1	0.9	0.8
200.	*	1.2	1.2	1.0	0.9
210.	*	1.1	1.2	1.1	1.0
220.	*	0.6	1.1	1.2	1.2
230.	*	0.9	1.0	1.0	1.1
240.	*	0.8	1.0	1.2	1.2
250.	*	1.0	0.9	1.0	1.1
260.	*	1.1	1.1	1.1	0.9
270.	*	0.7	0.8	1.0	0.7
280.	*	0.4	0.3	0.3	0.2
290.	*	0.2	0.2	0.0	0.0
300.	*	0.1	0.0	0.0	0.0
310.	*	0.0	0.0	0.0	0.0
320.	*	0.0	0.0	0.0	0.0
330.	*	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.0	0.0
360.	*	0.0	0.0	0.0	0.0
MAX	*	1.2	1.2	1.2	1.2
DEGR.	*	190	200	220	220

THE HIGHEST CONCENTRATION OF 2.00 PPM OCCURRED AT RECEPTOR REC13.

JOB: 56TH AND Havana INTERSECTION RUN: 2035 NO BUILD AM

DATE : 1/ 3/ 8
TIME : 9: 8:42

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM)											
	*	ANGLE (DEGREES)											
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12
REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20						
LINK #	*	270	280	280	290	300	320	290	290	290	290	40	30
100	120	150	150	180	130	250	110						

```
      1  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
      2  *   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
      3  *   0.3   0.3   0.3   0.3   0.3   0.2   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.1   0.1   0.0   0.0   0.0   0.0
      4  *   0.1   0.3   0.7   0.7   0.7   0.5   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.1   0.1   0.1   0.0   0.0   0.0
      5  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
      6  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
      7  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1   0.0
 0.6   0.6   0.4   0.2   0.1   0.0   0.1   0.0
      8  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.3   0.1   0.1   0.1   0.0   0.0   0.1   0.0
      9  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.3   0.4   0.2   0.2   0.1   0.0   0.1   0.0
     10  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
     11  *   0.2   0.2   0.1   0.1   0.1   0.1   0.2   0.2   0.2   0.2   0.1   0.1
 0.0   0.0   0.0   0.0   0.1   0.0   0.2   0.0
     12  *   0.2   0.2   0.2   0.2   0.2   0.1   0.3   0.3   0.3   0.3   0.2   0.3
 0.0   0.0   0.0   0.0   0.1   0.0   0.2   0.0
     13  *   0.2   0.2   0.2   0.2   0.1   0.1   0.4   0.4   0.3   0.3   0.4   0.4
 0.0   0.0   0.0   0.0   0.1   0.0   0.2   0.0
     14  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
     15  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.1   0.1   0.1   0.1   0.0   0.1   0.0   0.2
     16  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.4   0.3   0.1   0.1   0.0   0.2   0.1   0.5
     17  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.2   0.1   0.0   0.0   0.0   0.1   0.0   0.3
     18  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.1
     19  *   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 0.1   0.1   0.0   0.0   0.0   0.1   0.0   0.2
     20  *   0.2   0.3   0.2   0.2   0.2   0.1   0.3   0.3   0.3   0.3   0.2   0.2
 0.0   0.0   0.1   0.1   0.1   0.0   0.4   0.0
```


JOB: 56TH AND Havana INTERSECTION RUN: 2035 NO BUILD AM

DATE : 1/ 3/ 8
TIME : 9: 8:42

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	* CO/LINK (PPM) ANGLE (DEGREES)			
	* REC21	REC22	REC23	REC24
LINK #	* 190	200	220	220
1	* 0.0	0.0	0.0	0.0
2	* 0.0	0.0	0.0	0.0
3	* 0.1	0.1	0.1	0.1
4	* 0.2	0.2	0.2	0.2
5	* 0.0	0.0	0.0	0.0
6	* 0.0	0.0	0.0	0.0
7	* 0.0	0.0	0.0	0.0
8	* 0.0	0.0	0.0	0.0

9	*	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0
11	*	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.1	0.1	0.1	0.1
16	*	0.3	0.3	0.4	0.4
17	*	0.1	0.2	0.2	0.2
18	*	0.3	0.2	0.1	0.0
19	*	0.1	0.1	0.1	0.2
20	*	0.0	0.0	0.0	0.0

JOB: 56TH AND Havana INTERSECTION RUN: 2035 NO BUILD PM

DATE : 1/ 3/ 8
TIME : 9: 9: 5

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)			(G/MI)	(FT)	(FT)		(VEH)
1. Havana St. NB appr.	*	25.0	-1000.0	25.0	0.0	*	1000.	360.	AG	35.	14.1	0.0	32.0		
2. Havana St. NB Queue	*	25.0	-25.0	25.0	-43.8	*	19.	180.	AG	211.	100.0	0.0	12.0	0.14	1.0
3. Havana St. NB Q. Rig	*	40.0	-25.0	40.0	-209.4	*	184.	180.	AG	173.	100.0	0.0	12.0	0.86	9.4
4. Havana St. NB Q. Lef	*	20.0	-40.0	20.0	-120.3	*	80.	180.	AG	384.	100.0	0.0	24.0	0.46	4.1
5. Havana St. NB Dep.	*	25.0	0.0	25.0	1000.0	*	1000.	360.	AG	35.	14.1	0.0	32.0		
6. Havana St. SB appr	*	-15.0	1000.0	-15.0	0.0	*	1000.	180.	AG	40.	14.1	0.0	32.0		
7. Havana St. SB Queue.	*	-15.0	40.0	-15.0	62.5	*	23.	360.	AG	222.	100.0	0.0	12.0	0.22	1.1
8. Havana St. SB Q. Rig	*	-15.0	40.0	-15.0	45.6	*	6.	360.	AG	222.	100.0	0.0	12.0	0.06	0.3
9. Havana St. SB Q. Lef	*	-5.0	40.0	-5.0	93.0	*	53.	360.	AG	209.	100.0	0.0	12.0	0.40	2.7
10. Havana St. SB Dep.	*	-15.0	0.0	-15.0	-1000.0	*	1000.	180.	AG	40.	14.1	0.0	32.0		
11. 56 EB th appr.	*	-1000.0	-5.0	0.0	-5.0	*	1000.	90.	AG	965.	14.1	0.0	32.0		
12. 56 EB Queue	*	-40.0	-5.0	-1879.7	-5.0	*	1840.	270.	AG	125.	100.0	0.0	10.0	1.18	93.5
13. 56 EB Q. Right	*	-40.0	-20.0	-108.2	-20.0	*	68.	270.	AG	125.	100.0	0.0	12.0	0.28	3.5
14. 56 EB Q. Left	*	-40.0	5.0	-45.9	4.6	*	6.	266.	AG	116.	100.0	0.0	12.0	0.02	0.3
15. 56 EB Dep.	*	0.0	-5.0	1000.0	-5.0	*	1000.	90.	AG	965.	14.1	0.0	32.0		
16. 56 WB th appr.	*	1000.0	16.0	0.0	16.0	*	1000.	270.	AG	530.	14.1	0.0	32.0		
17. 56 WB th Queue.	*	50.0	16.0	177.5	16.0	*	128.	90.	AG	95.	100.0	0.0	12.0	0.52	6.5
18. 56 WB Q. Right.	*	50.0	30.0	66.8	30.0	*	17.	90.	AG	95.	100.0	0.0	12.0	0.07	0.9
19. 56 WB Q. Left.	*	50.0	5.0	115.8	5.0	*	66.	90.	AG	80.	100.0	0.0	12.0	0.31	3.3
20. 56 WB Dep.	*	0.0	16.0	-1000.0	16.0	*	1000.								

270. AG   530. 14.1   0.0 32.0

JOB: 56TH AND Havana INTERSECTION RUN: 2035 NO BUILD PM

DATE : 1/ 3/ 8
TIME : 9: 9: 5

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. Havana St. NB Queue	120	98	2.0	35	1700	96.50	2	3
3. Havana St. NB Q. Rig	120	80	2.0	410	1600	96.50	2	3
4. Havana St. NB Q. Lef	120	89	2.0	330	1600	96.50	2	3
7. Havana St. SB Queue.	120	103	2.0	40	1700	96.50	2	3
8. Havana St. SB Q. Rig	120	103	2.0	10	1600	96.50	2	3
9. Havana St. SB Q. Lef	120	97	2.0	100	1600	96.50	2	3
12. 56 EB Queue	120	58	2.0	965	1700	96.50	2	3
13. 56 EB Q. Right	120	58	2.0	215	1600	96.50	2	3
14. 56 EB Q. Left	120	54	2.0	20	1600	96.50	2	3
17. 56 WB th Queue.	120	44	2.0	530	1700	96.50	2	3
18. 56 WB Q. Right.	120	44	2.0	70	1600	96.50	2	3
19. 56 WB Q. Left.	120	37	2.0	325	1600	96.50	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (SE CORNER #1)	55.0	-30.0	6.0
2. REC 2 (SE CORNER #2)	55.0	-45.0	6.0
3. REC 3 (SE CORNER #3)	55.0	-60.0	6.0
4. REC 4 (SE CORNER #4)	55.0	-75.0	6.0
5. REC 5 (SE CORNER #5)	55.0	-95.0	6.0
6. REC 6 (SE CORNER #6)	55.0	-125.0	6.0
7. REC 7 (SW CORNER #1)	-35.0	-50.0	6.0
8. REC 8 (SW CORNER #2)	-50.0	-50.0	6.0
9. REC 9 (SW CORNER #3)	-65.0	-50.0	6.0
10. REC 10 (SW CORNER #4	-80.0	-50.0	6.0
11. REC 11 (SW CORNER #5	-100.0	-50.0	6.0
12. REC 12 (SW CORNER #6	-125.0	-50.0	6.0
13. REC 13 (NW CORNER #1	-30.0	50.0	6.0
14. REC 14 (NW CORNER #2	-30.0	65.0	6.0
15. REC 15 (NW CORNER #3	-30.0	80.0	6.0

16. REC 16 (NW CORNER #4 *	-30.0	95.0	6.0	*
17. REC 17 (NW CORNER #5 *	-30.0	115.0	6.0	*
18. REC 18 (NW CORNER #6 *	-30.0	140.0	6.0	*
19. REC 19 (NE CORNER #1 *	30.0	45.0	6.0	*
20. REC 20 (NE CORNER #2 *	45.0	45.0	6.0	*
21. REC 21 (NE CORNER #3 *	60.0	45.0	6.0	*
22. REC 22 (NE CORNER #4 *	75.0	45.0	6.0	*
23. REC 23 (NE CORNER #5 *	95.0	45.0	6.0	*
24. REC 24 (NE CORNER #6 *	120.0	45.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	0.8	0.6	0.7	0.5	0.5	0.6	0.8	0.7	0.8	0.8	0.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	*	0.8	0.6	0.6	0.6	0.6	0.5	0.6	0.9	0.8	0.8	0.8	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	0.8	0.6	0.6	0.5	0.5	0.3	0.5	0.8	0.9	0.9	0.8	0.7	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	0.8	0.6	0.6	0.5	0.4	0.4	0.6	0.6	0.9	0.9	0.9	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	0.8	0.6	0.6	0.4	0.4	0.3	0.5	0.6	0.8	0.8	0.8	0.9	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0
50.	*	0.9	0.8	0.5	0.5	0.3	0.3	0.5	0.5	0.6	0.9	0.9	0.9	0.7	0.3	0.1	0.0	0.0	0.0	0.0	0.0
60.	*	0.9	0.7	0.5	0.4	0.3	0.3	0.8	0.6	0.5	0.6	0.8	0.9	0.8	0.4	0.2	0.0	0.0	0.0	0.0	0.0
70.	*	0.9	0.7	0.4	0.4	0.3	0.3	1.1	0.9	0.8	0.7	0.8	0.9	0.9	0.4	0.3	0.0	0.0	0.0	0.0	0.0
80.	*	0.8	0.6	0.4	0.4	0.3	0.2	1.1	1.0	1.0	0.7	0.7	0.8	1.2	0.7	0.4	0.1	0.0	0.0	0.2	0.2
90.	*	0.6	0.4	0.3	0.3	0.1	0.1	1.2	1.0	0.9	0.8	0.6	0.6	1.6	0.9	0.6	0.4	0.2	0.1	0.5	0.5
100.	*	0.3	0.1	0.1	0.1	0.0	0.0	0.9	0.8	0.6	0.6	0.5	0.4	1.7	1.3	0.8	0.6	0.3	0.2	0.8	0.7
110.	*	0.1	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.6	0.5	0.4	0.3	1.6	1.4	0.9	0.7	0.4	0.3	1.1	1.0
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.6	0.4	0.3	0.2	1.3	1.5	1.0	0.8	0.5	0.3	1.0	1.0
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	0.4	0.3	0.2	0.2	1.3	1.2	1.0	0.8	0.6	0.4	0.9	1.0
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.2	0.2	0.1	0.0	1.1	1.4	1.1	1.0	0.6	0.4	0.8	1.0
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.1	0.0	0.0	1.1	1.3	1.2	0.9	0.8	0.6	0.8	1.0
160.	*	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	1.0	1.1	1.1	1.0	1.0	0.7	0.8	0.9

