Air Quality
Technical Support Document

FOR

I-25 EA Re-evaluation
Woodmen Road (Exit 149) to SH 105 (Exit 161)

March 2012

Submitted To:
Colorado Department of Transportation
Region 2
1480 Quail Lake Loop
Colorado Springs, CO 80906

I-25 EA Re-evaluation
Air Quality Technical Support Document

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ACRONYMS AND ABBREVIATIONS

APCD	Air Pollution Control Division (part of CDPHE)
CDPHE	Colorado Department Public Health and Environment
CDOT	Colorado Department of Transportation
CFR	Code of Federal Regulations
CO	Carbon monoxide
EA	Environmental Assessment
EPA	US Environmental Protection Agency
FHWA	Federal Highway Administration
LOS	Level of Service
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NO_x	Oxides of nitrogen (ozone precursor)
$PM_{2.5}$	"Fine" particulate matter -- 2.5 microns in diameter, or smaller
PM_{10}	"Coarse" particulate matter -- ten microns in diameter, or smaller
PPACG	Pikes Peak Area Council of Governments
ppm	Parts per million
VOC	Volatile organic compound (ozone precursor)
VMT	Vehicle miles of travel

1.0 Introduction

Air quality is a required consideration for transportation projects in Colorado Springs, Colorado and the Pikes Peak Region, where violations of National Ambient Air Quality Standard for carbon monoxide were last recorded more than two decades ago, in 1989. Motor vehicle use is a major contributor of various pollutants in the region.

In the foreseeable future, the total number of vehicle miles traveled per day in the Pikes Peak Region is expected to increase by about 37 percent, going from 13.6 million in 2010 to 18.6 million in 2035, according to the most recent regional transportation plan adopted by the Pikes Peak Area Council of Governments (PPACG, 2012). The documentation which follows pertains to proposed highway improvements on a section of Interstate 25 that currently carries about seven percent of average weekday traffic in the Pikes Peak Region.

2.0 I-25 Proposed Action

In 2004, the Colorado Department of Transportation (CDOT) and Federal Highway Administration (FHWA) assproved an Environmental Assessment (EA) and Finding of No Significant Impacts (FONSI) for 26 miles of widening the existing Interstate 25 (I-25) freeway, including reconstruction of various interchanges and new construction of ramps connecting I-25 to a planned future roadway, North Powers Bouevard (subsequently designated as State Highway 21). A first phase (the "COSMIX" project) of the EA's Proposed Action was completed in 2007.

Page 2-10 of the EA stated that, "Consistent with projected traffic demand in the I-25 corridor, the conceptual phasing for the Proposed Action calls for:

(1) initially six-laning through central Colorado Springs, then

(2) six-laning in northern El Paso County, and finally

(3) adding HOV [High-Occupancy Vehicle] lanes through central Colorado Springs and widening to six lanes south to South Academy Boulevard." (CDOT, 2004)

FIGURE 1. I-25 EA Re-evaluation Project Vicinity

For the year 2012, CDOT has received funding to begin the second phase, meaning to widen I-25 to six lanes in northern El Paso County. The EA calls for eventually widening I-25 to State Highway 105 in Monument (Exit 161), which is the area depicted in Figure 1. The 2012 project will begin north of Woodmen Road (Exit 149) and may be able to widen I-25 to the North Gate Interchange (Exit 156) or slightly beyond, perhaps to Black Squirrel Creek. Nevertheless, to be prepared for possible additional funding availability in the near future, CDOT's current EA re-evaluation effort is covering all Phase 2 improvements. Therefore, the study area for this re-evaluation extends northward to SH105.

The air quality analysis included in the I-25 EA demonstrated that the Proposed Action would be in compliance with all air quality requirements that were applicable at that time. The analysis considered three future years: 2007, 2015 and 2025. At that time, 2025 was the planning horizon year for the region's adopted long-range transportation plan. The planning horizon year for the current long-range transportation plan is 2035.

3.0 No-Action Alternative

The No-Action Alternative consists of existing I-25 configuration, assumed to have periodic maintenance to keep its surface and bridges in usable condition. Beyond the widening and interchange reconstruction work that has been previously completed (e.g., the Colorado Springs Metropolitan Interstate Expansion, or COSMIX) under the approved 2004 I-25 EA, no further improvements would be made. However, North Powers Boulevard (now State Highway 21) would be connected to I-25 because this action was approved as part of a separate EA in 1997 (and FONSI approved in 1998).

4.0 Consultation and Methodology

Prior to undertaking the air quality analysis for this re-evaluation, interagency consultation was conducted at a meeting held on January 4, 2012. Table 1 indicates the results of the consultation process, in terms of how each air quality issue was to be addressed. Participants at the consultation meeting included staff from:

- FHWA
- EPA
- Air Pollution Control Division (APCD), Colorado Department of Public Health and Environment
- PPACG
- CDOT
- Wilson & Company (consultant to CDOT)

The analysis was undertaken using transportation and socio-economic forecasts consistent with the PPACG 2035 Regional Transportation Plan, called the *Moving Forward 2035 Update*, adopted by PPACG in January 2012. For the re-evaluation, PPACG provided traffic forecasts for 2015 and 2035, for both the Proposed Action (fully included in the adopted plan) and a No-Action Alternative. Forecasts for 2025 were developed through interpolation, as PPACG does not currently maintain a 2025 network.

PPACG's model output and current CDOT traffic counts were used, together with other available data, to develop traffic Level of Service analyses for 2015, 2025 and 2035 for the Proposed Action and No-Action Alternatives. Generally, these forecasts showed better LOS through the year 2035 than was shown in the EA through 2025. PPACG has adopted an entirely new traffic model and has new population and employment forecasts, compared to the tools and data used for the 2004 EA. The current model predicts substantially less total regional VMT than the earlier model did, whether due to lifestyle changes, higher fuel costs, or other reasons. For example, PPACG previously predicted 19 million daily VMT in the year 2025, and now predicts less than that, only 18.6 million, for ten years later, 2035.

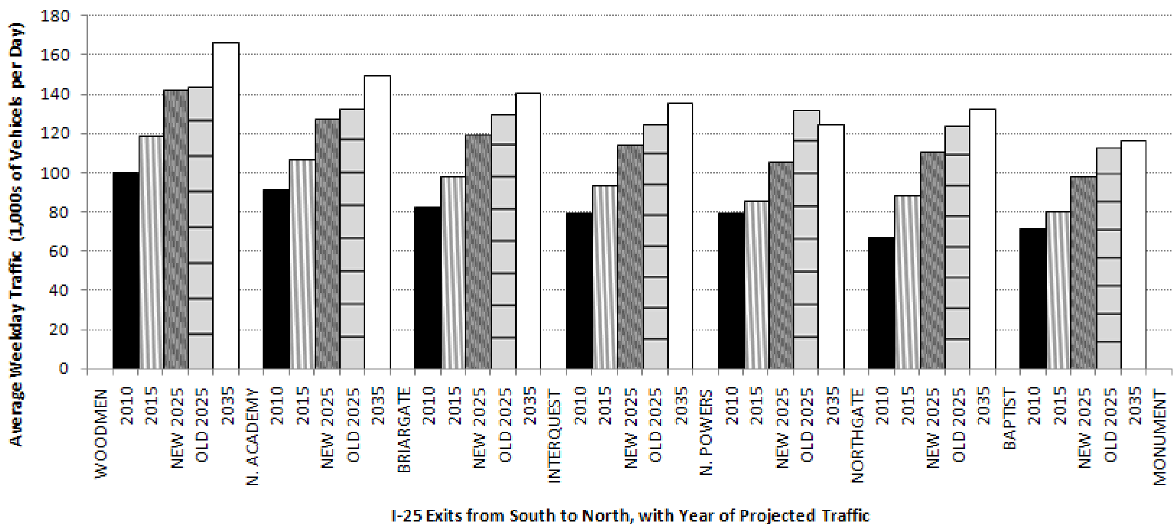
TABLE 1. Air Quality Analytical Scope Determined by Consultation

Issue	Previous Analysis in EA	Re-evaluation Approach
Carbon Monoxide (CO) Emissions Budget	The analysis in 2004 had a planning horizon year of 2025. The 2025 Plan, including the Proposed Action, met the budget of 270 tons per day by 4 tons (about 1.5%).	The budget of 270 tons per day was later changed to 531 tons using the MOBILE 6.2 emissions model, as discussed in the EA. Under the region's Limited Maintenance Plan adopted in 2009, a CO budget is not applicable for the foreseeable future.
CO Microscale Analysis	Emissions were calculated for all future build or no-build cases (AM and/or PM peak) with traffic level of service D, E, or F in 2007, 2015 or 2025. All 110 modeled cases met the 8-hour average standard of 9.0 ppm.	Identify intersections with LOS D, E or F under the Proposed Action. Select and model the three most congested intersections in the re-evaluation area. Use the latest regional planning assumptions and newest emissions factor model, MOVES2010a.
Corridor Emissions Analysis for Criteria Pollutants	The EA's Air Quality appendix presented corridor emissions for 2007, 2015, and 2025 for four pollutants: CO, HC, NO_x and tailpipe PM_{10}.	Calculate corridor emissions for the re-evaluation area for the same pollutants, for years 2015, 2025 and 2035, using the latest regional planning assumptions and newest emissions factor model, MOVES 2010a.
Other Criteria Pollutants • Lead (Pb); • Sulfur Dioxide (SO_2) • Nitrogen Dioxide (NO_2)	No plans for these three criteria pollutants are in effect. Monitored readings have been very low and stable for years. Monitoring of SO_2 and NO_2 was discontinued in 2008.	No new analysis needed.
Mobile Source Air Toxics	"Urban Air Toxics" were discussed. Highest future (year 2025) traffic volumes on I-25 were projected to be 124,000 vehicles per day.	Year 2035 future traffic volumes on I-25 are expected to exceed 140,000 vehicles per day north of Woodmen Road. Prepare quantitative MSAT analysis per FHWA latest guidance.
Regional haze and visibility	Not a problem in this region. No protected wilderness areas are nearby.	No new analysis needed.
Greenhouse gases and global climate change	Not discussed in 2004 I-25 EA.	Qualitative discussion as part of a separate Cumulative Effects technical memorandum.

Figure 2 depicts the traffic volumes on I-25 that were developed for the re-evaluation analysis. The columns shaded black represent 2010 traffic count data available online at CDOT's website. The 2015 and 2035 columns were developed based on the PPACG model runs provided in 2012, for the *2035 Moving Forward Update*, which includes the I-25 Proposed Action.

The new 2025 volumes represent interpolation of the 2015 and 2035 projections. Comparing the new 2025 interpolated projections to the old 2025 projections from the 2025 EA, it can be seen that the new 2025 projections are lower, which is consistent with the above discussion about PPACG now forecasting less regional VMT than it did in the prior regional plan. The highest projected volumes in the figure are the projections for 2035, reflecting ten years of additional regional growth beyond what was considered in PPACG's previous *Destination 2025* plan.

FIGURE 2. Existing and Projected Traffic on I-25 in the Re-evaluation Area



Future traffic Level of Service was predicted using SYNCHRO intersection analysis software for the closest signalized intersection to each I-25 interchange in the re-evaluation study area. The results of this effort are presented in Table 2.

The updated traffic analysis shows future congestion (LOS D, E or F) at five locations:

- Exit 149, Woodmen Road interchange
- Exit 151, Briargate Parkway interchange (Voyager/Briargate intersection)
- Exit 153, Interquest Parkway (Voyager/Interquest intersection)
- Exit 155, North Powers connection (eastbound exit ramp to Voyager)
- Exit 161, SH105 (Monument) interchange

The Woodmen Road and SH105 interchanges both had LOS F for both the Proposed Action and the No-Action Alternative for the year 2035. At each location, the eastern intersection (serving northbound ramps) was more congested overall (both morning and evening) than the western intersection.

TABLE 2. Modeled Future Traffic Level of Service for Signalized Intersections
(No-Action LOS/ Proposed Action LOS)

INTERSECTION	2015		2025		2035	
(north to south)	AM	PM	AM	PM	AM	PM
Exit 161 Monument Exit 161						
West Ramp Intersection	C/C	C/D	D/D	D/D	D/E	F/F
Woodmoor Drive	B/C	C/C	D/C	C/C	C/D	C/C
East Ramp Intersection*	C/C	**c/D**	**D/D**	**E/E**	**E/F**	**F/F**
Exit 158 Baptist						
West Ramp Intersection	C/C	C/C	C/C	C/C	C/C	C/C
East Ramp Intersection	B/B	B/B	B/B	B/B	B/B	B/B
Exit 156 Northgate						
West Ramp Intersection	B/B	B/C	C/C	C/C	C/C	C/C
East Ramp Intersection	B/B	B/B	B/B	B/B	B/B	B/B
Future Exit 155 Powers/Voyager						
North Ramp Intersection	B/B	B/C	C/C	C/C	C/C	C/C
South Ramp Intersection	C/C	C/C	D/D	D/D	D/D	E/D
Exit 153 Interquest/Voyager	D/C	D/C	E/C	E/D	F/C	F/D
Exit 151 Briargate/Voyager*	**C/D**	**C/D**	**C/E**	**D/E**	**D/E**	**E/F**
Exit 150 North Academy Blvd						
West Ramp Intersection	A/A	A/A	A/A	A/A	A/A	A/A
East Ramp Intersection	A/A	A/A	A/A	B/B	B/B	B/C
Exit 149 Woodmen						
West Ramp Intersection	C/C	C/C	D/C	C/C	D/F	D/E
East Ramp Intersection*	**C/D**	**D/D**	**D/D**	**E/E**	**E/F**	**F/F**

[shaded box] = scenario with LOS C, D, or E

* = selected for microscale modeling

Lesser congestion was predicted for Exits 151 and 153, where in the Proposed Action, Briargate was clearly more congested (LOS E in the morning and F in the evening) than Interquest Parkway (LOS C in the morning and D in the evening). Exit 155 (Powers /Voyager south ramps) also shows less congestion that Exit 151, Briargate.

The carbon monoxide screening process resulted in selection of the three worst future traffic volume and congestion prone intersections for hotspot analyses:

- East ramp of Exit 161, SH105 interchange;
- Voyager/Briargate intersection; and
- East ramp of Exit 149, Woodman Road interchange.

The air quality analysis results based on the above traffic data are presented later in this document. First, however, information on existing air quality conditions is presented below. Existing conditions were only minimally discussed in the 2004 I-25 EA, and the conditions have changed since that time. Also, the *CDOT NEPA Manual* published in 2008 (and updated in 2010) identifies this type of information that should be presented in a NEPA air quality analysis. (CDOT, 2008)

5.0 Existing Conditions

Air quality in the Pikes Peak Region is considered good, as there has been no violation of a National Ambient Air Quality Standard since 1989 — a period of almost two decades. Information on the region's air quality conditions is presented in this section. Presented first, however, is an overview of the local climate and meteorological setting, because these play an important physical role that affects what happens to air pollutant emissions after they are released into the air.

Local Climate, Meteorological Conditions, and Topography

The Pikes Peak Region is known for its cool summer weather, high percentage of clear sunny days and relatively dry climate. The meteorological classification of the area is an alpine dessert with about 250 days of sunshine per year. The temperatures within the region varies from highs of over a 100° F in the summer to winter lows of minus 30° F at the higher elevations. As indicated in Table 3, the annual mean temperature in the Pikes Peak Region is approximately 48.5° F. The average temperature for the summer (June-July-August) ozone seson is approximately 68.0℉, with mean daily high temperatures of 81.6℉.

The mountain-plains climate is characterized by periodic high winds called Chinook winds. These warm, dry winds tend to moderate winter temperatures and facilitate snow melt. In the summertime, vigorous thunderstorms produce cloudbursts, lightning and hail. The region also experiences a low relative humidity, and wide ranges in temperature between sun and shade, between day and night, and sometimes from day to day. Average monthly temperatures (℉) and precipitation for the Colorado Springs area are detailed in Table 3.

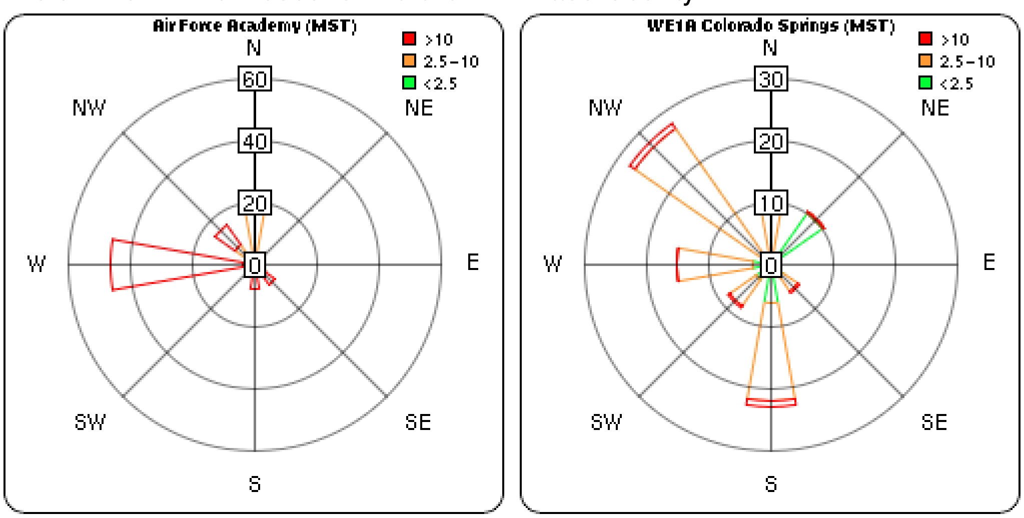
Northern El Paso County is typically windier than elsewhere in the county, such as the Colorado Springs Airport. Two wind roses from the 12-mile long I-25 re-evaluation area are presented in Figure 3. One is from the U.S. Air Force Academy, west of I-25, and the other is from a neighborhood wind station east of I-25. Given topographical variation in the study area, it is not surprising that there are differences in the patterns from the two sites. The USAFA monitor reports winds in the 40 to 50 mph range, while the neighborhood monitor depicts winds less than 30 mph. (NOTE: the scales of the two wind roses are different.)

TABLE 3. Colorado Springs Mean Monthly Temperatures, Precipitation and Wind Speeds

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
Mean Daily Temp.	28.8	32.0	37.3	46.4	55.4	65.0	70.8	68.3	60.4	49.9	37.8	29.8	48.5
Mean Daily High	41.4	44.6	50.0	59.8	68.7	79.0	84.4	81.3	73.6	63.5	50.7	42.2	61.6
Mean Daily Low	16.1	19.3	24.6	33.0	42.1	51.1	57.1	55.2	47.1	36.3	24.9	17.4	35.4
Mean Monthly Precip-itation (inches)	0.3	0.4	0.9	1.2	2.1	2.2	2.0	3.0	1.3	0.8	0.5	0.5	1.3
Mean Monthly Speed (mph)	9.4	10.0	11.1	11.6	11.2	10.4	9.3	8.9	9.4	9.6	9.5	9.4	10.0

Sources: PPACG, 2012; NCDC, 2009.

FIGURE 3. Wind Roses for Northern El Paso County



(University of Utah, 2011)

Temperature and topography strongly influence concentrations of carbon monoxide. In winter, surface temperatures at sunset cool more rapidly than the air above, in a phenomenon called a thermal inversion. The inversion is reinforced by the physical "bowl" effect created by the mountains to the west and the Palmer Divide to the north. The cool surface air and the pollutants it contains (e.g., evening rush hour and nighttime fireplace use) remain trapped until surface warming occurs the following morning, or even longer.

The Colorado Springs metropolitan area is located at the eastern base of Pikes Peak, and thus at the foot of the Piedmont east of the Front Range of the Rocky Mountains. It is in the subdrainage basin of the Monument and Fountain Creeks, which flow southward into the Arkansas River in Pueblo. I-25 closely follows Monument Creek in the EA re-evaluation area. The elevation along I-25 declines from 7,352 feet above sea level at the top of the Palmer Divide at I-25 Exit 163 near the north end of the re-evaluation area southward to 6,035 feet at downtown Colorado Springs near I-25 Exit 141.

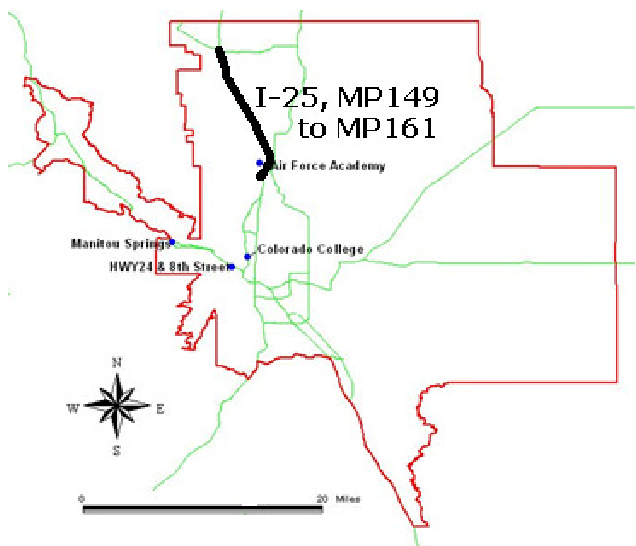
5.1 Air Quality Monitoring Efforts

Air quality in the Pikes Peak Region currently complies with all national ambient air quality standards. The region's current air quality monitoring network has evolved over the past several decades in response to new standards and air quality trends. Table 4, below, lists which pollutants are monitored, and where. These locations and their proximity to I-25 are depicted in Figure 4.

TABLE 4. Regional Monitoring Stations and Pollutants Monitored (PPACG, 2011)

Site Name	Pb	CO	SO_2	NO_2	O_3	PM_{10}	$PM_{2.5}$
Colorado College (I-25/Uintah)						X	X
Manitou Springs (six miles west of I-25)					X		
Air Force Academy (I-25/N. Academy Blvd.)					X		
US Highway 24/8th St. near I-25/Cimarron		X					

FIGURE 4. Regional Monitoring Stations and Location of I-25 Re-evaluation Area



Ozone concentrations are monitored at two locations in the Colorado Springs area. One of these is on the grounds of USAFA, near the I-25 widening project. The USAFA monitor is upslope from downtown Colorado Springs. Emissions from the region during the day heat up and rise in elevation towards the monitors at USAFA and Manitou Springs. Three other criteria pollutants (CO, PM_{10} and $PM_{2.5}$) are monitored seven or more miles to the south of the I-25 widening project. Three other criteria pollutants (lead, oxides of nitrogen, and sulfur dioxide) were formerly monitored but their concentrations were so low for so many years that ultimately monitoring was allowed to be discontinued.

The Pikes Peak Region has not recorded a violation of any National Ambient Air Quality Standard (NAAQS) since 1989. These standards have been established by the U.S. Environmental Protection Agency (EPA) for six principal pollutants, called criteria pollutants. The current standards are listed in Table 5.

TABLE 5. National Ambient Air Quality Standards (EPA, 2012)

Pollutant	Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide	primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Ozone	primary and secondary	8-hour	0.075 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution $PM_{2.5}$	primary and secondary	Annual	15 µg/m^3	Annual mean, averaged over 3 years
		24-hour	35 µg/m^3	98th percentile averaged over 3 years
PM_{10}	primary and secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Lead	primary and secondary	Rolling 3 month average	0.15 µg/m^3	Not to be exceeded
Nitrogen Dioxide	primary	1-hour	100 ppb	98th percentile, averaged over 3 years
	primary and secondary	Annual	53 ppb	Annual Mean
Sulfur Dioxide	primary	1-hour	75 ppb	99th percentile of 1-hr daily maximum concentrations, averaged over 3 years
	secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

The units of measure for the standards vary by pollutant. They are expressed as parts per million (ppm) by volume, milligrams per cubic meter of air (mg/m^3), and micrograms per cubic meter of air (µg/m^3). The NAAQS include both primary and secondary standards. Primary standards set limits to protect public health, including the health of potentially sensitive populations such as asthmatics, children, and the elderly. Secondary standards set

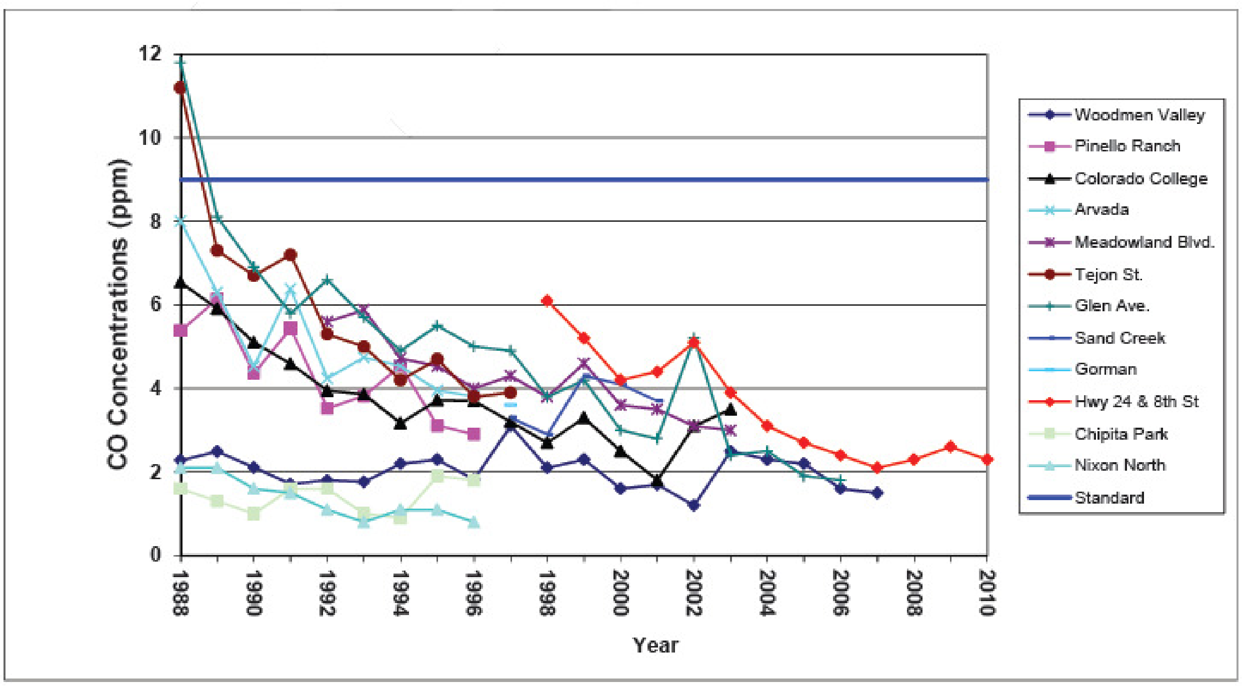
limits to protect public welfare and the environment, including protection against decreased visibility, and harm to animals, crops, vegetation and buildings.
The EPA criteria pollutants are discussed in further detail below.