170.	*	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
0.7	0.8	1.0	0.9	0.9	0.8	1.0	1.1						
180.	*	0.5	0.5	0.4	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
0.5	0.4	0.5	0.4	0.6	0.6	1.3	1.2						
190.	*	0.9	0.7	0.6	0.6	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
0.7	0.6	0.5	0.6	0.4	0.3	1.1	1.2						
200.	*	1.2	1.1	0.9	0.8	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0
0.7	0.6	0.5	0.5	0.4	0.3	0.8	1.0						
210.	*	1.4	1.3	1.1	1.0	0.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
0.7	0.6	0.5	0.5	0.4	0.3	0.6	0.7						
220.	*	1.4	1.4	1.3	1.2	0.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0
0.8	0.6	0.5	0.4	0.4	0.3	0.5	0.6						
230.	*	1.4	1.3	1.3	1.2	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0
0.8	0.7	0.4	0.4	0.4	0.4	0.7	0.8						
240.	*	1.3	1.4	1.4	1.3	1.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0
0.7	0.7	0.6	0.4	0.4	0.4	0.8	0.7						
250.	*	1.3	1.3	1.4	1.3	1.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0
0.8	0.7	0.6	0.5	0.4	0.4	1.2	1.0						
260.	*	1.5	1.5	1.5	1.4	1.3	0.6	0.2	0.2	0.2	0.2	0.2	0.2
0.8	0.7	0.6	0.4	0.3	0.3	1.1	1.0						
270.	*	1.7	2.0	1.8	1.7	1.5	1.0	0.6	0.6	0.6	0.6	0.6	0.5
0.6	0.4	0.3	0.3	0.3	0.2	1.1	0.9						
280.	*	1.7	2.0	2.0	1.9	1.8	1.4	0.9	0.8	0.8	0.8	0.8	0.8
0.3	0.2	0.0	0.0	0.0	0.0	0.8	0.6						
290.	*	1.2	1.8	1.9	2.0	2.0	1.5	1.0	1.0	1.0	0.9	0.9	0.9
0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4						
300.	*	1.0	1.3	1.8	1.8	1.8	1.7	1.0	1.0	0.9	0.8	0.8	0.8
0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3						
310.	*	1.0	0.9	1.4	1.7	1.8	1.8	0.8	0.8	0.8	0.7	0.6	0.6
0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2						
320.	*	0.7	1.2	1.3	1.3	1.6	1.8	0.8	0.8	0.8	0.7	0.6	0.6
0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1						
330.	*	0.6	0.7	1.0	1.3	1.5	1.7	0.8	0.8	0.8	0.8	0.6	0.6
0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1						
340.	*	0.7	0.6	0.8	1.0	1.2	1.5	0.7	0.8	0.8	0.8	0.7	0.6
0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0						
350.	*	0.8	0.5	0.7	0.7	1.0	1.0	0.6	0.8	0.8	0.8	0.7	0.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
360.	*	0.8	0.6	0.7	0.5	0.5	0.6	0.8	0.7	0.8	0.8	0.8	0.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

------*----------

MAX	*	1.7	2.0	2.0	2.0	2.0	1.8	1.2	1.0	1.0	0.9	0.9	0.9
1.7	1.5	1.2	1.0	1.0	0.8	1.3	1.2						
DEGR.	*	270	270	280	290	290	310	90	290	290	50	30	60
100	120	150	140	160	170	180	180						

JOB: 56TH AND Havana INTERSECTION RUN: 2035 NO BUILD PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	*	REC21	REC22	REC23	REC24
0.	*	0.0	0.0	0.0	0.0
10.	*	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0
80.	*	0.2	0.2	0.2	0.2
90.	*	0.5	0.4	0.4	0.4
100.	*	0.7	0.7	0.7	0.6
110.	*	0.9	0.9	0.8	0.8
120.	*	0.9	0.8	0.8	0.7
130.	*	0.8	0.8	0.7	0.7
140.	*	0.9	0.8	0.7	0.7
150.	*	0.9	0.8	0.8	0.7
160.	*	1.0	0.8	0.8	0.7
170.	*	1.2	0.9	0.8	0.7
180.	*	1.4	1.0	0.9	0.7
190.	*	1.5	1.2	1.0	0.9
200.	*	1.5	1.4	1.2	1.0
210.	*	1.3	1.4	1.3	1.2
220.	*	0.7	1.1	1.2	1.1
230.	*	0.8	0.9	1.0	1.1
240.	*	0.8	0.9	1.0	0.9
250.	*	0.9	1.1	0.9	0.9
260.	*	1.0	1.1	1.1	1.0
270.	*	0.8	0.8	0.9	0.7
280.	*	0.6	0.6	0.5	0.4
290.	*	0.3	0.2	0.1	0.1
300.	*	0.2	0.1	0.1	0.0
310.	*	0.1	0.1	0.0	0.0
320.	*	0.1	0.0	0.0	0.0
330.	*	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.0	0.0
360.	*	0.0	0.0	0.0	0.0
MAX	*	1.5	1.4	1.3	1.2
DEGR.	*	190	200	210	210

THE HIGHEST CONCENTRATION OF 2.00 PPM OCCURRED AT RECEPTOR REC2 .

JOB: 56TH AND Havana INTERSECTION RUN: 2035 NO BUILD PM

DATE : 1/ 3/ 8
TIME : 9: 9: 5

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM)											
	*	ANGLE (DEGREES)											
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12
REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20						
LINK #	*	270	270	280	290	290	310	90	290	290	50	30	60
100	120	150	140	160	170	180	180						

1 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
2 *	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0						
3 *	0.4	0.5	0.5	0.5	0.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.3						
4 *	0.2	0.6	0.7	0.8	0.9	0.8	0.5	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.2	0.1	0.2	0.2	0.4	0.3						
5 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
6 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
7 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.5	0.5	0.3	0.1	0.1	0.1	0.0	0.0						
8 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0						
9 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
0.3	0.4	0.2	0.4	0.3	0.2	0.0	0.0						
10 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
11 *	0.4	0.3	0.3	0.3	0.2	0.2	0.0	0.4	0.4	0.3	0.3	0.3	
0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0						
12 *	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.3	0.3	0.1	0.2	0.1	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
13 *	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
14 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
15 *	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.1	
0.3	0.3	0.1	0.2	0.1	0.1	0.3	0.3						
16 *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	
0.3	0.2	0.1	0.1	0.1	0.0	0.2	0.2						
17 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1						
18 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
19 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
20 *	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.1	
0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0						

DATE : 1/ 3/ 8
TIME : 9: 9: 5

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	* CO/LINK (PPM)			
	* ANGLE (DEGREES)			
	* REC21	REC22	REC23	REC24
LINK #	* 190	200	210	210
1	* 0.0	0.0	0.0	0.0
2	* 0.0	0.0	0.0	0.0
3	* 0.3	0.2	0.2	0.2
4	* 0.3	0.3	0.3	0.2
5	* 0.0	0.0	0.0	0.0
6	* 0.0	0.0	0.0	0.0
7	* 0.0	0.0	0.0	0.0
8	* 0.0	0.0	0.0	0.0

9	*	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0
11	*	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.3	0.3	0.3	0.3
16	*	0.2	0.2	0.2	0.2
17	*	0.1	0.2	0.2	0.2
18	*	0.2	0.1	0.0	0.0
19	*	0.1	0.1	0.1	0.1
20	*	0.0	0.0	0.0	0.0

JOB: 56TH AND Peoria INTERSECTION RUN: 2035 NO BUILD AM

DATE : 1/ 3/ 8
TIME : 9: 9:47

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT) X1	Y1	X2	Y2	*	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C QUEUE (VEH)
1. Peoria St. NB appr.	*	36.0	-1000.0	36.0	0.0	*	1000.	360.	AG	5.	14.1	0.0	30.0	
2. Peoria St. NB Queue	*	36.0	-50.0	36.0	-52.0	*	2.	180.	AG	160.	100.0	0.0	10.0	0.01
3. Peoria St. NB Q. Rig	*	36.0	-50.0	36.0	-92.5	*	42.	180.	AG	160.	100.0	0.0	10.0	0.19
4. Peoria St. NB Q. Lef	*	14.0	-50.0	14.0	-627.1	*	577.	180.	AG	160.	100.0	0.0	10.0	1.05
5. Peoria St. NB Dep.	*	36.0	0.0	36.0	1000.0	*	1000.	360.	AG	5.	14.1	0.0	30.0	
6. Peoria St. SB appr	*	-5.0	1000.0	-5.0	0.0	*	1000.	180.	AG	5.	14.1	0.0	30.0	
7. Peoria St. SB Queue.	*	-5.0	26.0	-5.0	29.1	*	3.	360.	AG	244.	100.0	0.0	10.0	0.12
8. Peoria St. SB Q. Rig	*	-5.0	26.0	-5.0	29.1	*	3.	360.	AG	244.	100.0	0.0	10.0	0.13
9. Peoria St. SB Q. Lef	*	-5.0	26.0	-5.0	26.6	*	1.	360.	AG	244.	100.0	0.0	10.0	0.03
10. Peoria St. SB Dep.	*	-5.0	0.0	-5.0	-1000.0	*	1000.	180.	AG	5.	14.1	0.0	30.0	
11. 56 EB th appr.	*	-1000.0	-10.0	0.0	-10.0	*	1000.	90.	AG	275.	14.1	0.0	32.0	
12. 56 EB Queue	*	-70.0	-10.0	-191.8	-10.0	*	122.	270.	AG	175.	100.0	0.0	12.0	0.56
13. 56 EB Q. Right	*	-72.0	-20.0	-169.4	-20.0	*	97.	270.	AG	175.	100.0	0.0	10.0	0.47
14. 56 EB Q. Left	*	-70.0	0.0	-72.2	0.0	*	2.	270.	AG	175.	100.0	0.0	10.0	0.01
15. 56 EB Dep.	*	0.0	-10.0	1000.0	-10.0	*	1000.	90.	AG	275.	14.1	0.0	32.0	
16. 56 WB th appr.	*	1000.0	15.0	0.0	15.0	*	1000.	270.	AG	1055.	14.1	0.0	30.0	
17. 56 WB th Queue.	*	64.0	15.0	1953.0	15.2	*	1889.	90.	AG	112.	100.0	0.0	10.0	1.16
18. 56 WB Q. Right.	*	64.0	15.0	65.4	15.0	*	1.	90.	AG	112.	100.0	0.0	18.0	0.01
19. 56 WB Q. Left.	*	64.0	0.0	192.0	0.0	*	128.	90.	AG	112.	100.0	0.0	10.0	0.53
20. 56 WB Dep.	*	0.0	15.0	-1000.0	15.0	*	1000.							

270. AG   1055. 14.1   0.0 30.0

DATE : 1/ 3/ 8
TIME : 9: 9:47

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. Peoria St. NB Queue	120	74	2.0	5	1700	96.50	2	3
3. Peoria St. NB Q. Rig	120	74	2.0	105	1600	96.50	2	3
4. Peoria St. NB Q. Lef	120	74	2.0	585	1600	96.50	2	3
7. Peoria St. SB Queue.	120	113	2.0	5	1700	96.50	2	3
8. Peoria St. SB Q. Rig	120	113	2.0	5	1600	96.50	2	3
9. Peoria St. SB Q. Lef	120	113	2.0	1	1600	96.50	2	3
12. 56 EB Queue	120	81	2.0	275	1700	96.50	2	3
13. 56 EB Q. Right	120	81	2.0	220	1600	96.50	2	3
14. 56 EB Q. Left	120	81	2.0	5	1600	96.50	2	3
17. 56 WB th Queue.	120	52	2.0	1055	1700	96.50	2	3
18. 56 WB Q. Right.	120	52	2.0	5	1600	96.50	2	3
19. 56 WB Q. Left.	120	52	2.0	450	1600	96.50	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (SE CORNER #1)	52.0	-40.0	6.0
2. REC 2 (SE CORNER #2)	52.0	-55.0	6.0
3. REC 3 (SE CORNER #3)	52.0	-70.0	6.0
4. REC 4 (SE CORNER #4)	52.0	-85.0	6.0
5. REC 5 (SE CORNER #5)	52.0	-105.0	6.0
6. REC 6 (SE CORNER #6)	52.0	-130.0	6.0
7. REC 7 (SW CORNER #1)	-48.0	-35.0	6.0
8. REC 8 (SW CORNER #2)	-63.0	-35.0	6.0
9. REC 9 (SW CORNER #3)	-78.0	-35.0	6.0
10. REC 10 (SW CORNER #4	-93.0	-35.0	6.0
11. REC 11 (SW CORNER #5	-113.0	-35.0	6.0
12. REC 12 (SW CORNER #6	-138.0	-35.0	6.0
13. REC 13 (NW CORNER #1	-15.0	35.0	6.0
14. REC 14 (NW CORNER #2	-15.0	50.0	6.0
15. REC 15 (NW CORNER #3	-15.0	65.0	6.0