5.2 Carbon Monoxide

Carbon monoxide is a colorless, odorless, poisonous gas produced by the incomplete burning of carbon fuels. Motor vehicle use is the predominant generator of CO in most cities. Wood-burning for home heating also produces CO, but is not a major source. CO is produced every day, year-round, but is a potential health concern primarily during winter months, when thermal inversion conditions trap air close to the ground, not allowing pollutants to disperse and become more diluted in the atmosphere. Fueled by the evening rush hour, CO concentrations can build up overnight before dispersion occurs with warming from the sunrise.

At the region's network of air quality monitors, measured carbon monoxide concentrations were more than 100% of the allowable standard in 1989, but since 1992 have not surpassed 70% (and most recently were about 26%) of the allowable value. Figure 5 shows the dramatic improvement in monitored CO concentrations from 1988 to 2010.

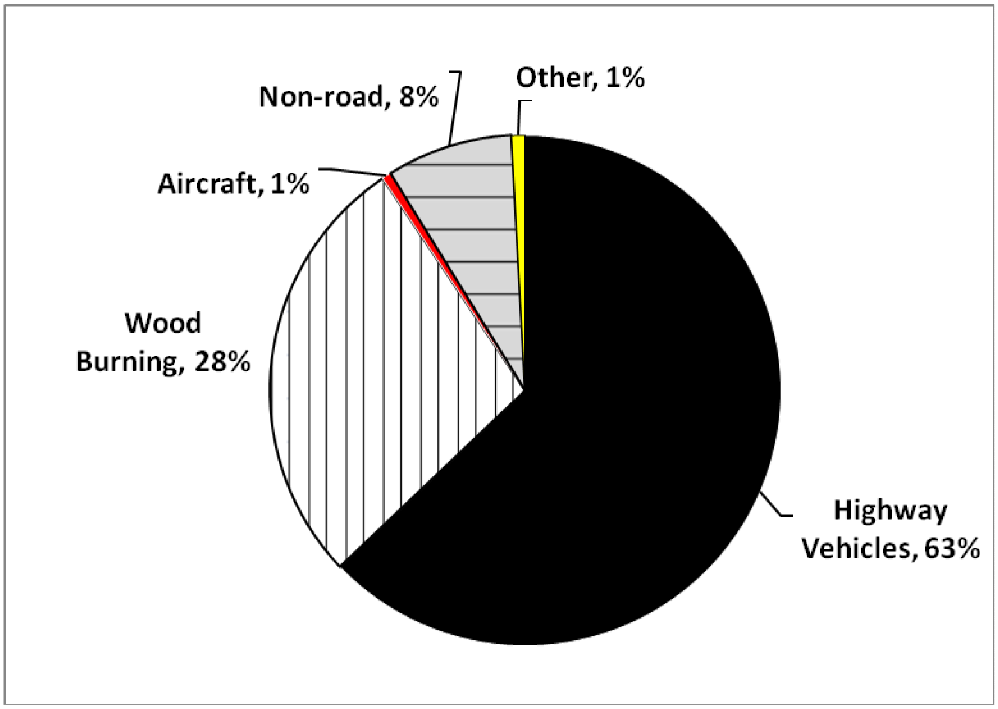
FIGURE 5. Trend of Declining CO Concentrations in the Pikes Peak Region (PPACG, 2011)



There is also a one-hour health standard for CO, and monitored values in the Colorado Springs area have been far below it as well. The standard is 35 ppm, and the highest reading in 2008 was 3.5 ppm, just one tenth of the amount allowable.

A pie chart depicting total daily emission of carbon monoxide (CO) for the year 2007 is presented in Figure 6. It shows that over 60 percent of the region's CO was from motor vehicle use. The I-25 corridor between Woodmen Road and Monument currently carries about 950,000 total vehicle miles of travel (VMT) per average weekday, which is about 7% of total regional VMT. If it also accounted for 7% of on-road emissions, I-25 in the re-evaluation area would be account for about 4% of total daily CO. However, freeways with smooth-flowing traffic typically produce fewer emissions per mile than local and arterial streets where motorists must decelerate, stop, and re-accelerate when they encounter stop signs or traffic signals.

FIGURE 6. Year 2007 Carbon Monoxide Emission Sources for the Colorado Springs Area (APCD, 2009)



5.3 Ozone

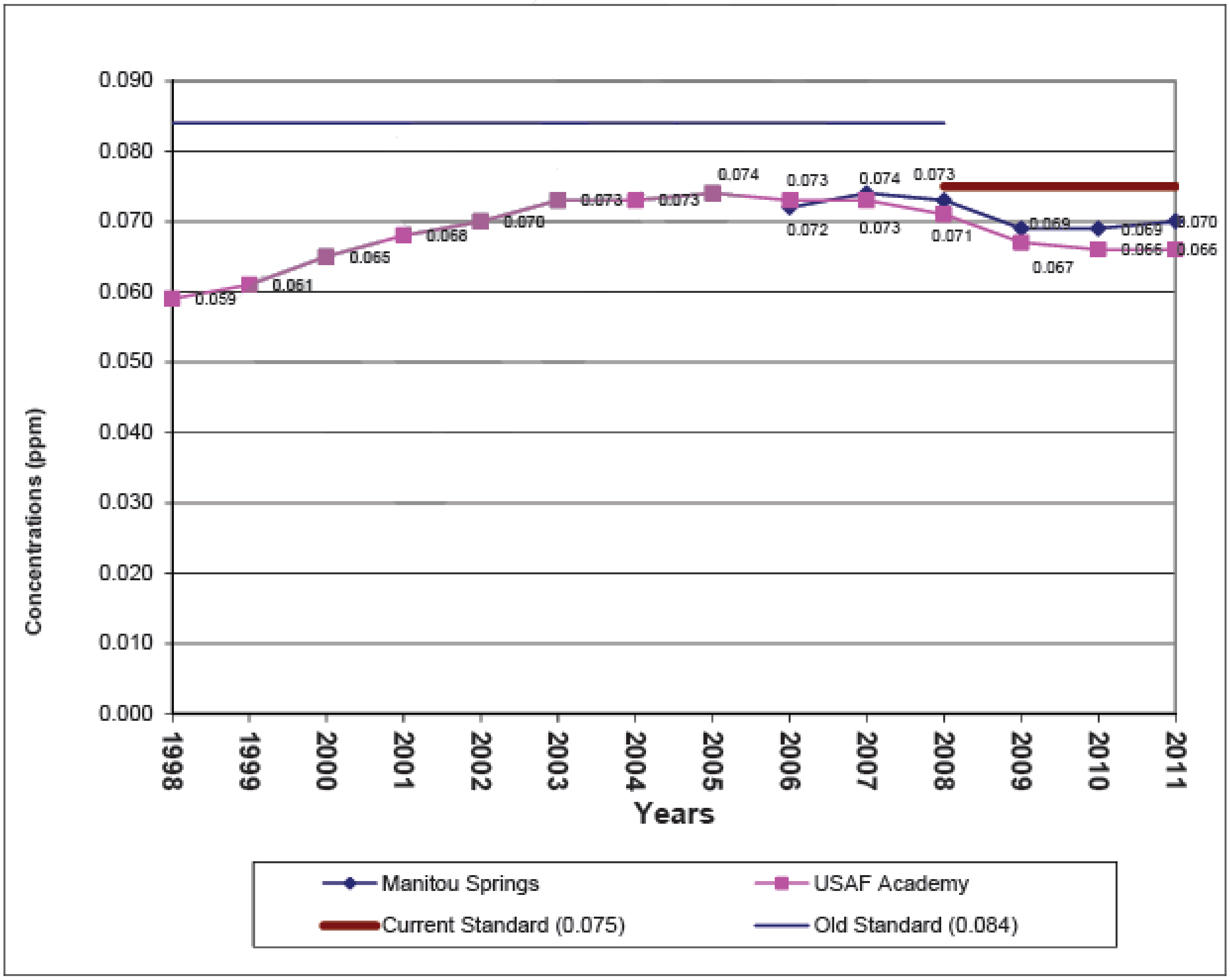
Ozone is a pollutant that has been of increased regional concern because current ozone concentrations are only slightly below the recently tightened national air quality standard of 0.075 ppm.

Ozone (O_3) is a constituent of urban smog formed during summer (and occasionally winter) days when intense sunshine provides the energy needing to trigger photochemical reactions in the atmosphere. Ozone is not directly emitted from motor vehicles but its formation involves primarily volatile hydrocarbons and oxides of nitrogen, which are both motor vehicle emissions. These pollutants that lead to ozone formation are called precursor pollutants. Industrial uses, dry cleaners and even household use of chemicals such as cleaning solvents and paints also produce precursor emissions that contribute to ozone formation. Ozone in the atmospheric layer high above the Earth protects us from damaging radiation, but “ground-level” ozone is harmful to humans, plants, animals and even buildings.

Prior to 2008, the 8-hour average National Ambient Air Quality Standard for ozone was 0.8 parts per million for the fourth highest reading in a three-year period. Due to mathematical rounding, levels below 0.85 could meet this standard. Recorded concentrations in the Colorado Springs area were substantially better than that standard, not reaching 90% of the allowable level.

In March 2008, however, the U.S. Environmental Protection Agency established a new, tighter standard of 0.75 parts per million. Figure 7 shows that the Pikes Peak Region almost reached this standard in the 2005 to 2008 timeframe, but has experienced lower ozone concentrations in the past several years.

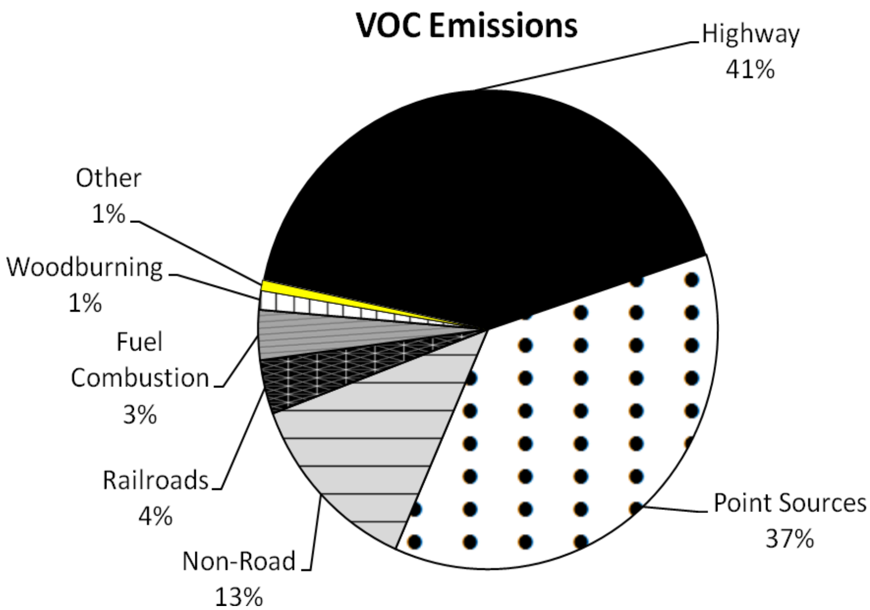
FIGURE 7. Three-Year Average of 4th Maximum 8-Hour Ozone Concentrations

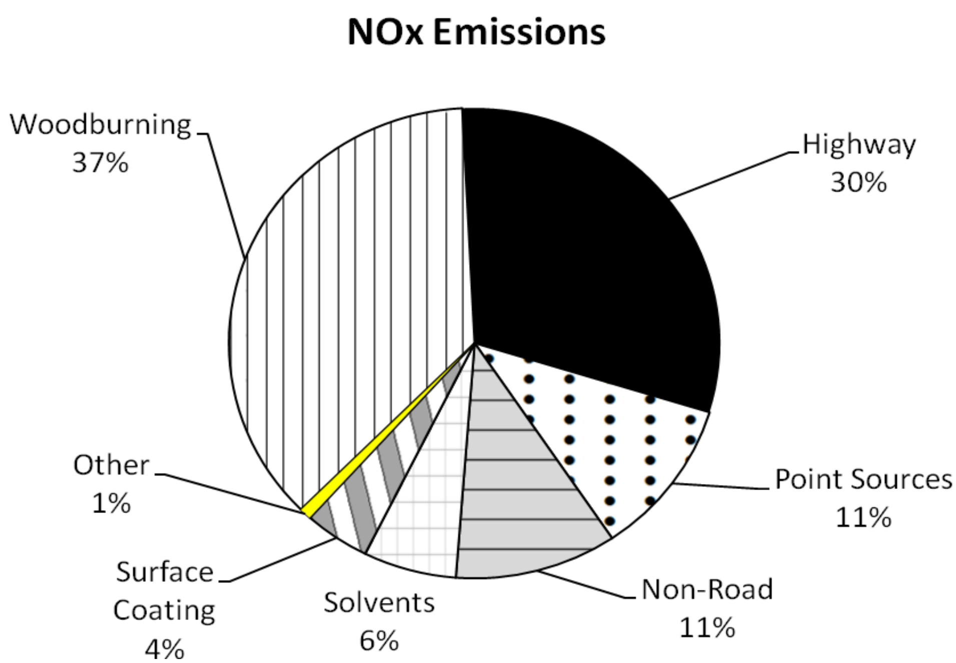


Source: PPACG, 2011

Inventories of ozone precursor emissions were estimated for the Pikes Peak Region by APCD for the year 2006. Emissions from highway vehicles were an important source for both volatile organic compounds (VOC) and oxides of nitrogen (NO_x) as shown in Figure 8.

FIGURE 8. Estimated Regional Ozone Precursor Emission Inventories for 2006





5.4 Particulate Matter

Particulate matter is the term given to the tiny particles of solid or semi-solid material suspended in the atmosphere.

There are separate EPA health standards for particulate matter of two different sizes. The PM_{10} standard is for particles that are ten microns or smaller in diameter. The more recent

$PM_{2.5}$ standard is for a subset of these particles – those smaller than 2.5 microns. Both PM_{10} and $PM_{2.5}$ particles are small enough to be inhaled by humans. The smaller particles are somewhat more dangerous because they get deeper into the lungs.

The smaller particles tend to come from fuel combustion, especially diesel fuel, while the larger particles include dust from unpaved roads, construction, or "re-entrained dust" which is dust that lands on a paved road and is then kicked back up into the air by the movement of vehicles. The primary sources of PM_{10} in the re-evaluation area are blowing dust from unpaved roads, street sanding, and dust from construction; and, the second highest source is woodburning. Other sources include fly ash from power plants, automobiles, and diesel engines.

Measured concentrations of particulate matter in the Pikes Peak Region have been only about half the allowable standard over the past decade and show no clear trend of increase, despite rapid metropolitan growth during the same time period.

5.5 Other Criteria Pollutants

NAAQSs exist for three additional pollutants not discussed above: lead, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). Over the span of two decades (1988 to 2007) in Colorado Springs, monitored concentrations of these air pollutants were well below allowable levels and showed no upward trends. NO_2 concentrations were half of the standard or less, SO_2 decreased from about 15% of allowable levels to negligible levels, and lead concentrations were about 5% of allowable levels. With the approval of the CDPHE, monitoring of all three pollutants has recently been discontinued in the Pikes Peak Region, which has no State Implementation Plan element for any of these criteria pollutants.

Near-road monitoring of NO_2 will be required by January 2013 to meet the most recent EPA NAAQS provisions. Siting for these new roadside monitors has yet to be determined by APCD, but is anticipated to include a location along I-25 within the city of Colorado Springs.

5.6 Other Air Quality Issues

Other air quality issues commonly addressed in CDOT NEPA documents include: Mobile Source Air Toxics (MSAT); regional haze and visibility; and greenhouse gases and climate change.

Mobile Source Air Toxics: Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) (http://www.epa.gov/ncea/iris/index.html).

In addition, EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA) (http://www.epa.gov/ttn/atw/nata1999/). These are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics (MSAT), the list is subject to change and may be adjusted in consideration of future EPA rules.

No National Ambient Air Quality Standards have been established by EPA for MSATs, and MSAT concentrations are not routinely monitored in the Pikes Peak Region. FHWA guidance on MSAT (FHWA, 2009) indicates that quantitative analysis is recommended where the AADT is projected to be in the range of 140,000 to 150,000 or greater by the design year." I-25 is expected to reach this threshold by 2035 for the southernmost several miles of the EA re-evaluation area (e.g., north of the Woodmen Road exit).

Section 6.4 of this technical memorandum presents quantuitative estimates of MSAT emissions for the I-25 corridor within the re-evaluation area.

Regional Haze and Visibility: Regional haze and visibility issues were discussed in the 2004 I-25 EA and were concluded to not be affected by the I-25 Proposed Action, due to the distance of direction of the nearest protected Class I visibility areas. Based on interagency air quality consultation in 2012, no new or additional information on the topic is needed for this EA re-evaluation.

Greenhouse Gases and Global Climate Change: The *CDOT NEPA Manual*, published in 2008, indicates that the topic of greenhouse gases and global warming should be included in NEPA documents in the discussion of cumulative effects. Please see the I-25 REA Re-evaluation Technical Memorandum on Cumulative Effects for a discussion of this issue.

6.0 Air Quality Impacts and Mitigation

This section describes the long-term impacts of the Proposed Action on air quality, as determined using the analytical methodologies determined by interagency consultation. As was noted in ***Section 2.0, Proposed Action***, a planned future phase of the I-25 Proposed Action includes provision of High Occupancy Vehicles (HOV) lanes to provide peak-period travel time savings for carpools and transit vehicles. The Proposed Action's temporary impacts to air quality from construction activities, as discussed in the 2004 I-25 EA, have not changed.

6.1 Carbon Monoxide Microscale Analysis

In according with the methodology decided in the interagency scoping meeting, the three worst locations were screened and selected. As noted in the table, the three intersection selected for CO microscale analysis were Exit 149 (I-25 northbound ramps at Woodmen Road), Exit 151 (Voyager/Briargate intersection), and Exit 161 (I-25 northbound ramps at SH105). Microscale CO modeling was conducted for these three worst-case intersections using the CAL3QHC dispersion model. Inputs to the model included vehicle emission factors provided by APCD, generated by EPA's MOVES 2010a emissions model.

CO modeling results for the I-25 EA re-evaluation are presented in Table 6. The table begins with worst-case one-hour concentrations as produced by the microscale model and adds the future background concentration to yield a total one-hour concentration that can be compared to the one-hour CO standard of 35 ppm. Then, using a CDPHE-supplied persistence factor, the one-hour modeled result is converted to an 8-hour concentration.

This intersection contribution is added to an 8-hour background concentration to yield the total concentration that is compared to the 8-hour standard of 9.0 ppm.

TABLE 6. Modeled CO Concentrations for Worst-Congested Intersections

Year & Scenario Location	2015 Build/No-Build CO concentrations (and PM peak LOS)	2025 Build/No-Build CO concentrations and PM peak LOS	2035 Build/No-Build CO concentrations and PM peak LOS
Exit 149 (Woodmen Rd. NB ramp intersection)	4.62 (D) / 4.57 (D)	4.45 (E) / 4.39 (E)	4.62 (F) / 4.39 (F)
Exit 151 Briargate Pkwy/Voyage Pkwy intersection)	3.54 (D) / 3.43 (D)	3.54 (E) / 3.54 (E)	3.65 (F) / 3.71 (F)
Exit 161 Monument State Highway 105 NB ramp intersection	NA* (C) / NA (C)	3.60 (E) / 3.54 (E)	3.82 (F) / 3.54 (F)

** Intersections with Level of Service C are normally not required to have CO microscale analysis.*

The future predictions presented in Table 6 include an APCD-provided CO background concentration of 2.0 ppm. (APCD, 2011). The results of the CO microscale analyses showed predicted concentrations in the range of 3.31 parts per million (ppm) to 4.62 ppm (worst case), as compared with the NAAQS of 9.0 ppm as an 8-hour average. No future CO violations are expected due to implementing the Proposed Action. In the CO microscale analyses performed in 2002 for the 2004 EA, 8-hour average concentrations at I-25-related intersections in northern El Paso County ranged from 4.1 to 7.3 ppm. The new results, based on updated traffic forecasts and MOVES2010a emission factors, are much lower than the corresponding forecasts from the 2004 EA.

With the Proposed Action, all predicted future CO concentrations along I-25 in the re-evauation area are well within the national health standards for this pollutant.

6.2 Corridor-Level Emissions Analysis

APCD also provided MOVES2010a emission factors in support of an assessment for several other vehicle-generated pollutants, including Mobile Source Air Toxics. This was done for a subarea encompassing I-25, its ramps, cross streets and parallel arterials in the re-evaluation area, a total of 142 lane-miles miles including 48 of them on the 12 roadway miles of I-25. Emission factors are influenced by ambient temperature. For its design day emission factors, APCD used winter temperatures that are typical of days when thermal inversions can cause high concentrations of CO, and summer temperatures typical of sunny days when ozone formation is likely.

Tailpipe emissions for 48 miles of roadway in northern El Paso County on I-25, its cross-streets and closest parallel arterials were calculated for four pollutants to update the assessment presented in the 2004 EA. Inclusion of nearest parallel arterials captures traffic shifts off of I-25 that may be caused by congested conditions expected under the No-Action Alternative. Projected traffic volumes, estimated speeds, and roadway link lengths were provided to APCD staff. MOVES2010a emission factors were determined and applied and aggregated to yield total daily emissions (summer day and winter day) by pollutant for the 48-mile roadway network. The results of these calculations are presented in Table 7.

TABLE 7. Projected Criteria Pollutant Daily Emissions for the I-25 Re-evaluation Area

Pollutant	**VOC (tons)**			**CO (tons)**			**NO_x (tons)**			**Tailpipe PM_{10} (pounds)**		
Year / **Alternative**	**2015**	**2025**	**2035**	**2015**	**2025**	**2035**	**2015**	**2025**	**2035**	**2015**	**2025**	**2035**
No-Action - Summer - Winter	0.69 0.73	0.66 0.71	0.56 0.58	10.35 20.34	11.88 23.26	12.36 24.39	1.00 1.13	0.62 0.70	0.57 0.65	74 74	79 79	86 86
Proposed Action - Summer - Winter	0.70 0.74	0.69 0.74	0.38 0.39	11.15 21.86	12.57 24.52	12.91 25.38	1.07 1.22	0.65 0.74	0.59 0.67	79 79	82 82	87 87

Three factors affecting the outcome of the emission analysis are increased traffic over time for both the No-Action and Proposed Action alternatives, emission factors that generally decline over time with improved vehicle technology, and shifts of traffic from I-25 to alternate routes with the increasingly congested No-Action Alternative. For all future years, the Proposed Action would result in more vehicle-miles of travel (VMT) than the No-Action Alternative (100,000 more in 2015, 140,000 more in 2025, and 180,000 more in 2025). These VMT increases are large enough to overcome the other factors, resulting in slightly greater emissions for the Proposed Action than for the No-Action Alternative.

The patterns reflected in Table 7 with regard to the build and no-build case over time are the same patterns that were projected in the 2004 EA, using different traffic volumes, different emission factors, and a different study area (26 miles in the EA, compared to the 12-mile re-evaluation area used above).

6.3 Other Criteria Pollutants

Concentrations of lead, sulfur dioxide, and nitrogen dioxide in the Pikes Peak region are expected to remain well below (i.e., better than) the NAAQS for these pollutants.

6.4 Mobile Source Air Toxics (MSAT)

Since the FHWA threshold of 140,000 vehicles per day is expected to be exceeded in 2035 in the southernmost part of the I-25 re-evaluation area, project-level MSAT emissions were quantitified. This was done for the same 48-mile roadway network used for the criteria pollutants emission analysis. The projected MSAT emissions for 2035 (only year meeting the 140,000 vehicel/day traffic threshold) are shown in Table 8.

The results of the analysis for MSAT also showed that emissions would increase slightly for the Proposed Action, compared with the Proposed Action. However, all of the MSAT except PM_{10} decrease by at least 40% between 2015 and 2025 (these numbers not shown), and decrease slightly more by 2035. So for all the MSAT except PM_{10}, future emissions will be less in 2025 and 2035 than they are today, despite the increased traffic over time.

TABLE 8. Projected 2035 Daily MSAT Emissions for the I-25 Re-evaluation Area (pounds)

Pollutant: Scenario	Acetaldehyde	Acrolein	Benzene	1,3-Butadiene	Formaldehyde	Diesel Particulate PM_{10}
2035 No-Action Alternative						
Summer	8.00	0.51	39.75	4.58	13.45	85.58
Winter	10.30	0.70	45.17	5.56	16.17	85.58
2035 Proposed Action						
Summer	8.16	0.52	40.40	4.67	13.73	87.46
Winter	10.52	0.71	45.98	5.67	16.52	87.46

Appendix A to this Air Quality Technical Support Document presents FHWA's current position *("Incomplete or Unavailable Information for Project-Specific MSAT Health Impacts Analysis")* regarding health impacts that may be associated with MSAT emissions.

6.0 References

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Two Attachments follow.]

ATTACHMENT A. MOBILE SOURCE AIR TOXICS – SUPPLEMENTAL INFORMATION

INCOMPLETE OR UNAVAILABLE INFORMATION FOR PROJECT-SPECIFIC MSAT HEALTH IMPACTS ANALYSIS

Existing Federal environmental regulations regarding incomplete or unavailable information provide the context for the MSAT discussion which follows. Accordingly, Section 1502.22 from Title 40 of the Code of Federal Regulations is presented here, in its entirety.

40 CFR 1502.22 Incomplete or Unavailable Information

When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.

a. If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.
b. If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known, the agency shall include within the environmental impact statement:
    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. For the purposes of this section, "reasonably foreseeable" includes impacts that have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The U.S. Environmental Protection Agency (EPA) is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, http://www.epa.gov/ncea/iris/index.html). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's Interim Guidance Update on Mobile source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, http://pubs.healtheffects.org/view.php?id=282) or in the future as vehicle emissions substantially decrease (HEI, http://pubs.healtheffects.org/view.php?id=306).

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts - each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable. The results produced by the EPA's MOBILE6.2 model, the California EPA's Emfac2007 model, and the EPA's DraftMOVES2009 model in forecasting MSAT emissions are highly inconsistent. Indications from the development of the MOVES model are that MOBILE6.2 significantly underestimates diesel particulate matter (PM) emissions and significantly overestimates benzene emissions.