16. REC 16 (NW CORNER #4 *	-15.0	80.0	6.0	*
17. REC 17 (NW CORNER #5 *	-15.0	100.0	6.0	*
18. REC 18 (NW CORNER #6 *	-15.0	125.0	6.0	*
19. REC 19 (NE CORNER #1 *	15.0	35.0	6.0	*
20. REC 20 (NE CORNER #2 *	30.0	35.0	6.0	*
21. REC 21 (NE CORNER #3 *	45.0	35.0	6.0	*
22. REC 22 (NE CORNER #4 *	60.0	35.0	6.0	*
23. REC 23 (NE CORNER #5 *	80.0	35.0	6.0	*
24. REC 24 (NE CORNER #6 *	105.0	35.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) * REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	0.4	0.3	0.3	0.3	0.3	0.2	0.4	0.5	1.1	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	*	0.6	0.5	0.5	0.5	0.5	0.3	0.4	0.4	0.9	1.1	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.4	0.8	1.1	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	0.6	0.5	0.5	0.5	0.5	0.3	0.4	0.4	0.7	1.1	1.2	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	0.7	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	1.0	1.2	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50.	*	0.8	0.6	0.5	0.5	0.5	0.3	0.4	0.5	0.4	0.9	1.2	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.	*	0.8	0.7	0.6	0.5	0.4	0.4	0.7	0.5	0.5	0.8	1.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	*	0.9	0.7	0.7	0.4	0.4	0.4	0.8	0.8	0.8	0.8	1.0	1.3	0.1	0.0	0.0	0.0	0.0	0.1	0.1
80.	*	0.7	0.6	0.5	0.4	0.4	0.2	0.8	0.9	0.8	0.9	1.1	1.1	0.4	0.3	0.2	0.1	0.0	0.0	0.5	0.5
90.	*	0.4	0.4	0.3	0.2	0.2	0.2	0.7	0.7	0.5	0.4	0.6	0.8	1.0	0.7	0.5	0.3	0.2	0.2	1.1	1.1
100.	*	0.3	0.1	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.4	0.3	0.4	1.4	0.9	0.8	0.6	0.4	0.3	1.3	1.4
110.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.1	1.2	0.9	0.8	0.7	0.5	0.3	1.3	1.4
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.1	0.1	0.1	1.3	0.7	0.7	0.6	0.6	0.3	1.0	1.2
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.1	0.1	0.1	1.1	0.6	0.6	0.6	0.5	0.4	0.8	0.9
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.1	0.9	0.7	0.4	0.3	0.3	0.4	0.6	0.7
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.1	1.0	0.8	0.5	0.2	0.2	0.2	0.6	0.6
160.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.1	1.0	0.9	0.5	0.4	0.3	0.2	0.8	0.7

```
 170.  *   0.1   0.1   0.1   0.1   0.1   0.1   0.2   0.2   0.1   0.1   0.1   0.1
0.8   0.8   0.5   0.4   0.4   0.4   0.9   0.9
 180.  *   0.3   0.3   0.2   0.2   0.2   0.2   0.1   0.1   0.1   0.0   0.0   0.0
0.8   0.6   0.4   0.5   0.5   0.4   1.0   1.0
 190.  *   0.5   0.4   0.3   0.3   0.3   0.3   0.0   0.0   0.0   0.0   0.0   0.0
0.7   0.5   0.5   0.3   0.3   0.3   0.7   1.0
 200.  *   0.6   0.5   0.4   0.3   0.3   0.3   0.0   0.0   0.0   0.0   0.0   0.0
0.6   0.5   0.4   0.2   0.2   0.4   0.6   0.7
 210.  *   0.7   0.6   0.5   0.3   0.3   0.3   0.0   0.0   0.0   0.0   0.0   0.0
0.6   0.7   0.6   0.5   0.4   0.4   0.6   0.6
 220.  *   0.6   0.7   0.6   0.3   0.3   0.3   0.0   0.0   0.0   0.0   0.0   0.0
0.8   0.7   0.6   0.6   0.4   0.4   0.7   0.6
 230.  *   0.5   0.7   0.6   0.4   0.3   0.3   0.0   0.0   0.0   0.0   0.0   0.0
0.9   0.8   0.7   0.6   0.5   0.4   1.1   0.8
 240.  *   0.4   0.6   0.7   0.5   0.3   0.3   0.0   0.0   0.0   0.0   0.0   0.0
1.2   0.9   0.8   0.6   0.5   0.2   1.1   0.9
 250.  *   0.2   0.6   0.6   0.4   0.2   0.2   0.0   0.0   0.0   0.0   0.0   0.0
1.2   0.9   0.7   0.5   0.4   0.2   1.3   1.1
 260.  *   0.4   0.7   0.6   0.5   0.2   0.2   0.4   0.4   0.3   0.3   0.3   0.2
1.1   0.7   0.5   0.4   0.2   0.2   1.3   1.1
 270.  *   0.5   1.0   0.8   0.7   0.3   0.3   0.8   0.8   0.6   0.6   0.5   0.4
0.8   0.5   0.2   0.2   0.1   0.1   1.0   0.8
 280.  *   0.6   1.0   1.1   1.1   0.5   0.3   1.3   1.3   1.3   1.2   1.1   0.8
0.3   0.2   0.1   0.1   0.0   0.0   0.3   0.3
 290.  *   0.6   1.0   1.2   1.1   0.8   0.6   1.4   1.5   1.5   1.4   1.3   1.0
0.1   0.0   0.0   0.0   0.0   0.0   0.1   0.1
 300.  *   0.6   0.6   1.0   1.1   0.8   0.7   1.3   1.5   1.5   1.5   1.5   1.2
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 310.  *   0.4   0.4   0.7   0.9   0.9   0.6   0.9   1.2   1.3   1.3   1.3   1.1
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 320.  *   0.4   0.3   0.5   0.7   0.6   0.5   0.7   1.0   1.3   1.3   1.3   1.2
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 330.  *   0.4   0.4   0.5   0.5   0.6   0.4   0.5   0.9   1.3   1.3   1.3   1.2
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 340.  *   0.4   0.3   0.4   0.5   0.6   0.5   0.4   0.7   1.1   1.2   1.2   1.2
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 350.  *   0.4   0.3   0.3   0.4   0.3   0.4   0.4   0.6   1.1   1.2   1.2   1.2
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
 360.  *   0.4   0.3   0.3   0.3   0.3   0.2   0.4   0.5   1.1   1.2   1.2   1.2
0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0

------*-------------------------------------------------------------------------
-----------------------------------------
 MAX   *   0.9   1.0   1.2   1.1   0.9   0.7   1.4   1.5   1.5   1.5   1.5   1.3
1.4   0.9   0.8   0.7   0.6   0.4   1.3   1.4
 DEGR. *   70   270   290   280   310   300   290   290   290   300   300    70
100   100   100   110   120   130   100   100
```


JOB: 56TH AND Peoria INTERSECTION RUN: 2035 NO BUILD AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE	* CONCENTRATION (PPM)

(DEGR)	*	REC21	REC22	REC23	REC24
0.	*	0.0	0.0	0.0	0.0
10.	*	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0
70.	*	0.1	0.1	0.1	0.1
80.	*	0.5	0.5	0.5	0.5
90.	*	1.1	1.0	1.0	1.0
100.	*	1.4	1.4	1.4	1.4
110.	*	1.4	1.5	1.4	1.4
120.	*	1.3	1.3	1.3	1.3
130.	*	1.1	1.2	1.2	1.2
140.	*	0.8	1.0	1.1	1.1
150.	*	0.8	1.0	1.1	1.1
160.	*	0.7	0.9	1.0	1.0
170.	*	0.8	0.9	1.0	1.0
180.	*	0.9	1.1	1.1	1.1
190.	*	1.0	0.9	1.2	1.1
200.	*	0.7	0.8	1.2	1.2
210.	*	0.7	0.7	1.2	1.3
220.	*	0.6	0.7	0.8	1.1
230.	*	0.7	0.7	0.8	1.1
240.	*	0.9	1.0	0.8	1.1
250.	*	1.1	1.1	1.0	1.2
260.	*	1.1	1.1	1.1	1.2
270.	*	0.8	0.8	0.9	0.8
280.	*	0.4	0.4	0.3	0.3
290.	*	0.1	0.1	0.1	0.2
300.	*	0.0	0.0	0.0	0.0
310.	*	0.0	0.0	0.0	0.0
320.	*	0.0	0.0	0.0	0.0
330.	*	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.0	0.0
360.	*	0.0	0.0	0.0	0.0
MAX	*	1.4	1.5	1.4	1.4
DEGR.	*	100	110	100	100

THE HIGHEST CONCENTRATION OF 1.50 PPM OCCURRED AT RECEPTOR REC22.

JOB: 56TH AND Peoria INTERSECTION RUN: 2035 NO BUILD AM

DATE : 1/ 3/ 8
TIME : 9: 9:47

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM)											
	*	ANGLE (DEGREES)											
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12
REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20						
LINK #	*	70	270	290	280	310	300	290	290	290	300	300	70
100	100	100	110	120	130	100	100						

1 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
2 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
3 *	0.0	0.3	0.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
4 *	0.0	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
5 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
6 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
7 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.0	0.0	0.0	0.0	0.0	0.0							
8 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.0	0.0	0.0	0.0	0.0	0.0							
9 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
10 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
11 *	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
12 *	0.0	0.1	0.1	0.1	0.1	0.1	0.4	0.4	0.4	0.4	0.4	0.3	
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
13 *	0.0	0.1	0.1	0.1	0.1	0.1	0.4	0.5	0.5	0.5	0.5	0.4	
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
14 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
15 *	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1						
16 *	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
0.7	0.5	0.4	0.3	0.3	0.2	0.8	0.8						
17 *	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.4						
18 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
19 *	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1						
20 *	0.0	0.2	0.3	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.4	0.2	
0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

DATE : 1/ 3/ 8
TIME : 9: 9:47

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	* CO/LINK (PPM)			
	* ANGLE (DEGREES)			
	* REC21	REC22	REC23	REC24
LINK #	* 100	110	100	100
1	* 0.0	0.0	0.0	0.0
2	* 0.0	0.0	0.0	0.0
3	* 0.0	0.0	0.0	0.0
4	* 0.0	0.0	0.0	0.0
5	* 0.0	0.0	0.0	0.0
6	* 0.0	0.0	0.0	0.0
7	* 0.0	0.0	0.0	0.0
8	* 0.0	0.0	0.0	0.0

9	*	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0
11	*	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.1	0.1	0.1	0.1
16	*	0.8	0.8	0.8	0.8
17	*	0.4	0.4	0.4	0.4
18	*	0.0	0.0	0.0	0.0
19	*	0.1	0.2	0.1	0.1
20	*	0.0	0.0	0.0	0.0

JOB: 56TH AND Peoria INTERSECTION RUN: 2035 NO BUILD PM

DATE : 1/ 3/ 8
TIME : 9:10: 9

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT) X1	Y1	X2	Y2	*	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. Peoria St. NB appr.	*	36.0	-1000.0	36.0	0.0	*	1000.	360.	AG	1.	14.1	0.0	30.0		
2. Peoria St. NB Queue	*	36.0	-50.0	36.0	-50.5	*	1.	180.	AG	209.	100.0	0.0	10.0	0.00	0.0
3. Peoria St. NB Q. Rig	*	36.0	-50.0	36.0	-949.7	*	900.	180.	AG	209.	100.0	0.0	10.0	1.26	45.7
4. Peoria St. NB Q. Lef	*	14.0	-50.0	14.0	-173.7	*	124.	180.	AG	209.	100.0	0.0	10.0	0.85	6.3
5. Peoria St. NB Dep.	*	36.0	0.0	36.0	1000.0	*	1000.	360.	AG	1.	14.1	0.0	30.0		
6. Peoria St. SB appr	*	-5.0	1000.0	-5.0	0.0	*	1000.	180.	AG	5.	14.1	0.0	30.0		
7. Peoria St. SB Queue.	*	-5.0	26.0	-5.0	29.1	*	3.	360.	AG	244.	100.0	0.0	10.0	0.12	0.2
8. Peoria St. SB Q. Rig	*	-5.0	26.0	-5.0	29.1	*	3.	360.	AG	244.	100.0	0.0	10.0	0.13	0.2
9. Peoria St. SB Q. Lef	*	-5.0	26.0	-5.0	32.2	*	6.	360.	AG	244.	100.0	0.0	10.0	0.26	0.3
10. Peoria St. SB Dep.	*	-5.0	0.0	-5.0	-1000.0	*	1000.	180.	AG	5.	14.1	0.0	30.0		
11. 56 EB th appr.	*	-1000.0	-10.0	0.0	-10.0	*	1000.	90.	AG	1155.	14.1	0.0	32.0		
12. 56 EB Queue	*	-70.0	-10.0	-2104.8	-10.0	*	2035.	270.	AG	99.	100.0	0.0	12.0	1.17	103.4
13. 56 EB Q. Right	*	-72.0	-20.0	-177.6	-20.0	*	106.	270.	AG	99.	100.0	0.0	10.0	0.45	5.4
14. 56 EB Q. Left	*	-70.0	0.0	-71.3	0.0	*	1.	270.	AG	99.	100.0	0.0	10.0	0.01	0.1
15. 56 EB Dep.	*	0.0	-10.0	1000.0	-10.0	*	1000.	90.	AG	1155.	14.1	0.0	32.0		
16. 56 WB th appr.	*	1000.0	15.0	0.0	15.0	*	1000.	270.	AG	580.	14.1	0.0	30.0		
17. 56 WB th Queue.	*	64.0	15.0	156.0	15.0	*	92.	90.	AG	63.	100.0	0.0	10.0	0.47	4.7
18. 56 WB Q. Right.	*	64.0	15.0	64.8	15.0	*	1.	90.	AG	63.	100.0	0.0	18.0	0.00	0.0
19. 56 WB Q. Left.	*	64.0	0.0	97.3	0.0	*	33.	90.	AG	63.	100.0	0.0	10.0	0.18	1.7
20. 56 WB Dep.	*	0.0	15.0	-1000.0	15.0	*	1000.								

270. AG   580. 14.1   0.0 30.0

JOB: 56TH AND Peoria INTERSECTION RUN: 2035 N0 BUILD PM

DATE : 1/ 3/ 8
TIME : 9:10: 9

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. Peoria St. NB Queue	120	97	2.0	1	1700	96.50	2	3
3. Peoria St. NB Q. Rig	120	97	2.0	320	1600	96.50	2	3
4. Peoria St. NB Q. Lef	120	97	2.0	215	1600	96.50	2	3
7. Peoria St. SB Queue.	120	113	2.0	5	1700	96.50	2	3
8. Peoria St. SB Q. Rig	120	113	2.0	5	1600	96.50	2	3
9. Peoria St. SB Q. Lef	120	113	2.0	10	1600	96.50	2	3
12. 56 EB Queue	120	46	2.0	1155	1700	96.50	2	3
13. 56 EB Q. Right	120	46	2.0	420	1600	96.50	2	3
14. 56 EB Q. Left	120	46	2.0	5	1600	96.50	2	3
17. 56 WB th Queue.	120	29	2.0	580	1700	96.50	2	3
18. 56 WB Q. Right.	120	29	2.0	5	1600	96.50	2	3
19. 56 WB Q. Left.	120	29	2.0	210	1600	96.50	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (SE CORNER #1)	52.0	-40.0	6.0
2. REC 2 (SE CORNER #2)	52.0	-55.0	6.0
3. REC 3 (SE CORNER #3)	52.0	-70.0	6.0
4. REC 4 (SE CORNER #4)	52.0	-85.0	6.0
5. REC 5 (SE CORNER #5)	52.0	-105.0	6.0
6. REC 6 (SE CORNER #6)	52.0	-130.0	6.0
7. REC 7 (SW CORNER #1)	-48.0	-35.0	6.0
8. REC 8 (SW CORNER #2)	-63.0	-35.0	6.0
9. REC 9 (SW CORNER #3)	-78.0	-35.0	6.0
10. REC 10 (SW CORNER #4	-93.0	-35.0	6.0
11. REC 11 (SW CORNER #5	-113.0	-35.0	6.0
12. REC 12 (SW CORNER #6	-138.0	-35.0	6.0
13. REC 13 (NW CORNER #1	-15.0	35.0	6.0
14. REC 14 (NW CORNER #2	-15.0	50.0	6.0
15. REC 15 (NW CORNER #3	-15.0	65.0	6.0

16. REC 16 (NW CORNER #4 *	-15.0	80.0	6.0	*
17. REC 17 (NW CORNER #5 *	-15.0	100.0	6.0	*
18. REC 18 (NW CORNER #6 *	-15.0	125.0	6.0	*
19. REC 19 (NE CORNER #1 *	15.0	35.0	6.0	*
20. REC 20 (NE CORNER #2 *	30.0	35.0	6.0	*
21. REC 21 (NE CORNER #3 *	45.0	35.0	6.0	*
22. REC 22 (NE CORNER #4 *	60.0	35.0	6.0	*
23. REC 23 (NE CORNER #5 *	80.0	35.0	6.0	*
24. REC 24 (NE CORNER #6 *	105.0	35.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) * REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	0.5	0.4	0.4	0.4	0.4	0.5	0.7	0.7	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	*	0.6	0.4	0.4	0.3	0.4	0.4	0.7	0.7	1.0	1.1	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	0.7	0.4	0.4	0.3	0.3	0.3	0.7	0.7	0.9	1.1	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	0.9	0.6	0.5	0.4	0.3	0.3	0.6	0.7	0.9	1.1	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	0.9	0.6	0.4	0.4	0.3	0.3	0.8	0.6	0.6	1.0	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50.	*	0.8	0.6	0.4	0.4	0.3	0.3	0.8	0.8	0.8	1.0	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.	*	0.9	0.6	0.5	0.4	0.4	0.3	0.9	0.9	0.8	0.9	1.2	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.	*	0.8	0.7	0.5	0.4	0.4	0.3	0.9	1.0	0.9	1.0	1.2	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1
80.	*	0.8	0.6	0.5	0.4	0.3	0.3	1.0	1.0	0.9	1.0	1.0	1.3	0.4	0.2	0.2	0.0	0.0	0.0	0.3
90.	*	0.6	0.4	0.3	0.3	0.1	0.1	0.8	0.7	0.9	0.8	0.7	0.8	0.8	0.4	0.3	0.2	0.2	0.2	0.8
100.	*	0.2	0.1	0.1	0.1	0.0	0.0	0.6	0.5	0.6	0.6	0.6	0.6	1.5	0.7	0.5	0.4	0.3	0.3	1.0
110.	*	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.3	0.3	0.3	0.2	1.4	0.8	0.5	0.5	0.3	0.3	1.0
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.2	0.2	1.5	0.6	0.5	0.5	0.3	0.3	0.9
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.3	0.3	0.2	1.4	0.6	0.5	0.5	0.3	0.3	0.7
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.3	0.3	0.3	0.1	1.2	0.9	0.4	0.3	0.3	0.3	0.7
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.3	0.3	0.2	0.2	1.4	1.0	0.6	0.4	0.4	0.4	0.8
160.	*	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.2	0.2	0.2	0.2	1.5	1.2	0.9	0.7	0.5	0.5	0.9

170.	*	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1
1.1	1.3	1.0	0.8	0.8	0.6	1.2	1.1						
180.	*	0.7	0.7	0.6	0.6	0.6	0.6	0.1	0.1	0.1	0.1	0.1	0.0
0.9	0.9	0.8	0.7	0.6	0.6	1.2	1.2						
190.	*	1.0	0.9	0.9	0.9	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
0.8	0.7	0.6	0.5	0.4	0.3	0.9	1.1						
200.	*	1.1	1.1	1.0	1.0	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0
0.6	0.5	0.4	0.3	0.3	0.3	0.9	0.8						
210.	*	0.9	1.0	1.0	1.0	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0
0.7	0.5	0.5	0.3	0.4	0.4	0.7	0.6						
220.	*	0.9	0.9	0.9	0.9	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0
0.7	0.7	0.7	0.5	0.5	0.4	0.6	0.6						
230.	*	0.7	0.9	0.9	0.9	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0
0.9	0.7	0.7	0.7	0.4	0.4	1.0	0.7						
240.	*	0.5	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
1.0	0.9	0.7	0.6	0.4	0.4	1.3	1.0						
250.	*	0.4	0.8	0.8	0.8	0.8	0.8	0.1	0.1	0.1	0.1	0.1	0.1
1.2	1.0	0.7	0.6	0.4	0.4	1.6	1.2						
260.	*	0.5	1.0	1.0	0.9	0.8	0.8	0.6	0.6	0.6	0.6	0.5	0.4
1.1	0.9	0.7	0.5	0.4	0.4	1.6	1.3						
270.	*	0.9	1.2	1.2	1.2	1.0	1.0	1.2	1.2	1.1	1.0	1.0	0.9
0.9	0.5	0.4	0.3	0.3	0.3	1.1	1.0						
280.	*	1.1	1.3	1.6	1.3	1.2	1.2	1.4	1.5	1.4	1.4	1.4	1.3
0.4	0.3	0.2	0.0	0.0	0.0	0.5	0.4						
290.	*	0.9	1.1	1.4	1.4	1.3	1.2	1.4	1.5	1.5	1.5	1.4	1.4
0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1						
300.	*	0.8	0.7	1.1	1.3	1.3	1.2	1.3	1.5	1.5	1.5	1.5	1.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
310.	*	0.8	0.6	0.9	1.0	1.1	1.3	1.1	1.2	1.3	1.3	1.3	1.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
320.	*	0.7	0.6	0.7	1.0	1.2	1.2	0.9	1.1	1.2	1.2	1.2	1.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
330.	*	0.5	0.4	0.7	0.9	1.0	1.1	0.8	1.0	1.2	1.2	1.2	1.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
340.	*	0.5	0.4	0.5	0.6	0.9	0.9	0.7	0.9	1.2	1.2	1.2	1.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
350.	*	0.5	0.4	0.4	0.5	0.6	0.8	0.7	0.8	1.1	1.2	1.2	1.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
360.	*	0.5	0.4	0.4	0.4	0.4	0.5	0.7	0.7	1.1	1.1	1.1	1.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
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MAX	*	1.1	1.3	1.6	1.4	1.3	1.3	1.4	1.5	1.5	1.5	1.5	1.4
1.5	1.3	1.0	0.8	0.8	0.6	1.6	1.3						
DEGR.	*	200	280	280	290	290	310	280	280	290	290	300	60
160	170	170	170	170	170	250	260						

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE	*	CONCENTRATION (PPM)

(DEGR)	*	REC21	REC22	REC23	REC24
0.	*	0.0	0.0	0.0	0.0
10.	*	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0
70.	*	0.1	0.1	0.1	0.1
80.	*	0.3	0.3	0.3	0.3
90.	*	0.7	0.7	0.6	0.6
100.	*	1.0	0.9	0.9	0.9
110.	*	1.0	1.0	1.0	1.0
120.	*	0.9	1.0	0.9	0.9
130.	*	0.9	0.9	0.9	0.8
140.	*	0.9	0.9	0.8	0.8
150.	*	0.8	0.9	0.8	0.8
160.	*	0.7	0.9	0.8	0.7
170.	*	1.0	1.0	0.9	0.8
180.	*	1.1	1.1	1.1	0.9
190.	*	1.2	1.2	1.3	1.0
200.	*	0.9	0.9	1.2	1.1
210.	*	0.9	0.8	1.1	1.1
220.	*	0.6	0.8	0.9	1.0
230.	*	0.8	0.7	0.8	1.1
240.	*	0.8	0.9	0.8	0.8
250.	*	1.0	1.2	0.9	1.1
260.	*	1.1	1.1	1.1	1.1
270.	*	0.9	0.7	0.7	0.8
280.	*	0.4	0.3	0.4	0.4
290.	*	0.0	0.0	0.0	0.0
300.	*	0.0	0.0	0.0	0.0
310.	*	0.0	0.0	0.0	0.0
320.	*	0.0	0.0	0.0	0.0
330.	*	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.0	0.0
360.	*	0.0	0.0	0.0	0.0
MAX	*	1.2	1.2	1.3	1.1
DEGR.	*	190	190	190	200

THE HIGHEST CONCENTRATION OF 1.60 PPM OCCURRED AT RECEPTOR REC19.

DATE : 1/ 3/ 8
TIME : 9:10: 9

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM)											
	*	ANGLE (DEGREES)											
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12
REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20						
LINK #	*	200	280	280	290	290	310	280	280	290	290	300	60
160	170	170	170	170	170	250	260						

1 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
2 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
3 *	0.8	0.3	0.5	0.5	0.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.3	0.3	0.3	0.3	0.3	0.2	0.0	0.0						
4 *	0.3	0.1	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0						
5 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
6 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
7 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0						
8 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0						
9 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1						
10 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
11 *	0.0	0.4	0.4	0.3	0.3	0.2	0.7	0.7	0.7	0.7	0.7	0.6	
0.2	0.2	0.1	0.1	0.1	0.1	0.5	0.5						
12 *	0.0	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.2	
0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2						
13 *	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.3	
0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1						
14 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
15 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0						
16 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1						
17 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
18 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
19 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
20 *	0.0	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	
0.2	0.2	0.1	0.1	0.1	0.0	0.3	0.3						

DATE : 1/ 3/ 8
TIME : 9:10: 9

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	* CO/LINK (PPM)			
	* ANGLE (DEGREES)			
	* REC21	REC22	REC23	REC24
LINK #	* 190	190	190	200
1	* 0.0	0.0	0.0	0.0
2	* 0.0	0.0	0.0	0.0
3	* 0.4	0.4	0.4	0.3
4	* 0.2	0.2	0.1	0.1
5	* 0.0	0.0	0.0	0.0
6	* 0.0	0.0	0.0	0.0
7	* 0.0	0.0	0.0	0.0
8	* 0.0	0.0	0.0	0.0

9	*	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0
11	*	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.3	0.3	0.3	0.3
16	*	0.3	0.3	0.3	0.2
17	*	0.0	0.0	0.1	0.1
18	*	0.0	0.0	0.0	0.0
19	*	0.0	0.0	0.1	0.1
20	*	0.0	0.0	0.0	0.0