Regarding air dispersion modeling, an extensive evaluation of EPA's guideline CAL3QHC model was conducted in an NCHRP study (http://www.epa.gov/scram001/dispersion_alt.htm#hyroad), which documents poor model performance at ten sites across the country - three where intensive monitoring was conducted plus an additional seven with less intensive monitoring. The study indicates a bias of the CAL3QHC model to overestimate concentrations near highly congested intersections and underestimate concentrations near uncongested intersections. The consequence of this is a tendency to overstate the air quality benefits of mitigating congestion at intersections. Such poor model performance is less difficult to manage for demonstrating compliance with National Ambient Air Quality Standards for relatively short time frames than it is for forecasting individual exposure over an entire lifetime, especially given that some information needed for estimating 70-year lifetime exposure is unavailable. It is particularly difficult to reliably forecast MSAT exposure near roadways, and to determine the portion of time that people are actually exposed at a specific location.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (http://pubs.healtheffects.org/view.php?id=282). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA (http://www.epa.gov/risk/basicinformation.htm#g) and the HEI (http://pubs.healtheffects.org/getfile.php?u=395) have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine a "safe" or "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million;in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's approach to addressing risk in its two step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

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ATTACHMENT B. CAL3QHC MODELING DOCUMENTATION

In total, 36 runs of the CAL3QHC model were conducted for this EA re-evaluation. These consists of two alternatives for teo time periods for three different years for three different locations. Model input and output files for each run are included in this Appendix. The twelve runs were as follows:

<u>Exit 161, I-25/SH105 Monument NB ramps intersection, AM peak period</u>

<u>Exit 161, I-25/SH105 Monument NB ramps intersection, PM peak period</u>

#1 of 36
Exit 149 I-25/Woodmen Road NB ramps
2015 No-Build AM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Road 2015 NoBuild AM
RUN: I-25 Analysis

DATE :  2/28/12
TIME :  9:49:34

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

SITE & METEOROLOGICAL VARIABLES
 -------------------------------
VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM       U
=  1.0 M/S      CLAS =   4  (D)      ATIM =  60. MINUTES     MIXH
=  1000. M        AMB =   .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. I-25 Ramp NB Appr   *     -6.0   -3280.0      -6.0        .0
*    3280.   360. AG  1280.   8.0    .0 44.0
 2. I-25 Ramp NB Dptr   *     -6.0        .0      -6.0    3280.0
*    3280.   360. AG   600.   9.4    .0 44.0
 3. Woodmen EB Appr     *  -3280.0     -48.0        .0     -48.0
*    3280.    90. AG  1670.   8.0    .0 56.0
 4. Woodmen EB Dptr     *       .0     -48.0    3280.0     -48.0
*    3280.    90. AG  2130.   8.0    .0 56.0
 5. Woodmen WB Appr     *   3280.0      24.0        .0      24.0
*    3280.   270. AG  2890.   8.0    .0 80.0
 6. Woodmen WB Dptr     *       .0      24.0   -3280.0      24.0
*    3280.   270. AG  3110.   8.0    .0 80.0
 7. Woodmen EB Left  Q  *    -30.0     -18.0    -126.5     -18.0
*      96.   270. AG   271. 100.0    .0 24.0  .87   4.9
```

```
 8. Woodmen EB Thru Q    *     -30.0      -48.0   -1641.1      -48.0
*    1611.   270. AG    396. 100.0    .0 36.0 1.49  81.8
 9. Woodmen WB Thru Q    *      30.0       24.0     171.5       24.0
*     141.    90. AG    452. 100.0    .0 60.0  .77   7.2
 10. Woodmen WB Right Q  *      30.0       60.0      81.2       60.0
*      51.    90. AG     90. 100.0    .0 12.0  .30   2.6
 11. I-25 Ramp NB Left  Q*     -18.0      -66.0     -18.0     -133.9
*      68.   180. AG    226. 100.0    .0 24.0  .47   3.5
 12. I-25 Ramp NB Right Q*      12.0      -66.0      12.0     -160.5
*      94.   180. AG    339. 100.0    .0 36.0  .65   4.8
```

PAGE 2
JOB: Exit 149 Woodmen Road 2015 NoBuild AM
RUN: I-25 Analysis

DATE : 2/28/12
TIME : 9:49:34

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
7. Woodmen EB Left Q	90	72	3.0	405	1600	63.20	2	3
8. Woodmen EB Thru Q	90	70	3.0	1265	1700	63.20	2	3
9. Woodmen WB Thru Q	90	48	3.0	2695	1700	63.20	2	3
10. Woodmen WB Right Q	90	48	3.0	195	1600	63.20	2	3
11. I-25 Ramp NB Left Q	90	60	3.0	415	1600	63.20	2	3
12. I-25 Ramp NB Right Q	90	60	3.0	865	1600	63.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9
3. REC 3	40.0	-76.0	5.9
4. REC 4	-40.0	-76.0	5.9

```
*
    5. REC 5                   *       -28.0      146.1        5.9
*
    6. REC 6                   *       -28.0      228.1        5.9
*
    7. REC 7                   *        16.0      158.1        5.9
*
    8. REC 8                   *        16.0      240.1        5.9
*
    9. REC 9                   *        40.0     -158.1        5.9
*
   10. REC 10                  *        40.0     -240.1        5.9
*
   11. REC 11                  *       -40.0     -158.1        5.9
*
   12. REC 12                  *       -40.0     -240.1        5.9
*
   13. REC 13                  *      -110.1       64.0        5.9
*
   14. REC 14                  *      -192.1       64.0        5.9
*
   15. REC 15                  *        98.1       76.0        5.9
*
   16. REC 16                  *       180.1       76.0        5.9
*
   17. REC 17                  *       122.1      -76.0        5.9
*
   18. REC 18                  *       204.1      -76.0        5.9
*
   19. REC 19                  *      -122.1      -76.0        5.9
*
   20. REC 20                  *      -204.1      -76.0        5.9
*
```

PAGE 3
JOB: Exit 149 Woodmen Road 2015 NoBuild AM
RUN: I-25 Analysis

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)*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0. *	.3	.3	1.6	2.3	.3	.3	.3	.3	1.2	.9	1.3	1.1	.1	.0	.1	.0	1.8	1.1	2.3	1.9
10. *	.4	.2	1.6	2.1	.4	.4	.2	.2	1.0	.8	1.7	1.6	.1	.1	.0	.0	1.5	.9	2.4	2.0
20. *	.3	.1	1.6	1.9	.3	.3	.1	.1	.8	.6	2.0	1.3	.1	.1	.0	.0	1.4	.9	2.4	2.0
30. *	.3	.0	1.6	1.9	.3	.3	.0	.0	.8	.5	2.1	1.6	.1	.1	.0	.0	1.2	.9	2.5	2.1
40. *	.2	.0	1.6	1.9	.2	.2	.0	.0	.8	.4	2.2	1.1	.2	.2	.0	.0	1.1	1.0	2.9	2.4
50. *	.2	.0	1.6	2.1	.2	.2	.0	.0	.7	.4	2.0	.9	.2	.2	.0	.0	1.1	1.1	3.0	2.7
60. *	.2	.0	1.5	2.5	.2	.2	.0	.0	.6	.4	1.8	.7	.2	.2	.0	.0	1.2	1.2	3.0	3.1
70. *	.3	.1	1.5	2.6	.2	.2	.0	.0	.6	.4	1.5	.7	.3	.3	.1	.1	1.4	1.4	3.0	3.3
80. *	1.2	.5	1.6	2.8	.3	.2	.1	.0	.6	.4	1.4	.7	.8	.9	.4	.4	1.6	1.6	2.8	3.3
90. *	2.1	1.2	1.3	2.7	.6	.5	.4	.2	.4	.2	1.1	.5	1.7	1.5	.9	.9	1.3	1.2	2.1	2.3
100. *	2.7	2.1	.6	2.1	.8	.7	.6	.4	.1	.0	.6	.3	2.2	1.9	1.5	1.3	.6	.6	1.3	1.1

```
110.  *   2.5   2.3    .2   1.7   1.0    .7    .6    .5    .0
 .0   .4    .3   1.9   1.8   1.6   1.2    .2    .2    .8    .5
120.  *   2.1   2.4    .1   1.7   1.2    .7    .8    .5    .0
 .0   .3    .3   1.6   1.9   1.7   1.1    .1    .1    .5    .3
130.  *   1.8   2.3    .1   1.7   1.3    .8    .9    .5    .0
 .0   .3    .3   1.7   2.1   1.9   1.0    .1    .1    .3    .1
140.  *   1.4   1.9    .0   1.6   1.2    .8   1.0    .5    .0
 .0   .3    .3   1.7   2.0   1.8    .8    .0    .0    .1    .1
150.  *   1.5   1.7    .0   1.4   1.2    .9   1.0    .6    .0
 .0   .4    .4   2.0   1.6   1.8    .8    .0    .0    .2    .1
160.  *   1.8   1.5    .0   1.1   1.1   1.0   1.0    .7    .0
 .0   .4    .4   1.9   1.4   1.7    .7    .0    .0    .2    .1
170.  *   2.1   1.6    .2    .9   1.4   1.1   1.1    .9    .1
 .1   .5    .5   1.9   1.5   1.8    .9    .0    .0    .2    .1
180.  *   2.1   2.0    .6    .5   1.5   1.1   1.5   1.1    .3
 .3   .4    .4   1.8   1.5   2.0   1.2    .1    .1    .1    .1
190.  *   2.1   1.8   1.0    .2   1.2    .8   1.5   1.3    .4
 .4   .2    .2   1.6   1.4   2.1   1.4    .2    .1    .0    .0
200.  *   1.7   1.6   1.2    .0   1.0    .8   1.2   1.0    .3
 .3   .0    .0   1.5   1.4   2.2   1.6    .2    .1    .0    .0
210.  *   1.7   1.7   1.5    .0    .9    .7   1.1   1.0    .3
 .3   .0    .0   1.4   1.4   2.5   1.9    .2    .1    .0    .0
220.  *   1.8   1.8   1.6    .0   1.0    .7   1.0    .9    .3
 .3   .0    .0   1.5   1.5   2.6   2.3    .2    .1    .0    .0
230.  *   1.8   1.8   1.7    .0    .9    .7   1.1    .9    .4
 .3   .0    .0   1.7   1.7   2.6   2.5    .4    .2    .0    .0
240.  *   1.9   1.9   1.5    .1   1.0    .7   1.1    .9    .3
 .2   .0    .0   1.8   1.8   2.6   2.7    .6    .3    .1    .1
250.  *   2.1   2.0   1.8    .2   1.1    .7   1.2    .9    .4
 .2   .0    .0   2.1   2.1   2.5   2.6    .8    .5    .2    .2
260.  *   2.2   2.0   2.5   1.1   1.0    .6   1.1    .8    .7
 .2   .1    .0   2.2   2.2   2.4   2.4   1.5   1.3   1.1   1.1
270.  *   1.7   1.5   3.8   2.5    .5    .4    .7    .6   1.6
 .6   .7    .3   1.7   1.7   1.5   1.5   2.6   2.4   2.5   2.5
280.  *    .7    .6   4.1   3.3    .1    .0    .3    .2   2.2
1.0  1.2    .7    .7    .7    .5    .5   2.9   2.6   3.3   3.3
290.  *    .2    .3   3.3   3.2    .0    .0    .2    .2   2.6
1.1  1.4    .9    .2    .2    .2    .1   2.3   2.0   3.1   3.1
300.  *    .1    .2   2.5   2.9    .0    .0    .2    .2   2.6
1.1  1.1    .9    .1    .1    .1    .1   1.7   1.7   2.7   2.7
310.  *    .1    .2   1.8   2.7    .0    .0    .2    .2   2.8
1.0  1.1    .7    .1    .1    .1    .1   1.5   1.8   2.4   2.4
320.  *    .1    .2   1.6   2.6    .0    .0    .2    .2   2.8
```

```
1.2   1.1    .7    .1    .1    .1    .1   1.6   1.7   2.2   2.2
330.  *    .0    .3   1.3   2.4    .0    .0    .3    .3   2.3
1.3   1.1    .6    .0    .0    .1    .1   1.6   1.5   2.0   2.0
340.  *    .1    .3   1.2   2.3    .1    .1    .3    .3   2.1
1.4   1.2    .7    .0    .0    .1    .1   1.7   1.4   2.0   1.9
350.  *    .2    .4   1.4   2.4    .2    .2    .4    .4   1.3
1.4   1.3   1.0    .0    .0    .1    .1   1.7   1.2   2.1   1.9
360.  *    .3    .3   1.6   2.3    .3    .3    .3    .3   1.2
.9   1.3   1.1    .1    .0    .1    .0   1.8   1.1   2.3   1.9
 ------*----------------------------------------------------------------
-----------------------------------------------------------------
MAX   *   2.7   2.4   4.1   3.3   1.5   1.1   1.5   1.3   2.8
1.4   2.2   1.6   2.2   2.2   2.6   2.7   2.9   2.6   3.3   3.3
DEGR. *  100   120   280   280   180   170   190   190   310
350    40    10   100   260   230   240   280   280   280   280
```

THE HIGHEST CONCENTRATION OF 4.10 PPM OCCURRED AT RECEPTOR REC3 .

#2 of 36
Exit 149 I-25/Woodmen Road NB ramps
2025 No-Build AM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Road 2025 NoBuild AM
RUN: I-25 Analysis

DATE :  2/27/12
TIME :  9:53:48

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

          SITE & METEOROLOGICAL VARIABLES
          -------------------------------
          VS =     .0 CM/S       VD =     .0 CM/S       Z0 = 108. CM
           U =  1.0 M/S          CLAS =    4  (D)      ATIM =  60.
MINUTES      MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr    *     -6.0    -3280.0      -6.0
.0 *    3280.   360. AG   1430.   6.4    .0 44.0
          2. I-25 Ramp NB Dptr    *     -6.0        .0      -6.0
3280.0 *    3280.   360. AG    680.   7.6    .0 44.0
          3. Woodmen EB Appr      *  -3280.0     -48.0        .0
-48.0 *    3280.    90. AG   1945.   6.4    .0 56.0
          4. Woodmen EB Dptr      *       .0     -48.0    3280.0
-48.0 *    3280.    90. AG   2425.   6.4    .0 56.0
          5. Woodmen WB Appr      *   3280.0      24.0        .0
24.0 *    3280.   270. AG   3300.   6.4    .0 80.0
          6. Woodmen WB Dptr      *       .0      24.0   -3280.0
24.0 *    3280.   270. AG   3570.   6.4    .0 80.0
          7. Woodmen EB Left  Q   *    -30.0     -18.0    -176.0
-18.0 *     146.   270. AG    222. 100.0    .0 24.0  .92   7.4
```

```
       8. Woodmen EB Thru Q   *    -30.0     -48.0   -3185.3
-48.0 *    3155.   270. AG    347. 100.0    .0 36.0 2.33 160.3
       9. Woodmen WB Thru Q   *     30.0      24.0     232.4
24.0 *     202.    90. AG    347. 100.0    .0 60.0  .79  10.3
      10. Woodmen WB Right Q  *     30.0      60.0     100.5
60.0 *      71.    90. AG     69. 100.0    .0 12.0  .29   3.6
      11. I-25 Ramp NB Left  Q*    -18.0     -66.0     -18.0    -
177.2 *     111.   180. AG    194. 100.0    .0 24.0  .59   5.6
      12. I-25 Ramp NB Right Q*     12.0     -66.0      12.0    -
210.7 *     145.   180. AG    291. 100.0    .0 36.0  .76   7.3
```