APPENDIX C
BUILD
HOT SPOT ANALYSIS DATA

JOB: 56TH AND QUEBEC INTERSECTION RUN: 2035 BUILD AM

DATE : 1/ 3/ 8
TIME : 9:10:30

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT) X1	Y1	X2	Y2	*	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C QUEUE (VEH)
1.	Quebec St. NB appr.	*	38.0	-1000.0	38.0	0.0	*	1000.	360.	AG	525.	14.1	0.0	56.0	
2.	Quebec St. NB Queue	*	38.0	-80.0	38.0	-171.9	*	92.	180.	AG	621.	100.0	0.0	36.0	0.62 4.7
3.	Quebec St. NB Q. Rig	*	72.0	-80.0	72.0	-148.2	*	68.	180.	AG	186.	100.0	0.0	12.0	0.36 3.5
4.	Quebec St. NB Q. Lef	*	8.0	-80.0	8.0	-646.9	*	567.	180.	AG	496.	100.0	0.0	24.0	4.62 28.8
5.	Quebec St. NB Dep.	*	38.0	0.0	38.0	1000.0	*	1000.	360.	AG	525.	14.1	0.0	56.0	
6.	Quebec St. SB appr	*	-25.0	1000.0	-25.0	0.0	*	1000.	180.	AG	2410.	14.1	0.0	56.0	
7.	Quebec St. SB Queue.	*	-25.0	84.0	-25.0	1125.7	*	1042.	360.	AG	414.	100.0	0.0	36.0	1.09 52.9
8.	Quebec St. SB Q. Rig	*	-54.0	88.0	-54.0	116.0	*	28.	360.	AG	138.	100.0	0.0	12.0	0.12 1.4
9.	Quebec St. SB Q. Lef	*	2.0	80.0	2.0	342.1	*	262.	360.	AG	358.	100.0	0.0	24.0	0.99 13.3
10.	Quebec St. SB Dep.	*	-25.0	0.0	-25.0	-1000.0	*	1000.	180.	AG	2410.	14.1	0.0	56.0	
11.	56 EB th appr.	*	-1000.0	-22.0	0.0	-22.0	*	1000.	90.	AG	865.	14.1	0.0	44.0	
12.	56 EB Queue	*	-75.0	-22.0	-298.4	-22.0	*	223.	270.	AG	358.	100.0	0.0	24.0	0.93 11.3
13.	56 EB Q. Right	*	-80.0	-40.0	-180.2	-40.0	*	100.	270.	AG	168.	100.0	0.0	12.0	0.46 5.1
14.	56 EB Q. Left	*	-78.0	-2.0	-413.3	-2.0	*	335.	270.	AG	496.	100.0	0.0	24.0	3.08 17.0
15.	56 EB Dep.	*	0.0	-22.0	1000.0	-22.0	*	1000.	90.	AG	865.	14.1	0.0	44.0	
16.	56 WB th appr.	*	1000.0	30.0	0.0	30.0	*	1000.	270.	AG	1305.	14.1	0.0	44.0	
17.	56 WB th Queue.	*	80.0	30.0	1432.8	30.2	*	1353.	90.	AG	332.	100.0	0.0	24.0	1.18 68.7
18.	56 WB Q. Right.	*	78.0	52.0	78.5	52.0	*	0.	90.	AG	0.	100.0	0.0	12.0	0.43 0.0
19.	56 WB Q. Left.	*	80.0	2.0	573.8	2.1	*	494.	90.	AG	475.	100.0	0.0	24.0	1.48 25.1
20.	56 WB Dep.	*	0.0	30.0	-1000.0	30.0	*	1000.							

270. AG   1305. 14.1   0.0 44.0

DATE : 1/ 3/ 8
TIME : 9:10:30

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. Quebec St. NB Queue	120	96	2.0	525	1700	96.50	2	3
3. Quebec St. NB Q. Rig	120	86	2.0	145	1600	96.50	2	3
4. Quebec St. NB Q. Lef	120	115	2.0	120	1600	96.50	2	3
7. Quebec St. SB Queue.	120	64	2.0	2410	1700	96.50	2	3
8. Quebec St. SB Q. Rig	120	64	2.0	80	1600	96.50	2	3
9. Quebec St. SB Q. Lef	120	83	2.0	870	1600	96.50	2	3
12. 56 EB Queue	120	83	2.0	865	1700	96.50	2	3
13. 56 EB Q. Right	120	78	2.0	235	1600	96.50	2	3
14. 56 EB Q. Left	120	115	2.0	80	1600	96.50	2	3
17. 56 WB th Queue.	120	77	2.0	1305	1700	96.50	2	3
18. 56 WB Q. Right.	120	0	2.0	660	1600	96.50	2	3
19. 56 WB Q. Left.	120	110	2.0	235	1600	96.50	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (SE CORNER #1)	90.0	-70.0	6.0
2. REC 2 (SE CORNER #2)	90.0	-85.0	6.0
3. REC 3 (SE CORNER #3)	90.0	-100.0	6.0
4. REC 4 (SE CORNER #4)	90.0	-115.0	6.0
5. REC 5 (SE CORNER #5)	90.0	-135.0	6.0
6. REC 6 (SE CORNER #6)	90.0	-160.0	6.0
7. REC 7 (SW CORNER #1)	-55.0	-58.0	6.0
8. REC 8 (SW CORNER #2)	-70.0	-58.0	6.0
9. REC 9 (SW CORNER #3)	-85.0	-58.0	6.0
10. REC 10 (SW CORNER #4	-100.0	-58.0	6.0
11. REC 11 (SW CORNER #5	-120.0	-58.0	6.0
12. REC 12 (SW CORNER #6	-145.0	-58.0	6.0
13. REC 13 (NW CORNER #1	-67.0	70.0	6.0
14. REC 14 (NW CORNER #2	-67.0	85.0	6.0
15. REC 15 (NW CORNER #3	-67.0	100.0	6.0

16. REC 16 (NW CORNER #4 *	-67.0	115.0	6.0	*
17. REC 17 (NW CORNER #5 *	-67.0	135.0	6.0	*
18. REC 18 (NW CORNER #6 *	-67.0	160.0	6.0	*
19. REC 19 (NE CORNER #1 *	82.0	70.0	6.0	*
20. REC 20 (NE CORNER #2 *	97.0	70.0	6.0	*
21. REC 21 (NE CORNER #3 *	112.0	70.0	6.0	*
22. REC 22 (NE CORNER #4 *	127.0	70.0	6.0	*
23. REC 23 (NE CORNER #5 *	147.0	70.0	6.0	*
24. REC 24 (NE CORNER #6 *	172.0	70.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	2.0	1.7	1.7	1.7	1.8	1.6	3.3	3.0	3.3	3.5	3.3	3.1	2.1	2.1	2.0	2.0	2.0	1.9	0.8	0.5
10.	*	1.8	1.5	1.5	1.4	1.3	1.2	3.7	3.2	3.9	4.0	4.0	3.8	3.2	3.2	3.0	2.9	2.9	2.9	0.3	0.1
20.	*	1.7	1.3	1.2	1.2	1.1	0.9	3.1	2.8	3.3	3.8	4.2	4.1	3.4	3.5	3.3	3.1	3.1	3.0	0.0	0.0
30.	*	1.7	1.4	1.3	1.2	1.2	1.0	2.5	2.3	2.6	3.4	3.7	3.9	3.3	3.4	3.3	3.0	3.0	3.0	0.0	0.0
40.	*	1.7	1.5	1.3	1.2	1.2	1.0	2.3	1.9	2.0	2.7	3.3	3.7	3.0	3.3	3.2	2.9	2.9	2.9	0.0	0.0
50.	*	1.8	1.7	1.4	1.3	1.2	1.1	2.2	1.9	1.9	2.2	2.8	3.2	2.5	3.1	3.0	2.7	2.7	2.6	0.0	0.0
60.	*	1.9	1.7	1.5	1.4	1.2	1.1	2.5	2.5	2.0	2.2	2.5	3.1	2.2	2.8	2.9	2.5	2.5	2.5	0.0	0.0
70.	*	2.0	1.8	1.6	1.3	1.2	1.0	3.0	2.7	2.5	2.4	2.5	2.7	2.0	2.7	2.9	2.6	2.5	2.5	0.1	0.1
80.	*	1.8	1.4	1.2	1.0	0.8	0.5	3.1	2.8	2.7	2.6	2.5	2.7	2.2	2.7	3.1	2.8	2.5	2.5	0.6	0.6
90.	*	0.9	0.7	0.5	0.5	0.4	0.2	2.7	2.5	2.4	2.3	2.2	2.2	2.7	3.1	3.5	3.4	2.9	2.8	1.5	1.5
100.	*	0.3	0.2	0.0	0.0	0.0	0.0	2.3	2.1	1.9	1.7	1.6	1.5	3.1	3.3	3.9	3.9	3.5	3.3	2.5	2.4
110.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.9	1.8	1.7	1.5	1.3	2.6	2.7	3.4	4.0	3.6	3.5	2.7	2.7
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.3	1.9	1.7	1.5	1.3	2.2	2.2	2.9	3.4	3.5	3.6	2.6	2.6
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.3	1.9	1.8	1.5	1.3	2.1	2.2	2.5	2.9	3.1	3.3	2.4	2.4
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.3	1.8	1.6	1.4	1.1	2.3	2.2	2.4	2.7	3.0	3.0	2.2	2.2
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.2	1.8	1.5	1.3	1.1	2.6	2.5	2.7	2.6	2.7	3.1	2.1	2.1
160.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.1	1.8	1.5	1.3	1.0	2.9	2.7	2.7	2.7	2.8	3.0	1.9	2.1

170.	*	0.4	0.3	0.3	0.3	0.3	0.2	2.7	1.9	1.5	1.2	1.0	0.7
2.9	2.9	2.8	2.8	2.9	2.8	2.1	2.4						
180.	*	0.9	0.7	0.7	0.6	0.6	0.5	2.1	1.2	0.8	0.6	0.4	0.3
2.5	2.4	2.1	2.3	2.2	2.2	2.8	2.8						
190.	*	1.8	1.7	1.5	1.3	1.2	1.1	0.9	0.4	0.3	0.1	0.1	0.1
2.0	1.7	1.5	1.5	1.6	1.4	2.9	3.1						
200.	*	2.6	2.4	2.2	1.9	1.5	1.4	0.3	0.1	0.0	0.0	0.0	0.0
1.8	1.6	1.3	1.3	1.2	1.2	2.6	2.9						
210.	*	3.0	2.9	2.6	2.3	1.8	1.6	0.1	0.0	0.0	0.0	0.0	0.0
1.9	1.7	1.6	1.3	1.3	1.0	1.9	2.4						
220.	*	2.9	3.0	2.8	2.5	1.8	1.4	0.1	0.0	0.0	0.0	0.0	0.0
2.0	1.8	1.6	1.2	1.2	0.9	1.8	1.8						
230.	*	2.8	3.1	3.0	2.8	2.2	1.5	0.1	0.0	0.0	0.0	0.0	0.0
2.2	1.7	1.5	1.4	1.1	0.9	1.7	1.6						
240.	*	2.6	3.2	3.1	3.0	2.5	1.6	0.0	0.0	0.0	0.0	0.0	0.0
2.0	1.7	1.5	1.3	0.9	0.8	2.1	1.8						
250.	*	2.2	2.9	3.1	3.0	2.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0
1.9	1.5	1.2	1.1	0.8	0.6	2.5	2.2						
260.	*	2.1	2.9	3.0	3.0	2.9	2.0	0.5	0.5	0.4	0.4	0.3	0.3
1.4	1.2	0.8	0.6	0.5	0.4	2.4	2.4						
270.	*	2.2	3.0	3.3	3.4	3.3	2.4	1.5	1.5	1.4	1.3	1.2	1.1
0.7	0.5	0.4	0.3	0.1	0.1	2.1	1.9						
280.	*	2.4	3.0	3.6	3.9	3.8	3.0	2.6	2.6	2.5	2.4	2.2	2.0
0.2	0.1	0.1	0.1	0.0	0.0	1.6	1.6						
290.	*	1.9	2.7	3.2	3.8	4.1	3.5	3.2	3.2	3.1	3.1	3.0	2.7
0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.3						
300.	*	1.7	2.0	2.7	3.2	3.7	3.9	2.9	3.1	3.1	3.1	3.0	2.9
0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.6						
310.	*	1.5	1.6	2.0	2.4	2.9	3.4	2.7	2.9	3.1	3.0	3.0	2.9
0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.6						
320.	*	1.7	1.5	2.0	2.1	2.6	2.9	2.3	2.7	2.8	2.8	2.8	2.8
0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.7						
330.	*	2.1	1.8	1.9	2.2	2.3	2.8	1.7	2.3	2.6	2.6	2.6	2.6
0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.7						
340.	*	2.5	2.3	2.2	2.2	2.1	2.5	1.5	2.1	2.6	2.6	2.6	2.6
0.2	0.2	0.2	0.2	0.2	0.2	2.0	1.6						
350.	*	2.5	2.2	2.1	2.3	2.3	2.2	2.1	2.2	2.8	2.9	2.8	2.8
0.9	0.8	0.8	0.8	0.8	0.8	1.6	1.2						
360.	*	2.0	1.7	1.7	1.7	1.8	1.6	3.3	3.0	3.3	3.5	3.3	3.1
2.1	2.1	2.0	2.0	2.0	1.9	0.8	0.5						

MAX	*	3.0	3.2	3.6	3.9	4.1	3.9	3.7	3.2	3.9	4.0	4.2	4.1
3.4	3.5	3.9	4.0	3.6	3.6	2.9	3.1						
DEGR.	*	210	240	280	280	290	300	10	290	10	10	20	20
20	20	100	110	110	120	190	190						

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	*	REC21	REC22	REC23	REC24
0.	*	0.5	0.4	0.3	0.2
10.	*	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0
70.	*	0.1	0.1	0.1	0.1
80.	*	0.6	0.6	0.6	0.6
90.	*	1.5	1.5	1.5	1.5
100.	*	2.4	2.4	2.4	2.4
110.	*	2.6	2.6	2.6	2.6
120.	*	2.5	2.5	2.5	2.5
130.	*	2.4	2.4	2.4	2.4
140.	*	2.2	2.2	2.2	2.2
150.	*	2.1	2.1	2.1	2.1
160.	*	2.1	2.1	2.1	2.1
170.	*	2.2	2.1	2.1	2.1
180.	*	2.7	2.7	2.4	2.3
190.	*	3.4	3.2	2.9	2.8
200.	*	3.5	3.5	3.5	3.2
210.	*	2.8	3.0	3.4	3.4
220.	*	2.1	2.5	2.9	3.1
230.	*	2.0	2.2	2.3	2.7
240.	*	2.0	1.9	2.1	2.6
250.	*	2.2	2.0	2.0	2.5
260.	*	2.1	2.2	2.3	2.0
270.	*	1.8	1.6	1.5	1.6
280.	*	1.3	1.3	1.1	1.1
290.	*	1.2	1.1	1.0	1.0
300.	*	1.3	1.3	1.2	1.0
310.	*	1.4	1.3	1.2	1.1
320.	*	1.6	1.4	1.2	1.1
330.	*	1.6	1.4	1.2	1.1
340.	*	1.4	1.3	1.0	0.9
350.	*	1.1	0.9	0.7	0.6
360.	*	0.5	0.4	0.3	0.2
MAX	*	3.5	3.5	3.5	3.4
DEGR.	*	200	200	200	210

THE HIGHEST CONCENTRATION OF 4.20 PPM OCCURRED AT RECEPTOR REC11.