PAGE 2
JOB: Exit 149 Woodmen Road 2025 NoBuild AM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 9:53:48

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
7. Woodmen EB Left Q	120	96	3.0	465	1600	51.70	2	3
8. Woodmen EB Thru Q	120	100	3.0	1480	1700	51.70	2	3
9. Woodmen WB Thru Q	120	60	3.0	3085	1700	51.70	2	3
10. Woodmen WB Right Q	120	60	3.0	215	1600	51.70	2	3
11. I-25 Ramp NB Left Q	120	84	3.0	485	1600	51.70	2	3
12. I-25 Ramp NB Right Q	120	84	3.0	945	1600	51.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	X (FT)	Y (FT)	Z (FT)
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9

3. REC 3	*	40.0	-76.0	5.9	*
4. REC 4	*	-40.0	-76.0	5.9	*
5. REC 5	*	-28.0	146.1	5.9	*
6. REC 6	*	-28.0	228.1	5.9	*
7. REC 7	*	16.0	158.1	5.9	*
8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Road 2025 NoBuild AM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.3	.3	1.3	2.2	.3	.3	.3	.3	1.0	1.1	1.2	1.1	.1	.0	.1	.0	1.5	1.4	2.3	1.8
10.	.3	.2	1.4	2.0	.3	.3	.2	.2	.8	.7	1.6	1.6	.1	.1	.0	.0	1.3	1.2	2.3	2.0
20.	.3	.1	1.4	1.8	.3	.3	.1	.1	.7	.5	2.0	1.5	.1	.1	.0	.0	1.4	1.1	2.3	2.0
30.	.2	.0	1.4	1.6	.2	.2	.0	.0	.7	.6	2.1	1.6	.1	.1	.0	.0	1.4	1.0	2.3	2.1
40.	.2	.0	1.5	1.8	.2	.2	.0	.0	.7	.5	2.2	1.6	.2	.2	.0	.0	1.3	.9	2.5	2.3
50.	.2	.0	1.5	1.9	.2	.2	.0	.0	.8	.4	2.3	1.2	.2	.2	.0	.0	1.3	1.0	2.6	2.7
60.	.2	.0	1.5	2.2	.2	.2	.0	.0	.7	.4	2.3	1.0	.2	.1	.0	.0	1.2	1.1	2.7	2.9
70.	.3	.1	1.5	2.3	.2	.2	.0	.0	.6	.4	2.1	.8	.3	.1	.1	.1	1.3	1.3	2.7	3.0
80.	1.1	.4	1.6	2.5	.3	.2	.1	.0	.6	.4	1.9	.7	.8	.7	.3	.3	1.5	1.5	2.5	2.8
90.	2.1	1.3	1.1	2.4	.6	.4	.3	.2	.4	.2	1.9	.5	1.6	1.5	1.0	.9	1.1	1.1	1.9	2.0
100.	2.6	2.0	.5	1.7	.9	.6	.6	.3	.1	.0	1.4	.2	2.0	1.8	1.5	1.2	.5	.5	1.2	1.1

110.	*	2.3	2.2	.2	1.5	1.0	.7	.7	.4	.0
.0	1.3	.2	1.7	1.7	1.7	1.3	.2	.2	.8	.6
120.	*	2.0	2.0	.1	1.5	1.2	.7	.7	.3	.0
.0	1.2	.3	1.4	1.8	1.7	1.2	.1	.1	.7	.4
130.	*	1.6	1.8	.1	1.5	1.2	.7	.9	.4	.0
.0	1.0	.3	1.6	2.1	1.7	1.3	.1	.1	.5	.2
140.	*	1.4	1.7	.0	1.6	1.1	.8	.9	.5	.0
.0	.8	.3	1.7	1.9	1.7	1.4	.0	.0	.3	.1
150.	*	1.4	1.5	.0	1.6	.9	.8	.8	.6	.0
.0	.6	.3	1.9	1.8	1.5	1.4	.0	.0	.1	.1
160.	*	1.6	1.3	.0	1.4	1.0	1.0	.8	.6	.0
.0	.5	.4	2.0	1.5	1.5	1.5	.0	.0	.2	.1
170.	*	1.8	1.5	.2	1.0	1.4	.9	1.0	.8	.1
.1	.4	.4	1.9	1.4	1.6	1.5	.0	.0	.2	.1
180.	*	1.9	1.6	.6	.6	1.3	1.2	1.2	1.1	.3
.2	.3	.3	1.7	1.5	1.8	1.6	.1	.1	.1	.1
190.	*	1.8	1.7	1.0	.2	1.1	.8	1.2	1.2	.6
.3	.1	.1	1.5	1.2	2.1	1.6	.1	.1	.0	.0
200.	*	1.5	1.5	1.4	.0	.9	.6	1.1	.9	.8
.3	.0	.0	1.5	1.2	2.2	1.7	.1	.1	.0	.0
210.	*	1.5	1.6	1.6	.0	.9	.6	1.0	.8	1.0
.3	.0	.0	1.4	1.2	2.1	1.8	.2	.1	.0	.0
220.	*	1.7	1.6	1.6	.0	.8	.5	1.0	.8	1.1
.3	.0	.0	1.6	1.4	2.1	2.1	.3	.1	.0	.0
230.	*	1.8	1.9	1.4	.0	.9	.7	1.0	.8	1.1
.2	.0	.0	1.6	1.5	2.0	2.2	.6	.3	.0	.0
240.	*	1.8	1.8	1.4	.1	.9	.7	1.0	.9	1.1
.2	.0	.0	1.6	1.6	2.4	2.4	.7	.4	.1	.1
250.	*	1.9	1.8	1.6	.2	1.0	.7	1.2	.9	1.1
.2	.0	.0	1.8	1.8	2.4	2.3	.8	.6	.2	.2
260.	*	2.0	1.9	2.3	1.1	1.0	.7	1.1	.9	1.3
.2	.1	.0	2.0	2.0	2.2	2.2	1.5	1.2	1.1	1.1
270.	*	1.7	1.4	3.4	2.3	.6	.4	.8	.4	2.1
.6	.8	.4	1.7	1.7	1.4	1.5	2.5	2.1	2.3	2.3
280.	*	.6	.6	3.8	3.1	.1	.0	.3	.2	2.4
1.0	1.1	.8	.6	.6	.5	.4	2.5	2.4	3.0	3.0
290.	*	.2	.3	3.0	2.9	.0	.0	.2	.2	2.4
1.1	1.1	.8	.2	.2	.2	.0	1.9	1.8	2.7	2.7
300.	*	.1	.2	2.3	2.7	.0	.0	.2	.2	2.5
1.1	1.0	.7	.1	.1	.1	.0	1.5	1.6	2.5	2.4
310.	*	.1	.2	1.8	2.5	.0	.0	.2	.2	2.5
1.3	1.1	.6	.1	.1	.1	.1	1.2	1.5	2.2	2.1
320.	*	.1	.2	1.3	2.3	.0	.0	.2	.2	2.5

```
1.6   1.1    .6    .1    .1    .1    .1   1.4   1.4   2.1   1.9
 330.  *    .0    .2   1.2   2.2    .0    .0    .2    .2   2.0
1.8   1.1    .7    .0    .0    .1    .1   1.5   1.5   2.1   1.8
 340.  *    .1    .3   1.2   2.1    .1    .1    .3    .3   1.9
1.7   1.0    .7    .0    .0    .1    .1   1.3   1.5   2.1   1.8
 350.  *    .2    .3   1.3   2.1    .2    .2    .3    .3   1.3
1.7   1.2    .8    .0    .0    .1    .1   1.4   1.4   2.2   1.8
 360.  *    .3    .3   1.3   2.2    .3    .3    .3    .3   1.0
1.1   1.2   1.1    .1    .0    .1    .0   1.5   1.4   2.3   1.8
 ------*----------------------------------------------------------
---------------------------------------------------------------
 MAX   *   2.6   2.2   3.8   3.1   1.4   1.2   1.2   1.2   2.5
1.8   2.3   1.6   2.0   2.1   2.4   2.4   2.5   2.4   3.0   3.0
 DEGR. *  100   110   280   280   170   180   180   190   300
330    50    10   100   130   240   240   270   280   280    70
```

THE HIGHEST CONCENTRATION OF 3.80 PPM OCCURRED AT RECEPTOR REC3 .

#3 of 36
Exit 149 I-25/Woodmen Road NB ramps
2035 No-Build AM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Road 2035 NoBuild AM
RUN: I-25 Analysis

DATE :  2/27/12
TIME : 10: 8:40

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)     ATIM =  60.
MINUTES     MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr    *     -6.0   -3280.0      -6.0
.0 *    3280.   360. AG   1575.   6.2    .0 44.0
       2. I-25 Ramp NB Dptr    *     -6.0        .0      -6.0
3280.0 *    3280.   360. AG    750.   7.2    .0 44.0
       3. Woodmen EB Appr      *  -3280.0     -48.0        .0
-48.0 *    3280.    90. AG   2210.   6.2    .0 56.0
       4. Woodmen EB Dptr      *       .0     -48.0    3280.0
-48.0 *    3280.    90. AG   2710.   6.2    .0 56.0
       5. Woodmen WB Appr      *   3280.0      24.0        .0
24.0 *    3280.   270. AG   3705.   6.2    .0 80.0
       6. Woodmen WB Dptr      *       .0      24.0   -3280.0
24.0 *    3280.   270. AG   4030.   6.2    .0 80.0
       7. Woodmen EB Left Q    *    -30.0     -18.0    -406.6
-18.0 *     377.   270. AG    216. 100.0    .0 24.0 1.06   19.1
```

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       8. Woodmen EB Thru Q   *     -30.0      -48.0   -4457.2
-48.0 *    4427.   270. AG    346. 100.0    .0 36.0 3.33 224.9
       9. Woodmen WB Thru Q   *      30.0       24.0     303.6
24.0 *     274.    90. AG    319. 100.0    .0 60.0  .84  13.9
      10. Woodmen WB Right Q  *      30.0       60.0     120.6
60.0 *      91.    90. AG     64. 100.0    .0 12.0  .30   4.6
      11. I-25 Ramp NB Left Q *     -18.0      -66.0     -18.0    -
226.6 *     161.   180. AG    188. 100.0    .0 24.0  .67   8.2
      12. I-25 Ramp NB Right Q*      12.0      -66.0      12.0    -
263.1 *     197.   180. AG    282. 100.0    .0 36.0  .82  10.0
```

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PAGE  2
JOB: Exit 149 Woodmen Road 2035 NoBuild AM
RUN: I-25 Analysis

DATE :  2/27/12
TIME : 10: 8:40

       ADDITIONAL QUEUE LINK PARAMETERS
       --------------------------------
         LINK DESCRIPTION     *    CYCLE    RED      CLEARANCE
APPROACH  SATURATION   IDLE   SIGNAL   ARRIVAL
                              *    LENGTH   TIME     LOST TIME
VOL     FLOW RATE   EM FAC   TYPE     RATE
                              *     (SEC)   (SEC)     (SEC)
(VPH)      (VPH)    (gm/hr)
      ------------------------*----------------------------------
----------------------------------------------
       7. Woodmen EB Left Q   *     150      122        3.0
520        1600      49.60     2        3
       8. Woodmen EB Thru Q   *     150      130        3.0
1690        1700      49.60     2        3
       9. Woodmen WB Thru Q   *     150       72        3.0
3475        1700      49.60     2        3
      10. Woodmen WB Right Q  *     150       72        3.0
230        1600      49.60     2        3
      11. I-25 Ramp NB Left Q *     150      106        3.0
555        1600      49.60     2        3
      12. I-25 Ramp NB Right Q*     150      106        3.0
1020        1600      49.60     2        3

       RECEPTOR LOCATIONS
       ------------------
                              *          COORDINATES (FT)
*
         RECEPTOR             *      X          Y          Z
*
     -------------------------*----------------------------------
---*
      1. REC 1                *      -28.0       64.0         5.9
*
      2. REC 2                *       16.0       76.0         5.9
*
```

3. REC 3	*	40.0	-76.0	5.9	*
4. REC 4	*	-40.0	-76.0	5.9	*
5. REC 5	*	-28.0	146.1	5.9	*
6. REC 6	*	-28.0	228.1	5.9	*
7. REC 7	*	16.0	158.1	5.9	*
8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Road 2035 NoBuild AM
RUN: I-25 Analysis

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.

CONCENTRATION (PPM)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9
0.	.3	.3	1.3	2.2	.3	.3	.3	.3	1.0
10.	.4	.2	1.4	2.0	.4	.4	.2	.2	.8
20.	.3	.1	1.4	1.8	.3	.3	.1	.1	.7
30.	.3	.0	1.4	1.8	.3	.3	.0	.0	.8
40.	.2	.0	1.5	1.8	.2	.2	.0	.0	.9
50.	.2	.0	1.5	1.9	.2	.2	.0	.0	.9
60.	.2	.0	1.7	2.4	.2	.2	.0	.0	.7
70.	.4	.1	1.7	2.6	.2	.2	.0	.0	.6
80.	1.2	.5	1.6	2.7	.3	.2	.1	.0	.6
90.	2.1	1.3	1.3	2.6	.6	.5	.4	.2	.4
100.	2.7	2.2	.6	1.9	.9	.6	.7	.4	.1

WIND ANGLE (DEGR)	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	1.0	1.2	1.4	.1	.0	.1	.0	1.5	1.4	2.3	2.2
10.	.8	1.7	1.9	.1	.1	.0	.0	1.4	1.4	2.3	2.3
20.	.6	1.9	2.0	.1	.1	.0	.0	1.4	1.4	2.2	2.2
30.	.6	2.0	2.2	.2	.2	.0	.0	1.4	1.4	2.3	2.3
40.	.6	2.2	2.0	.2	.2	.0	.0	1.5	1.4	2.6	2.5
50.	.5	2.4	1.9	.2	.2	.0	.0	1.5	1.2	2.6	2.7
60.	.4	2.3	1.7	.2	.2	.0	.0	1.5	1.3	2.8	3.0
70.	.4	2.1	1.5	.3	.2	.1	.1	1.6	1.4	2.8	3.1
80.	.4	2.0	1.4	.9	.8	.5	.3	1.6	1.5	2.8	3.0
90.	.2	1.8	1.0	1.8	1.6	1.1	1.0	1.2	1.2	2.1	2.1
100.	.0	1.5	.8	2.2	1.9	1.8	1.6	.6	.6	1.2	1.1

110.	*	2.4	2.3	.2	1.6	1.1	.8	.8	.5	.0
.0	1.4	.6	1.8	1.8	2.0	1.7	.2	.2	.8	.6
120.	*	2.0	2.2	.1	1.5	1.2	.9	.9	.5	.0
.0	1.5	.5	1.5	1.9	2.1	1.8	.1	.1	.7	.5
130.	*	1.6	1.9	.1	1.5	1.2	.9	1.0	.6	.0
.0	1.5	.4	1.6	2.1	2.0	1.8	.1	.1	.6	.3
140.	*	1.4	1.6	.0	1.6	1.1	.8	.9	.6	.0
.0	1.5	.3	1.7	2.1	1.8	1.6	.0	.0	.5	.2
150.	*	1.5	1.4	.0	1.7	1.0	.8	1.0	.6	.0
.0	1.4	.4	2.1	1.9	1.8	1.6	.0	.0	.4	.1
160.	*	1.9	1.3	.0	1.6	1.0	1.0	.7	.6	.0
.0	1.2	.4	2.0	1.6	1.6	1.4	.0	.0	.2	.1
170.	*	2.3	1.6	.3	1.2	1.4	1.1	1.0	.8	.2
.1	.8	.4	2.0	1.7	1.7	1.5	.0	.0	.2	.1
180.	*	2.2	1.9	.8	.7	1.5	1.2	1.2	1.1	.6
.3	.4	.3	1.7	1.7	2.0	1.7	.1	.1	.1	.1
190.	*	1.9	1.9	1.3	.2	1.1	.9	1.4	1.2	.9
.3	.1	.1	1.6	1.6	2.1	1.6	.2	.1	.0	.0
200.	*	1.6	1.6	1.6	.0	1.0	.7	1.4	1.0	1.2
.4	.0	.0	1.6	1.6	2.2	1.6	.3	.1	.0	.0
210.	*	1.6	1.8	1.7	.0	1.0	.7	1.1	.8	1.4
.5	.0	.0	1.6	1.6	2.3	2.0	.3	.1	.0	.0
220.	*	1.8	1.6	1.6	.0	1.0	.8	1.1	.9	1.4
.6	.0	.0	1.8	1.8	2.2	2.0	.5	.2	.0	.0
230.	*	1.9	1.8	1.4	.0	1.0	.8	1.2	1.0	1.4
.7	.0	.0	1.9	1.9	2.4	2.2	.7	.4	.0	.0
240.	*	2.0	2.0	1.3	.1	1.2	.8	1.3	1.0	1.3
.8	.0	.0	2.0	2.0	2.3	2.4	.8	.5	.1	.1
250.	*	2.3	2.2	1.6	.2	1.2	.7	1.3	.9	1.3
.9	.0	.0	2.3	2.2	2.4	2.5	.8	.6	.2	.2
260.	*	2.4	2.2	2.4	1.1	1.1	.7	1.2	.9	1.4
1.1	.1	.1	2.3	2.3	2.4	2.6	1.5	1.4	1.1	1.1
270.	*	1.9	1.7	3.7	2.7	.6	.5	.8	.7	2.1
1.6	.8	.4	1.8	1.8	1.7	1.7	2.7	2.4	2.6	2.6
280.	*	.7	.6	4.0	3.4	.2	.0	.3	.2	2.6
1.9	1.2	.8	.7	.7	.5	.4	3.0	2.5	3.4	3.3
290.	*	.2	.3	3.3	3.3	.0	.0	.2	.2	2.8
2.2	1.4	.9	.2	.2	.2	.0	2.1	2.0	3.3	3.2
300.	*	.1	.2	2.4	2.9	.0	.0	.2	.2	2.5
2.4	1.2	1.0	.1	.1	.1	.1	1.7	1.5	2.9	2.9
310.	*	.1	.2	1.8	2.6	.0	.0	.2	.2	2.5
2.3	1.2	.8	.1	.1	.1	.1	1.4	1.5	2.6	2.6
320.	*	.1	.2	1.5	2.4	.0	.0	.2	.2	2.5

```
2.4   1.2    .7    .1    .1    .1    .1   1.4   1.6   2.4   2.4
 330.  *    .1    .3   1.2   2.2    .0    .0    .3    .3   2.1
2.3   1.1    .8    .1    .1    .1    .1   1.4   1.5   2.2   2.2
 340.  *    .1    .3   1.2   2.1    .1    .1    .3    .3   1.9
2.1   1.1    .7    .0    .0    .1    .1   1.5   1.5   2.1   2.1
 350.  *    .2    .4   1.3   2.1    .2    .2    .4    .4   1.2
1.8   1.3    .8    .0    .0    .1    .1   1.5   1.5   2.2   2.2
 360.  *    .3    .3   1.3   2.2    .3    .3    .3    .3   1.0
1.0   1.2   1.4    .1    .0    .1    .0   1.5   1.4   2.3   2.2
 ------*-----------------------------------------------------------
---------------------------------------------------------------
 MAX   *   2.7   2.3   4.0   3.4   1.5   1.2   1.4   1.2   2.8
2.4   2.4   2.2   2.3   2.3   2.4   2.6   3.0   2.5   3.4   3.3
 DEGR. *  100   110   280   280   180   180   190   190   290
300    50    30   250   260   230   260   280   280   280   280
```

THE HIGHEST CONCENTRATION OF 4.00 PPM OCCURRED AT RECEPTOR REC3 .

#4 of 36
Exit 149 I-25/Woodmen Road NB ramps
2015 No-Build PM Peak

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE 1

JOB: Exit 149 Woodmen Road 2015 NoBuild PM
RUN: I-25 Analysis

DATE : 2/28/12
TIME : 10: 4:28

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

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 108. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES
MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	X1 (FT)	Y1 (FT)	X2 (FT)	Y2 (FT)	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. I-25 Ramp NB Appr	-6.0	-3280.0	-6.0	.0	3280.	360.	AG	1795.	8.0	.0	44.0		
2. I-25 Ramp NB Dptr	-6.0	.0	-6.0	3280.0	3280.	360.	AG	715.	9.4	.0	44.0		
3. Woodmen EB Appr	-3280.0	-48.0	.0	-48.0	3280.	90.	AG	2295.	8.0	.0	56.0		
4. Woodmen EB Dptr	.0	-48.0	3280.0	-48.0	3280.	90.	AG	2900.	8.0	.0	56.0		
5. Woodmen WB Appr	3280.0	24.0	.0	24.0	3280.	270.	AG	2330.	8.0	.0	80.0		
6. Woodmen WB Dptr	.0	24.0	-3280.0	24.0	3280.	270.	AG	2805.	8.0	.0	80.0		
7. Woodmen EB Left Q	-30.0	-18.0	-190.2	-18.0	160.	270.	AG	260.	100.0	.0	24.0	.99	8.1

```
       8. Woodmen EB Thru Q   *    -30.0     -48.0   -3280.7     -48.0 *
3251.   270. AG    396. 100.0    .0 36.0 2.04 165.1
       9. Woodmen WB Thru Q   *     30.0      24.0     160.8      24.0 *
131.    90. AG    519. 100.0    .0 60.0  .77   6.6
      10. Woodmen WB Right Q  *     30.0      60.0      76.6      60.0 *
47.    90. AG    104. 100.0    .0 12.0  .29   2.4
      11. I-25 Ramp NB Left Q *    -18.0     -66.0     -18.0    -162.5 *
96.   180. AG    211. 100.0    .0 24.0  .61   4.9
      12. I-25 Ramp NB Right Q*     12.0     -66.0      12.0    -184.8 *
119.   180. AG    317. 100.0    .0 36.0  .75   6.0
```

PAGE 2
JOB: Exit 149 Woodmen Road 2015 NoBuild PM
RUN: I-25 Analysis

DATE : 2/28/12
TIME : 10: 4:28

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
7. Woodmen EB Left Q	90	69	3.0	560	1600	63.30	2	3
8. Woodmen EB Thru Q	90	70	3.0	1735	1700	63.30	2	3
9. Woodmen WB Thru Q	90	55	3.0	2175	1700	63.30	2	3
10. Woodmen WB Right Q	90	55	3.0	155	1600	63.30	2	3
11. I-25 Ramp NB Left Q	90	56	3.0	630	1600	63.30	2	3
12. I-25 Ramp NB Right Q	90	56	3.0	1165	1600	63.30	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9
3. REC 3	40.0	-76.0	5.9
4. REC 4	-40.0	-76.0	5.9
5. REC 5	-28.0	146.1	5.9
6. REC 6	-28.0	228.1	5.9
7. REC 7	16.0	158.1	5.9

8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Road 2015 NoBuild PM
RUN: I-25 Analysis

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.	.4	.4	1.8	2.6	.4	.4	.4	.4	1.3	1.1	1.5	1.1	.1	.0	.1	.0	2.0	1.1	2.6	2.2
10.	.4	.2	1.8	2.4	.4	.4	.2	.2	1.1	.9	1.9	1.7	.1	.1	.0	.0	1.6	1.0	2.5	2.3
20.	.4	.1	1.8	2.1	.4	.4	.1	.1	.9	.6	2.3	1.7	.1	.1	.0	.0	1.4	1.0	2.5	2.4
30.	.3	.0	1.8	2.1	.3	.3	.0	.0	.8	.5	2.5	1.8	.1	.1	.0	.0	1.2	1.0	2.7	2.7
40.	.3	.0	1.8	2.3	.3	.3	.0	.0	.7	.4	2.7	1.5	.2	.2	.0	.0	1.2	1.1	2.9	2.8
50.	.2	.0	1.8	2.4	.2	.2	.0	.0	.7	.5	2.6	1.2	.2	.2	.0	.0	1.3	1.3	3.2	3.3
60.	.2	.0	1.7	2.7	.2	.2	.0	.0	.6	.5	2.4	1.0	.2	.2	.0	.0	1.4	1.4	3.2	3.3
70.	.3	.1	1.7	2.9	.2	.2	.0	.0	.7	.5	2.3	.9	.3	.2	.1	.1	1.6	1.6	3.3	3.7
80.	1.1	.4	1.8	3.1	.3	.2	.1	.0	.8	.5	2.3	.9	.9	.8	.3	.3	1.8	1.8	3.0	3.5
90.	2.1	1.2	1.6	3.0	.6	.4	.3	.2	.4	.3	1.8	.7	1.7	1.6	.9	.9	1.6	1.6	2.5	2.6
100.	2.7	2.0	.8	2.3	.9	.6	.6	.4	.1	.0	1.4	.4	2.1	1.8	1.3	1.2	.8	.8	1.4	1.3