DATE : 1/ 3/ 8
TIME : 9:10:30

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM)											
	*	ANGLE (DEGREES)											
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12
REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20						
LINK #	*	210	240	280	280	290	300	10	290	10	10	20	20
20	20	100	110	110	120	190	190						

1 *	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.2	0.2						
2 *	0.9	1.3	0.9	1.2	1.2	1.3	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3					
3 *	0.5	0.5	0.4	0.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1					
4 *	0.8	0.7	0.4	0.5	0.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6					
5 *	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0					
6 *	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.9	0.7	0.7	0.6
1.3	1.3	0.9	0.8	0.8	0.9	0.0	0.0					
7 *	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	0.7	0.6	0.6
1.3	1.3	0.7	0.8	0.9	1.0	0.0	0.0					
8 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.3	0.4	0.4	0.0	0.0	0.0	0.0					
9 *	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.3	0.2	0.3	0.2
0.5	0.5	0.3	0.4	0.5	0.5	0.0	0.0					
10 *	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4					
11 *	0.0	0.0	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.3	0.3	0.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
12 *	0.0	0.0	0.3	0.2	0.3	0.2	0.0	0.9	0.5	0.7	0.8	0.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
13 *	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.5	0.3	0.4	0.4	0.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
14 *	0.0	0.0	0.4	0.3	0.4	0.4	0.0	0.9	0.4	0.6	0.7	0.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
15 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.1	0.2	0.1	0.1	0.2	0.2					
16 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.4	0.4	0.3	0.3	0.4	0.4					
17 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.5	0.4	0.4	0.3	0.2	0.5					
18 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
19 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.5	0.5	0.5	0.4	0.2	0.4					
20 *	0.0	0.0	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					

DATE : 1/ 3/ 8
TIME : 9:10:30

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	* CO/LINK (PPM)			
	* ANGLE (DEGREES)			
	* REC21	REC22	REC23	REC24
LINK #	* 200	200	200	210
1	* 0.2	0.1	0.1	0.1
2	* 0.4	0.3	0.3	0.3
3	* 0.1	0.1	0.1	0.1
4	* 0.6	0.5	0.5	0.4
5	* 0.0	0.0	0.0	0.0
6	* 0.0	0.0	0.0	0.0
7	* 0.0	0.0	0.0	0.0
8	* 0.0	0.0	0.0	0.0

9	*	0.0	0.0	0.0	0.0
10	*	0.5	0.5	0.4	0.4
11	*	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.2	0.2	0.2	0.2
16	*	0.5	0.5	0.5	0.5
17	*	0.6	0.7	0.7	0.7
18	*	0.0	0.0	0.0	0.0
19	*	0.4	0.6	0.7	0.7
20	*	0.0	0.0	0.0	0.0

JOB: 56TH AND QUEBEC INTERSECTION RUN: 2035 BUILD PM

DATE : 1/ 3/ 8
TIME : 9:11: 7

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG	TYPE	VPH	EF	H	W	V/C	QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)		(G/MI)	(FT)	(FT)		(VEH)	
1. Quebec St. NB appr.	*	38.0	-1000.0	38.0	0.0	*	1000.	360.	AG	1980.	14.1	0.0	56.0		
2. Quebec St. NB Queue	*	38.0	-80.0	38.0	-1658.7	*	1579.	180.	AG	505.	100.0	0.0	36.0	1.23	80.2
3. Quebec St. NB Q. Rig	*	72.0	-80.0	72.0	-158.9	*	79.	180.	AG	160.	100.0	0.0	12.0	0.35	4.0
4. Quebec St. NB Q. Lef	*	8.0	-80.0	8.0	-128.5	*	48.	180.	AG	462.	100.0	0.0	24.0	0.69	2.5
5. Quebec St. NB Dep.	*	38.0	0.0	38.0	1000.0	*	1000.	360.	AG	1980.	14.1	0.0	56.0		
6. Quebec St. SB appr	*	-25.0	1000.0	-25.0	0.0	*	1000.	180.	AG	1000.	14.1	0.0	56.0		
7. Quebec St. SB Queue.	*	-25.0	84.0	-25.0	211.5	*	127.	360.	AG	453.	100.0	0.0	36.0	0.51	6.5
8. Quebec St. SB Q. Rig	*	-54.0	88.0	-54.0	116.7	*	29.	360.	AG	151.	100.0	0.0	12.0	0.12	1.5
9. Quebec St. SB Q. Lef	*	2.0	80.0	2.0	2103.0	*	2023.	360.	AG	427.	100.0	0.0	24.0	1.77	102.8
10. Quebec St. SB Dep.	*	-25.0	0.0	-25.0	-1000.0	*	1000.	180.	AG	1000.	14.1	0.0	56.0		
11. 56 EB th appr.	*	-1000.0	-22.0	0.0	-22.0	*	1000.	90.	AG	1320.	14.1	0.0	44.0		
12. 56 EB Queue	*	-75.0	-22.0	-1796.4	-22.0	*	1721.	270.	AG	341.	100.0	0.0	24.0	1.26	87.4
13. 56 EB Q. Right	*	-80.0	-40.0	-105.3	-40.0	*	25.	270.	AG	142.	100.0	0.0	12.0	0.11	1.3
14. 56 EB Q. Left	*	-78.0	-2.0	-126.0	-2.0	*	48.	270.	AG	475.	100.0	0.0	24.0	0.82	2.4
15. 56 EB Dep.	*	0.0	-22.0	1000.0	-22.0	*	1000.	90.	AG	1320.	14.1	0.0	44.0		
16. 56 WB th appr.	*	1000.0	30.0	0.0	30.0	*	1000.	270.	AG	965.	14.1	0.0	44.0		
17. 56 WB th Queue.	*	80.0	30.0	805.5	30.1	*	725.	90.	AG	367.	100.0	0.0	24.0	1.10	36.9
18. 56 WB Q. Right.	*	78.0	52.0	79.3	52.0	*	1.	90.	AG	0.	100.0	0.0	12.0	0.52	0.1
19. 56 WB Q. Left.	*	80.0	2.0	380.5	2.1	*	301.	90.	AG	496.	100.0	0.0	24.0	2.85	15.3
20. 56 WB Dep.	*	0.0	30.0	-1000.0	30.0	*	1000.								

270. AG   965. 14.1   0.0 44.0

DATE : 1/ 3/ 8
TIME : 9:11: 7

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. Quebec St. NB Queue	120	78	2.0	1980	1700	96.50	2	3
3. Quebec St. NB Q. Rig	120	74	2.0	195	1600	96.50	2	3
4. Quebec St. NB Q. Lef	120	107	2.0	165	1600	96.50	2	3
7. Quebec St. SB Queue.	120	70	2.0	1000	1700	96.50	2	3
8. Quebec St. SB Q. Rig	120	70	2.0	75	1600	96.50	2	3
9. Quebec St. SB Q. Lef	120	99	2.0	800	1600	96.50	2	3
12. 56 EB Queue	120	79	2.0	1320	1700	96.50	2	3
13. 56 EB Q. Right	120	66	2.0	70	1600	96.50	2	3
14. 56 EB Q. Left	120	110	2.0	130	1600	96.50	2	3
17. 56 WB th Queue.	120	85	2.0	965	1700	96.50	2	3
18. 56 WB Q. Right.	120	0	2.0	810	1600	96.50	2	3
19. 56 WB Q. Left.	120	115	2.0	75	1600	96.50	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (SE CORNER #1)	90.0	-70.0	6.0
2. REC 2 (SE CORNER #2)	90.0	-85.0	6.0
3. REC 3 (SE CORNER #3)	90.0	-100.0	6.0
4. REC 4 (SE CORNER #4)	90.0	-115.0	6.0
5. REC 5 (SE CORNER #5)	90.0	-135.0	6.0
6. REC 6 (SE CORNER #6)	90.0	-160.0	6.0
7. REC 7 (SW CORNER #1)	-55.0	-58.0	6.0
8. REC 8 (SW CORNER #2)	-70.0	-58.0	6.0
9. REC 9 (SW CORNER #3)	-85.0	-58.0	6.0
10. REC 10 (SW CORNER #4	-100.0	-58.0	6.0
11. REC 11 (SW CORNER #5	-120.0	-58.0	6.0
12. REC 12 (SW CORNER #6	-145.0	-58.0	6.0
13. REC 13 (NW CORNER #1	-67.0	70.0	6.0
14. REC 14 (NW CORNER #2	-67.0	85.0	6.0
15. REC 15 (NW CORNER #3	-67.0	100.0	6.0

16.	REC 16 (NW CORNER #4 *	-67.0	115.0	6.0	*
17.	REC 17 (NW CORNER #5 *	-67.0	135.0	6.0	*
18.	REC 18 (NW CORNER #6 *	-67.0	160.0	6.0	*
19.	REC 19 (NE CORNER #1 *	82.0	70.0	6.0	*
20.	REC 20 (NE CORNER #2 *	97.0	70.0	6.0	*
21.	REC 21 (NE CORNER #3 *	112.0	70.0	6.0	*
22.	REC 22 (NE CORNER #4 *	127.0	70.0	6.0	*
23.	REC 23 (NE CORNER #5 *	147.0	70.0	6.0	*
24.	REC 24 (NE CORNER #6 *	172.0	70.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	2.6	2.3	2.3	2.1	2.1	1.9	2.7	2.4	3.2	3.2	2.5	2.0	1.5	1.5	1.4	1.3	1.3	1.2	1.3	1.0
10.	*	2.0	1.8	1.7	1.5	1.4	1.3	3.2	3.0	3.5	3.8	3.3	2.6	2.6	2.5	2.3	2.1	2.0	1.9	0.5	0.3
20.	*	1.7	1.6	1.3	1.2	1.0	1.0	2.9	2.6	3.0	3.6	3.7	3.0	3.1	3.0	2.7	2.5	2.4	2.1	0.1	0.0
30.	*	1.7	1.6	1.5	1.3	1.1	1.0	2.2	2.3	2.5	3.2	3.4	3.1	3.1	3.3	3.0	2.7	2.5	2.2	0.0	0.0
40.	*	2.0	1.7	1.5	1.5	1.2	1.0	2.0	1.9	1.9	2.5	2.9	3.0	2.9	3.1	3.0	2.6	2.5	2.3	0.0	0.0
50.	*	2.0	1.7	1.6	1.4	1.3	1.0	2.1	1.9	1.9	2.0	2.6	2.9	2.5	3.0	3.0	2.6	2.6	2.4	0.0	0.0
60.	*	2.0	1.8	1.6	1.4	1.3	1.0	2.3	2.2	2.1	2.2	2.3	2.7	2.3	2.7	2.9	2.6	2.5	2.4	0.0	0.0
70.	*	2.0	1.7	1.4	1.2	1.0	0.7	2.9	2.7	2.5	2.3	2.5	2.6	1.9	2.6	2.8	2.5	2.4	2.4	0.1	0.1
80.	*	1.5	1.2	0.9	0.7	0.6	0.4	2.8	2.7	2.5	2.5	2.3	2.6	1.9	2.7	3.0	2.7	2.5	2.4	0.4	0.4
90.	*	0.9	0.6	0.5	0.4	0.2	0.1	2.2	2.3	2.1	2.0	1.9	2.0	2.4	2.7	3.3	3.3	2.9	2.7	1.3	1.3
100.	*	0.1	0.1	0.1	0.0	0.0	0.0	1.8	1.7	1.7	1.6	1.5	1.5	2.8	3.0	3.7	3.8	3.4	3.1	2.3	2.2
110.	*	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.6	1.6	1.5	1.2	1.1	2.4	2.4	3.4	3.9	3.6	3.5	2.5	2.5
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.9	1.6	1.5	1.2	1.0	2.1	2.0	2.8	3.5	3.4	3.6	2.4	2.4
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.8	1.5	1.5	1.1	1.1	2.0	1.8	2.3	2.7	3.1	3.4	2.4	2.4
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.8	1.5	1.4	1.1	1.0	2.0	1.9	2.2	2.2	2.7	2.7	2.3	2.3
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.9	1.5	1.4	1.3	1.0	2.2	1.9	2.0	2.6	2.6	2.7	2.2	2.3
160.	*	0.1	0.1	0.1	0.1	0.1	0.1	2.3	1.8	1.6	1.4	1.2	1.1	2.3	2.4	2.5	2.4	2.7	2.7	2.1	2.2

170.	*	0.7	0.7	0.6	0.6	0.6	0.6	2.1	1.7	1.4	1.2	0.9	0.9
2.6	2.6	2.4	2.4	2.6	2.4	2.5	2.5						
180.	*	1.8	1.7	1.7	1.7	1.6	1.6	1.4	1.0	0.8	0.6	0.5	0.4
2.0	1.9	1.8	1.9	1.8	1.8	3.2	3.4						
190.	*	2.7	2.7	2.6	2.5	2.4	2.4	0.6	0.3	0.2	0.2	0.1	0.0
1.6	1.4	1.2	1.1	1.2	1.2	3.5	3.7						
200.	*	2.9	2.9	2.8	2.8	2.6	2.5	0.1	0.0	0.0	0.0	0.0	0.0
1.3	1.2	1.0	1.0	0.9	0.8	2.9	3.1						
210.	*	2.7	2.7	2.7	2.6	2.5	2.3	0.1	0.0	0.0	0.0	0.0	0.0
1.5	1.3	1.0	0.9	0.8	0.8	2.3	2.5						
220.	*	2.6	2.7	2.6	2.6	2.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0
1.4	1.2	1.0	0.8	0.8	0.7	2.0	1.9						
230.	*	2.4	2.5	2.5	2.4	2.3	2.0	0.0	0.0	0.0	0.0	0.0	0.0
1.4	1.1	1.0	0.8	0.7	0.7	1.9	1.9						
240.	*	2.4	2.6	2.5	2.4	2.3	1.9	0.0	0.0	0.0	0.0	0.0	0.0
1.3	1.2	1.0	1.0	0.8	0.7	2.1	2.0						
250.	*	2.0	2.6	2.5	2.3	2.2	1.8	0.2	0.2	0.2	0.2	0.2	0.2
1.4	1.2	1.1	0.9	0.8	0.7	2.2	1.9						
260.	*	2.0	2.7	2.8	2.7	2.4	2.0	0.6	0.6	0.6	0.6	0.6	0.6
1.3	1.1	0.9	0.8	0.7	0.5	2.5	2.3						
270.	*	2.3	2.9	3.2	3.2	2.8	2.3	1.5	1.4	1.4	1.4	1.4	1.4
0.8	0.6	0.5	0.4	0.4	0.2	2.1	2.1						
280.	*	2.5	2.9	3.5	3.4	3.5	2.9	2.1	2.1	2.0	2.0	2.0	2.0
0.2	0.2	0.2	0.1	0.0	0.0	1.8	1.7						
290.	*	2.0	2.5	3.0	3.3	3.6	3.2	2.3	2.4	2.2	2.1	2.1	2.0
0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.6						
300.	*	1.8	2.0	2.5	3.0	3.4	3.3	2.4	2.3	2.1	1.9	1.9	1.9
0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.8						
310.	*	1.8	1.9	2.3	2.5	3.0	3.2	2.1	2.3	2.1	1.8	1.7	1.7
0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.7						
320.	*	2.0	1.9	2.1	2.2	2.7	2.9	1.8	2.2	2.2	1.7	1.5	1.5
0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.8						
330.	*	2.4	2.1	2.1	2.4	2.7	2.8	1.6	2.2	2.3	1.9	1.6	1.5
0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.6						
340.	*	2.8	2.6	2.3	2.5	2.5	2.8	1.4	2.0	2.3	2.0	1.6	1.4
0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.7						
350.	*	3.0	2.8	2.6	2.5	2.6	2.6	1.9	2.1	2.7	2.4	1.8	1.5
0.7	0.6	0.5	0.5	0.5	0.5	2.0	1.6						
360.	*	2.6	2.3	2.3	2.1	2.1	1.9	2.7	2.4	3.2	3.2	2.5	2.0
1.5	1.5	1.4	1.3	1.3	1.2	1.3	1.0						

MAX	*	3.0	2.9	3.5	3.4	3.6	3.3	3.2	3.0	3.5	3.8	3.7	3.1
3.1	3.3	3.7	3.9	3.6	3.6	3.5	3.7						
DEGR.	*	350	280	280	280	290	300	10	10	10	10	20	30
20	30	100	110	110	120	190	190						

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION
ANGLE * (PPM)

(DEGR)	*	REC21	REC22	REC23	REC24
0.	*	0.9	0.7	0.5	0.3
10.	*	0.2	0.2	0.2	0.1
20.	*	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0
70.	*	0.0	0.0	0.0	0.0
80.	*	0.4	0.4	0.4	0.3
90.	*	1.3	1.3	1.2	1.1
100.	*	2.2	2.1	2.1	2.0
110.	*	2.5	2.5	2.4	2.4
120.	*	2.4	2.4	2.4	2.3
130.	*	2.4	2.4	2.4	2.4
140.	*	2.3	2.3	2.3	2.3
150.	*	2.3	2.3	2.3	2.3
160.	*	2.1	2.1	2.1	2.1
170.	*	2.4	2.4	2.3	2.2
180.	*	3.2	3.0	2.7	2.6
190.	*	3.7	3.5	3.3	3.1
200.	*	3.5	3.6	3.6	3.3
210.	*	2.9	3.2	3.4	3.5
220.	*	2.3	2.5	3.0	3.1
230.	*	1.8	2.0	2.3	2.9
240.	*	1.8	2.0	2.3	2.4
250.	*	1.9	2.2	2.2	2.2
260.	*	2.3	2.1	2.2	2.0
270.	*	2.0	2.0	1.7	1.5
280.	*	1.6	1.6	1.4	1.1
290.	*	1.5	1.5	1.1	1.0
300.	*	1.6	1.5	1.3	1.1
310.	*	1.6	1.5	1.2	1.1
320.	*	1.5	1.4	1.1	1.0
330.	*	1.5	1.4	1.2	1.0
340.	*	1.5	1.4	1.2	1.0
350.	*	1.3	1.1	1.0	0.8
360.	*	0.9	0.7	0.5	0.3
MAX	*	3.7	3.6	3.6	3.5
DEGR.	*	190	200	200	210

THE HIGHEST CONCENTRATION OF 3.90 PPM OCCURRED AT RECEPTOR REC16.

DATE : 1/ 3/ 8
TIME : 9:11: 7

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM)											
	*	ANGLE (DEGREES)											
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12
REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20						
LINK #	*	350	280	280	280	290	300	10	10	10	10	20	30
20	30	100	110	110	120	190	190						

1 *	0.1	0.6	0.6	0.6	0.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.8	0.7						
2 *	0.0	0.4	0.8	0.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	1.0	1.0						
3 *	0.0	0.2	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.1	0.1						
4 *	0.0	0.2	0.3	0.4	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.1	0.1						
5 *	0.8	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.4	0.3	0.4	0.3
0.5	0.5	0.4	0.4	0.4	0.4	0.2	0.0						
6 *	0.2	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.4	0.3	0.3	0.2
0.5	0.5	0.4	0.3	0.4	0.4	0.0	0.0						
7 *	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.3	0.3	0.3	0.3
0.9	1.1	0.8	0.9	1.0	1.1	0.0	0.0						
8 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.3	0.4	0.4	0.4	0.0	0.0	0.0	0.0						
9 *	0.7	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.7	0.6	0.6	0.4
0.9	0.8	0.4	0.4	0.6	0.6	0.0	0.0						
10 *	0.0	0.2	0.2	0.2	0.2	0.2	0.3	0.1	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2						
11 *	0.0	0.4	0.4	0.3	0.3	0.2	0.5	0.5	0.5	0.5	0.5	0.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
12 *	0.0	0.6	0.5	0.5	0.4	0.3	0.0	0.1	0.5	0.7	0.7	0.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
13 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
14 *	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.6	0.6	0.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
15 *	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.2	0.3	0.2	0.2	0.3	0.3						
16 *	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.3	0.3	0.2	0.2	0.3	0.3						
17 *	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.5	0.5	0.4	0.3	0.3	0.6						
18 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
19 *	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.3	0.4	0.4	0.4	0.2	0.4						
20 *	0.0	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

DATE : 1/ 3/ 8
TIME : 9:11: 7

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	* CO/LINK (PPM)			
	* ANGLE (DEGREES)			
	* REC21	REC22	REC23	REC24
LINK #	* 190	200	200	210
1	* 0.6	0.6	0.5	0.4
2	* 0.9	0.7	0.7	0.5
3	* 0.1	0.1	0.1	0.1
4	* 0.0	0.1	0.0	0.1
5	* 0.0	0.0	0.0	0.0
6	* 0.0	0.0	0.0	0.0
7	* 0.0	0.0	0.0	0.0
8	* 0.0	0.0	0.0	0.0

9	*	0.0	0.0	0.0	0.0
10	*	0.2	0.2	0.2	0.2
11	*	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.3	0.3	0.3	0.3
16	*	0.3	0.3	0.3	0.4
17	*	0.7	0.7	0.8	0.8
18	*	0.0	0.0	0.0	0.0
19	*	0.6	0.6	0.7	0.7
20	*	0.0	0.0	0.0	0.0

JOB: 56TH AND Havana INTERSECTION RUN: 2035 BUILD AM

DATE : 1/ 3/ 8
TIME : 9: 8:23

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

	LINK DESCRIPTION	*	LINK COORDINATES (FT) X1	Y1	X2	Y2	*	LENGTH (FT)	BRG	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C QUEUE (VEH)
1.	Havana St. NB appr.	*	28.0	-1000.0	28.0	0.0	*	1000.	360.	AG	20.	14.1	0.0	32.0	
2.	Havana St. NB Queue	*	28.0	-45.0	28.0	-54.2	*	9.	180.	AG	181.	100.0	0.0	12.0	0.04 0.5
3.	Havana St. NB Q. Rig	*	40.0	-45.0	40.0	-73.3	*	28.	180.	AG	160.	100.0	0.0	12.0	0.13 1.4
4.	Havana St. NB Q. Lef	*	10.0	-48.0	10.0	-185.3	*	137.	180.	AG	336.	100.0	0.0	24.0	0.64 7.0
5.	Havana St. NB Dep.	*	28.0	0.0	28.0	1000.0	*	1000.	360.	AG	20.	14.1	0.0	32.0	
6.	Havana St. SB appr	*	-20.0	1000.0	-20.0	0.0	*	1000.	180.	AG	10.	14.1	0.0	32.0	
7.	Havana St. SB Queue.	*	-20.0	40.0	-20.0	45.7	*	6.	360.	AG	224.	100.0	0.0	12.0	0.06 0.3
8.	Havana St. SB Q. Rig	*	-20.0	40.0	-20.0	88.3	*	48.	360.	AG	224.	100.0	0.0	12.0	0.53 2.5
9.	Havana St. SB Q. Lef	*	-10.0	40.0	-10.0	45.5	*	6.	360.	AG	218.	100.0	0.0	12.0	0.05 0.3
10.	Havana St. SB Dep.	*	-20.0	0.0	-20.0	-1000.0	*	1000.	180.	AG	10.	14.1	0.0	32.0	
11.	56 EB th appr.	*	-1000.0	-18.0	0.0	-18.0	*	1000.	90.	AG	685.	14.1	0.0	44.0	
12.	56 EB Queue	*	-70.0	-18.0	-184.1	-18.0	*	114.	270.	AG	263.	100.0	0.0	24.0	0.44 5.8
13.	56 EB Q. Right	*	-70.0	-38.0	-199.9	-38.0	*	130.	270.	AG	82.	100.0	0.0	12.0	0.60 6.6
14.	56 EB Q. Left	*	-70.0	0.0	-89.5	0.0	*	20.	270.	AG	119.	100.0	0.0	12.0	0.08 1.0
15.	56 EB Dep.	*	0.0	-18.0	1000.0	-18.0	*	1000.	90.	AG	685.	14.1	0.0	44.0	
16.	56 WB th appr.	*	1000.0	18.0	0.0	18.0	*	1000.	270.	AG	1520.	14.1	0.0	44.0	
17.	56 WB th Queue.	*	55.0	18.0	309.9	18.1	*	255.	90.	AG	246.	100.0	0.0	24.0	0.91 12.9
18.	56 WB Q. Right.	*	55.0	38.0	62.8	38.0	*	8.	90.	AG	123.	100.0	0.0	12.0	0.03 0.4
19.	56 WB Q. Left.	*	55.0	0.0	79.9	0.0	*	25.	90.	AG	104.	100.0	0.0	12.0	0.10 1.3
20.	56 WB Dep.	*	0.0	18.0	-1000.0	18.0	*	1000.							

270. AG   1520. 14.1   0.0 44.0

DATE : 1/ 3/ 8
TIME : 9: 8:23

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
2. Havana St. NB Queue	120	84	2.0	20	1700	96.50	2	3
3. Havana St. NB Q. Rig	120	74	2.0	70	1600	96.50	2	3
4. Havana St. NB Q. Lef	120	78	2.0	645	1600	96.50	2	3
7. Havana St. SB Queue.	120	104	2.0	10	1700	96.50	2	3
8. Havana St. SB Q. Rig	120	104	2.0	85	1600	96.50	2	3
9. Havana St. SB Q. Lef	120	101	2.0	10	1600	96.50	2	3
12. 56 EB Queue	120	61	2.0	685	1700	96.50	2	3
13. 56 EB Q. Right	120	38	2.0	625	1600	96.50	2	3
14. 56 EB Q. Left	120	55	2.0	65	1600	96.50	2	3
17. 56 WB th Queue.	120	57	2.0	1520	1700	96.50	2	3
18. 56 WB Q. Right.	120	57	2.0	25	1600	96.50	2	3
19. 56 WB Q. Left.	120	48	2.0	95	1600	96.50	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (SE CORNER #1)	55.0	-42.0	6.0
2. REC 2 (SE CORNER #2)	55.0	-57.0	6.0
3. REC 3 (SE CORNER #3)	55.0	-72.0	6.0
4. REC 4 (SE CORNER #4)	55.0	-87.0	6.0
5. REC 5 (SE CORNER #5)	55.0	-107.0	6.0
6. REC 6 (SE CORNER #6)	55.0	-132.0	6.0
7. REC 7 (SW CORNER #1)	-48.0	-50.0	6.0
8. REC 8 (SW CORNER #2)	-63.0	-50.0	6.0
9. REC 9 (SW CORNER #3)	-78.0	-50.0	6.0
10. REC 10 (SW CORNER #4	-93.0	-50.0	6.0
11. REC 11 (SW CORNER #5	-113.0	-50.0	6.0
12. REC 12 (SW CORNER #6	-138.0	-50.0	6.0
13. REC 13 (NW CORNER #1	-48.0	42.0	6.0
14. REC 14 (NW CORNER #2	-48.0	57.0	6.0
15. REC 15 (NW CORNER #3	-48.0	72.0	6.0

16. REC 16 (NW CORNER #4 *	-48.0	87.0	6.0	*
17. REC 17 (NW CORNER #5 *	-48.0	107.0	6.0	*
18. REC 18 (NW CORNER #6 *	-48.0	132.0	6.0	*
19. REC 19 (NE CORNER #1 *	52.0	52.0	6.0	*
20. REC 20 (NE CORNER #2 *	67.0	52.0	6.0	*
21. REC 21 (NE CORNER #3 *	82.0	52.0	6.0	*
22. REC 22 (NE CORNER #4 *	97.0	52.0	6.0	*
23. REC 23 (NE CORNER #5 *	117.0	52.0	6.0	*
24. REC 24 (NE CORNER #6 *	142.0	52.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	*	1.0	0.9	0.7	0.7	0.5	0.5	0.8	0.8	1.5	1.6	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10.	*	1.1	0.9	0.8	0.7	0.6	0.5	0.8	0.9	1.5	1.6	1.5	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20.	*	1.2	1.0	0.8	0.8	0.5	0.5	0.8	0.8	1.2	1.6	1.5	1.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30.	*	1.2	1.0	0.8	0.8	0.6	0.5	0.8	0.8	1.0	1.5	1.8	1.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
40.	*	1.1	1.1	0.8	0.8	0.8	0.5	0.9	0.9	1.0	1.3	1.7	1.7	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0
50.	*	1.3	1.1	0.9	0.8	0.7	0.6	0.8	1.0	0.9	1.3	1.5	1.8	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0
60.	*	1.3	1.1	1.0	0.8	0.7	0.5	1.0	1.0	1.0	1.3	1.5	1.7	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0
70.	*	1.5	1.2	0.9	0.8	0.6	0.6	1.3	1.3	1.2	1.3	1.4	1.7	0.7	0.5	0.3	0.1	0.0	0.0	0.1	0.1
80.	*	1.2	0.9	0.7	0.6	0.4	0.3	1.3	1.2	1.2	1.3	1.4	1.6	1.4	0.7	0.6	0.2	0.1	0.0	0.4	0.4
90.	*	0.9	0.5	0.4	0.3	0.2	0.2	1.1	1.2	0.9	0.9	1.0	1.1	2.0	1.3	1.1	0.7	0.4	0.1	1.0	1.0
100.	*	0.3	0.2	0.2	0.0	0.0	0.0	0.7	0.7	0.5	0.5	0.5	0.6	2.2	1.9	1.5	1.1	0.7	0.5	1.6	1.6
110.	*	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.4	0.3	0.3	0.3	1.7	1.8	1.5	1.4	0.9	0.6	1.8	1.8
120.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.4	0.4	0.3	0.3	1.3	1.5	1.4	1.2	1.0	0.6	1.8	1.7
130.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.4	0.3	0.3	0.2	1.3	1.2	1.2	1.0	0.9	0.7	1.6	1.5
140.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.3	0.3	0.2	0.1	1.2	1.0	1.0	1.1	0.9	0.6	1.5	1.4
150.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.2	0.1	0.1	0.0	1.2	1.1	1.0	1.1	0.9	0.8	1.6	1.4
160.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.0	0.0	0.0	1.2	0.9	1.0	1.0	0.9	0.8	1.5	1.4

170.	*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
1.2	1.0	0.8	0.8	0.7	0.8	1.4	1.4						
180.	*	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.0	0.9	0.7	0.7	0.6	0.7	1.4	1.6						
190.	*	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.0	0.8	0.6	0.6	0.5	0.5	1.3	1.7						
200.	*	0.7	0.6	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
1.1	1.0	0.9	0.7	0.6	0.6	1.0	1.5						
210.	*	1.0	0.8	0.6	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
1.4	1.3	1.0	0.9	0.7	0.6	1.0	1.4						
220.	*	1.1	0.9	0.7	0.6	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0
1.6	1.2	1.1	0.9	0.6	0.5	1.0	1.2						
230.	*	1.2	1.0	0.7	0.7	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0
1.6	1.3	1.0	0.7	0.6	0.5	1.0	1.3						
240.	*	1.1	1.0	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
1.7	1.1	1.0	0.8	0.6	0.4	1.2	1.2						
250.	*	1.0	1.0	0.7	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
1.5	1.1	0.9	0.7	0.5	0.4	1.4	1.3						
260.	*	1.2	1.4	1.0	0.6	0.6	0.6	0.4	0.4	0.3	0.3	0.3	0.3
1.5	1.0	0.8	0.6	0.5	0.4	1.3	1.3						
270.	*	1.5	1.7	1.4	1.0	0.8	0.8	1.0	1.0	0.9	0.9	0.9	0.7
1.1	0.6	0.5	0.4	0.3	0.1	1.1	0.9						
280.	*	1.6	1.8	1.8	1.3	1.2	0.9	1.5	1.6	1.5	1.5	1.3	1.1
0.6	0.2	0.1	0.1	0.1	0.0	0.5	0.5						
290.	*	1.2	1.8	1.7	1.6	1.4	1.2	1.7	1.8	1.7	1.7	1.6	1.4
0.2	0.1	0.0	0.0	0.0	0.0	0.3	0.2						
300.	*	1.0	1.3	1.6	1.3	1.3	1.2	1.7	1.9	1.8	1.8	1.7	1.5
0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1						
310.	*	1.0	1.0	1.3	1.3	1.0	1.1	1.3	1.6	1.7	1.7	1.6	1.5
0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0						
320.	*	0.9	1.0	1.2	1.1	0.9	1.0	1.2	1.5	1.6	1.6	1.6	1.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
330.	*	0.9	0.8	1.0	1.1	1.0	1.0	1.0	1.4	1.6	1.6	1.6	1.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
340.	*	0.8	0.7	0.9	0.9	0.8	0.7	0.9	1.3	1.7	1.6	1.6	1.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
350.	*	0.8	0.6	0.7	0.8	0.6	0.7	0.8	1.1	1.6	1.5	1.5	1.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
360.	*	1.0	0.9	0.7	0.7	0.5	0.5	0.8	0.8	1.5	1.6	1.5	1.5
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

------*----------

MAX	*	1.6	1.8	1.8	1.6	1.4	1.2	1.7	1.9	1.8	1.8	1.8	1.8
2.2	1.9	1.5	1.4	1.0	0.8	1.8	1.8						
DEGR.	*	280	280	280	290	290	290	290	300	300	300	30	50
100	100	100	110	120	150	120	110						

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE	*	CONCENTRATION (PPM)

(DEGR)	*	REC21	REC22	REC23	REC24
0.	*	0.0	0.0	0.0	0.0
10.	*	0.0	0.0	0.0	0.0
20.	*	0.0	0.0	0.0	0.0
30.	*	0.0	0.0	0.0	0.0
40.	*	0.0	0.0	0.0	0.0
50.	*	0.0	0.0	0.0	0.0
60.	*	0.0	0.0	0.0	0.0
70.	*	0.1	0.1	0.1	0.1
80.	*	0.4	0.4	0.4	0.4
90.	*	1.0	1.0	0.9	0.9
100.	*	1.6	1.6	1.6	1.5
110.	*	1.7	1.7	1.7	1.7
120.	*	1.7	1.7	1.7	1.6
130.	*	1.5	1.5	1.5	1.5
140.	*	1.4	1.4	1.4	1.4
150.	*	1.4	1.4	1.4	1.4
160.	*	1.4	1.4	1.4	1.4
170.	*	1.4	1.4	1.4	1.4
180.	*	1.5	1.3	1.3	1.3
190.	*	1.6	1.4	1.5	1.4
200.	*	1.7	1.6	1.6	1.5
210.	*	1.6	1.7	1.7	1.6
220.	*	1.4	1.6	1.6	1.6
230.	*	1.4	1.5	1.7	1.7
240.	*	1.4	1.3	1.6	1.7
250.	*	1.4	1.3	1.5	1.6
260.	*	1.3	1.2	1.4	1.4
270.	*	0.9	1.0	0.9	1.0
280.	*	0.4	0.4	0.4	0.4
290.	*	0.2	0.2	0.2	0.1
300.	*	0.0	0.0	0.0	0.0
310.	*	0.0	0.0	0.0	0.0
320.	*	0.0	0.0	0.0	0.0
330.	*	0.0	0.0	0.0	0.0
340.	*	0.0	0.0	0.0	0.0
350.	*	0.0	0.0	0.0	0.0
360.	*	0.0	0.0	0.0	0.0
MAX	*	1.7	1.7	1.7	1.7
DEGR.	*	110	110	110	110

THE HIGHEST CONCENTRATION OF 2.20 PPM OCCURRED AT RECEPTOR REC13.

DATE : 1/ 3/ 8
TIME : 9: 8:23

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	*	CO/LINK (PPM)											
	*	ANGLE (DEGREES)											
	*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12
REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20						
LINK #	*	280	280	280	290	290	290	290	300	300	300	30	50
100	100	100	110	120	150	120	110						

1 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
2 *	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
3 *	0.1	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0							
4 *	0.1	0.3	0.5	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0						
5 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
6 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
7 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0						
8 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
0.2	0.4	0.4	0.4	0.2	0.2	0.0	0.0						
9 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0						
10 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
11 *	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.3	0.3	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
12 *	0.2	0.2	0.2	0.2	0.2	0.1	0.6	0.7	0.6	0.6	0.6	0.6	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
13 *	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.3	0.3	0.3	0.3	0.3	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
14 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
15 *	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2						
16 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
0.8	0.7	0.6	0.5	0.4	0.2	0.8	0.9						
17 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.4	0.3	0.3	0.3	0.3	0.1	0.7	0.7						
18 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0						
19 *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
20 *	0.5	0.4	0.4	0.4	0.3	0.3	0.5	0.5	0.5	0.5	0.4	0.4	
0.4	0.1	0.0	0.0	0.0	0.1	0.0	0.0						

DATE : 1/ 3/ 8
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RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

	* CO/LINK (PPM)			
	* ANGLE (DEGREES)			
	* REC21	REC22	REC23	REC24
LINK #	* 110	110	110	110
1	* 0.0	0.0	0.0	0.0
2	* 0.0	0.0	0.0	0.0
3	* 0.0	0.0	0.0	0.0
4	* 0.0	0.0	0.0	0.0
5	* 0.0	0.0	0.0	0.0
6	* 0.0	0.0	0.0	0.0
7	* 0.0	0.0	0.0	0.0
8	* 0.0	0.0	0.0	0.0

9	*	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0
11	*	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0
15	*	0.2	0.2	0.2	0.2
16	*	0.9	0.9	0.9	0.9
17	*	0.6	0.6	0.6	0.6
18	*	0.0	0.0	0.0	0.0
19	*	0.0	0.0	0.0	0.0
20	*	0.0	0.0	0.0	0.0