```
 110.  *   2.6    2.3     .2    1.8    1.1     .6     .6     .4     .0     .0
1.0     .4    1.9    1.9    1.5    1.1     .2     .2     .9     .7
 120.  *   2.2    2.4     .1    1.7    1.2     .6     .7     .4     .0     .0
.8     .4    1.7    2.1    1.6    1.0     .1     .1     .8     .4
 130.  *   1.8    2.3     .1    1.7    1.4     .8     .8     .5     .0     .0
.7     .4    1.7    2.2    1.8     .9     .1     .1     .6     .2
 140.  *   1.7    2.0     .1    1.8    1.4    1.0    1.0     .6     .0     .0
.6     .5    1.9    2.3    1.8     .8     .1     .1     .5     .2
 150.  *   1.5    1.9     .0    1.7    1.1    1.1    1.1     .7     .0     .0
.5     .5    2.0    2.0    1.9     .8     .0     .0     .2     .2
 160.  *   1.8    1.6     .0    1.5    1.2    1.1    1.2     .9     .0     .0
.6     .6    2.1    1.9    1.8     .7     .0     .0     .2     .2
 170.  *   2.2    1.7     .2    1.2    1.6    1.2    1.2    1.0     .1     .1
.7     .7    2.1    1.8    2.0     .7     .0     .0     .3     .2
 180.  *   2.3    2.1     .7     .7    1.6    1.5    1.7    1.5     .4     .4
.5     .5    2.0    1.8    2.2    1.0     .1     .1     .2     .1
 190.  *   2.1    1.9    1.2     .3    1.5     .9    1.6    1.3     .6     .5
.2     .2    1.8    1.5    2.3    1.2     .2     .2     .0     .0
 200.  *   1.7    1.8    1.6     .0    1.1     .8    1.2    1.0     .7     .5
.0     .0    1.7    1.4    2.5    1.6     .2     .2     .0     .0
 210.  *   1.7    1.7    1.7     .0    1.0     .7    1.3    1.0     .7     .4
.0     .0    1.7    1.4    2.6    2.0     .3     .2     .0     .0
 220.  *   1.9    2.0    1.8     .1    1.1     .7    1.3    1.0     .9     .4
.0     .0    1.7    1.5    2.8    2.3     .5     .2     .1     .1
 230.  *   2.0    2.0    1.7     .1    1.1     .8    1.2     .9    1.0     .4
.0     .0    1.8    1.7    2.4    2.4     .7     .3     .1     .1
 240.  *   2.1    2.1    1.6     .1    1.0     .8    1.2    1.0    1.0     .3
.0     .0    1.9    1.8    2.8    2.7     .8     .3     .1     .1
 250.  *   2.1    2.0    1.8     .3    1.1     .9    1.2    1.0    1.2     .3
.0     .0    2.0    2.0    2.6    2.9    1.2     .7     .3     .3
 260.  *   2.3    2.1    2.7    1.3    1.0     .8    1.2    1.0    1.5     .4
.2     .1    2.3    2.3    2.4    2.6    1.9    1.5    1.3    1.3
 270.  *   1.7    1.5    4.2    2.8     .6     .5     .8     .5    2.3     .8
.9     .4    1.6    1.6    1.5    1.6    3.0    2.7    2.8    2.8
 280.  *    .7     .7    4.5    3.6     .2     .0     .3     .2    2.9    1.1
1.4     .8     .7     .7     .6     .7    3.3    2.8    3.5    3.5
 290.  *    .2     .3    3.8    3.6     .0     .0     .2     .2    3.0    1.2
1.4     .9     .2     .2     .1     .1    2.4    2.3    3.3    3.3
 300.  *    .1     .2    2.7    3.3     .0     .0     .2     .2    2.9    1.1
1.2     .8     .1     .1     .1     .1    1.8    1.9    3.0    2.9
 310.  *    .1     .2    2.2    3.0     .0     .0     .2     .2    3.0    1.5
1.3     .8     .1     .1     .1     .1    1.7    2.1    2.7    2.5
 320.  *    .1     .3    1.9    2.8     .0     .0     .3     .3    2.8    1.5
```

```
1.3    .9    .1    .1    .1    .1   1.8   1.8   2.6   2.3
 330.  *    .0    .3   1.6   2.6    .0    .0    .3    .3   2.4   1.8
1.2    .8    .0    .0    .1    .1   1.8   1.6   2.6   2.2
 340.  *    .1    .4   1.5   2.4    .1    .1    .4    .4   2.2   1.8
1.2    .9    .0    .0    .1    .1   1.9   1.4   2.4   2.0
 350.  *    .2    .4   1.6   2.6    .2    .2    .4    .4   1.8   1.7
1.4   1.1    .0    .0    .1    .1   1.9   1.2   2.4   2.0
 360.  *    .4    .4   1.8   2.6    .4    .4    .4    .4   1.3   1.1
1.5   1.1    .1    .0    .1    .0   2.0   1.1   2.6   2.2
 ------*------------------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.7   2.4   4.5   3.6   1.6   1.5   1.7   1.5   3.0   1.8
2.7   1.8   2.3   2.3   2.8   2.9   3.3   2.8   3.5   3.7
 DEGR. *  100   120   280   280   170   180   180   180   290   340
40    30   260   260   240   250   280   280   280    70
```

THE HIGHEST CONCENTRATION OF 4.50 PPM OCCURRED AT RECEPTOR REC3 .

#5 of 36
Exit 149 I-25/Woodmen Road NB ramps
2025 No-Build PM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Road 2025 Build PM
RUN: I-25 Analysis

DATE :  2/27/12
TIME :  9:57: 9

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *     -6.0   -3280.0      -6.0        .0 *
3280.   360. AG   2235.   6.4    .0 44.0
       2. I-25 Ramp NB Dptr   *     -6.0        .0      -6.0    3280.0 *
3280.   360. AG    900.   7.5    .0 44.0
       3. Woodmen EB Appr     *  -3280.0     -48.0        .0     -48.0 *
3280.    90. AG   2780.   6.4    .0 56.0
       4. Woodmen EB Dptr     *       .0     -48.0    3280.0     -48.0 *
3280.    90. AG   3490.   6.4    .0 56.0
       5. Woodmen WB Appr     *   3280.0      24.0        .0      24.0 *
3280.   270. AG   2780.   6.4    .0 80.0
       6. Woodmen WB Dptr     *       .0      24.0   -3280.0      24.0 *
3280.   270. AG   3405.   6.4    .0 80.0
       7. Woodmen EB Left Q   *    -30.0     -18.0    -791.3     -18.0 *
761.   270. AG    214. 100.0    .0 24.0 1.16   38.7
```

```
      8. Woodmen EB Thru Q   *    -30.0     -48.0   -5638.8     -48.0 *
5609.   270. AG    357. 100.0    .0 36.0 3.78 284.9
      9. Woodmen WB Thru Q   *     30.0      24.0     276.5      24.0 *
246.    90. AG    426. 100.0    .0 60.0  .87  12.5
     10. Woodmen WB Right Q  *     30.0      60.0     117.0      60.0 *
87.    90. AG     85. 100.0    .0 12.0  .33   4.4
     11. I-25 Ramp NB Left Q *    -18.0     -66.0     -18.0    -256.5 *
190.   180. AG    170. 100.0    .0 24.0  .72   9.7
     12. I-25 Ramp NB Right Q*     12.0     -66.0      12.0    -289.4 *
223.   180. AG    256. 100.0    .0 36.0  .85  11.3
```

PAGE 2
JOB: Exit 149 Woodmen Road 2025 Build PM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 9:57: 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
7. Woodmen EB Left Q	140	108	3.0	715	1600	51.70	2	3
8. Woodmen EB Thru Q	140	120	3.0	2065	1700	51.70	2	3
9. Woodmen WB Thru Q	140	86	3.0	2595	1700	51.70	2	3
10. Woodmen WB Right Q	140	86	3.0	185	1600	51.70	2	3
11. I-25 Ramp NB Left Q	140	86	3.0	810	1600	51.70	2	3
12. I-25 Ramp NB Right Q	140	86	3.0	1425	1600	51.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9
3. REC 3	40.0	-76.0	5.9
4. REC 4	-40.0	-76.0	5.9
5. REC 5	-28.0	146.1	5.9
6. REC 6	-28.0	228.1	5.9
7. REC 7	16.0	158.1	5.9

8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Road 2025 Build PM
RUN: I-25 Analysis

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.	.4	.4	1.6	2.4	.4	.4	.4	.4	1.2	1.1	1.4	1.2	.1	.0	.1	.0	1.8	1.7	2.4	2.3
10.	.4	.2	1.8	2.2	.4	.4	.2	.2	1.1	.9	1.9	1.9	.1	.1	.0	.0	1.7	1.6	2.3	2.3
20.	.4	.1	1.6	2.0	.4	.4	.1	.1	.9	.6	2.1	1.9	.1	.1	.0	.0	1.7	1.6	2.3	2.3
30.	.3	.0	1.7	1.9	.3	.3	.0	.0	.9	.7	2.2	2.2	.1	.1	.0	.0	1.7	1.5	2.4	2.6
40.	.3	.0	1.8	2.2	.3	.3	.0	.0	.9	.6	2.5	2.4	.2	.2	.0	.0	1.7	1.4	2.6	2.7
50.	.2	.0	1.9	2.3	.2	.2	.0	.0	.9	.5	2.4	2.0	.2	.2	.0	.0	1.7	1.3	3.0	2.9
60.	.2	.0	2.0	2.7	.2	.2	.0	.0	.7	.5	2.3	2.0	.2	.2	.0	.0	1.8	1.4	3.1	3.1
70.	.4	.1	2.0	2.7	.2	.2	.0	.0	.7	.5	2.2	1.9	.3	.2	.1	.1	1.8	1.6	3.2	3.6
80.	1.1	.4	2.0	3.1	.3	.2	.1	.0	.6	.5	2.0	1.9	.8	.9	.4	.3	1.8	1.8	3.0	3.4
90.	2.2	1.4	1.5	2.8	.6	.4	.3	.2	.4	.3	1.8	1.7	1.8	1.6	1.0	.9	1.5	1.5	2.3	2.4
100.	2.7	2.2	.7	2.1	.9	.6	.7	.4	.1	.0	1.5	1.4	2.1	1.9	1.8	1.5	.7	.7	1.3	1.3

```
 110.  *   2.5   2.4    .2   1.6   1.1    .7    .8    .4    .0    .0
1.4   1.3   1.8   1.9   2.1   1.6    .2    .2    .9    .7
 120.  *   2.1   2.4    .1   1.4   1.3    .8   1.0    .5    .0    .0
1.4   1.2   1.6   2.0   2.2   1.8    .1    .1    .8    .5
 130.  *   1.8   2.1    .1   1.4   1.4    .9   1.0    .6    .0    .0
1.4   1.0   1.6   2.0   2.0   1.8    .1    .1    .8    .4
 140.  *   1.5   1.8    .1   1.7   1.3   1.1   1.1    .7    .0    .0
1.6    .9   1.8   2.1   2.1   1.9    .1    .1    .7    .3
 150.  *   1.6   1.6    .0   1.7   1.0   1.1   1.0    .8    .0    .0
1.6    .7   1.8   1.9   2.0   1.8    .0    .0    .4    .2
 160.  *   1.8   1.5    .0   1.8   1.2    .9   1.0    .8    .0    .0
1.4    .6   2.1   1.8   1.9   1.7    .0    .0    .4    .2
 170.  *   2.3   1.8    .3   1.5   1.6   1.1   1.1   1.0    .2    .1
1.3    .7   2.0   1.8   2.0   1.7    .0    .0    .3    .2
 180.  *   2.1   2.1    .9    .9   1.6   1.4   1.6   1.4    .7    .5
.7    .5   1.7   1.6   2.3   1.9    .1    .1    .2    .1
 190.  *   1.9   2.0   1.4    .3   1.3   1.1   1.7   1.3   1.1    .7
.3    .2   1.7   1.6   2.5   1.9    .2    .2    .0    .0
 200.  *   1.5   1.9   1.7    .0   1.1    .7   1.2   1.0   1.5    .9
.0    .0   1.5   1.5   2.5   2.0    .3    .2    .0    .0
 210.  *   1.6   1.6   1.7    .0   1.0    .6   1.3    .9   1.5   1.0
.0    .0   1.7   1.7   2.4   2.2    .5    .1    .0    .0
 220.  *   1.8   1.7   1.6    .1   1.0    .7   1.3   1.0   1.5   1.1
.0    .0   1.8   1.8   2.4   2.3    .7    .3    .1    .1
 230.  *   1.8   2.0   1.5    .1   1.1    .9   1.2   1.0   1.5   1.2
.0    .0   1.8   1.8   2.4   2.3    .7    .5    .1    .1
 240.  *   2.0   2.0   1.5    .1   1.2   1.0   1.4   1.1   1.4   1.1
.0    .0   2.0   1.9   2.7   2.6    .8    .5    .1    .1
 250.  *   2.3   2.2   1.6    .3   1.2    .9   1.4   1.1   1.3   1.1
.0    .0   2.3   2.2   2.6   2.9   1.0    .7    .3    .3
 260.  *   2.5   2.3   2.7   1.3   1.1    .8   1.3   1.0   1.5   1.3
.2    .1   2.4   2.4   2.5   2.7   1.9   1.6   1.3   1.3
 270.  *   1.9   1.6   3.9   3.0    .7    .4    .8    .6   2.3   1.7
1.0    .5   1.8   1.8   1.6   1.8   3.0   2.6   2.9   2.9
 280.  *    .7    .7   4.3   3.8    .2    .0    .4    .2   2.8   2.2
1.5    .9    .7    .7    .5    .6   3.3   3.0   3.8   3.8
 290.  *    .2    .3   3.5   3.5    .0    .0    .2    .2   2.7   2.2
1.4    .9    .2    .2    .1    .1   2.3   2.1   3.5   3.5
 300.  *    .1    .2   2.5   3.0    .0    .0    .2    .2   2.7   2.4
1.4   1.0    .1    .1    .1    .1   1.8   1.7   3.0   3.0
 310.  *    .1    .2   2.2   2.8    .0    .0    .2    .2   2.8   2.4
1.3    .9    .1    .1    .1    .1   1.5   2.0   2.8   2.8
 320.  *    .1    .3   1.7   2.5    .0    .0    .3    .3   2.3   2.5
```

```
1.3    .9    .1    .1    .1    .1   1.7   1.8   2.5   2.5
 330.  *    .0    .3   1.5   2.5    .0    .0    .3    .3   2.2   2.4
1.2    .9    .0    .0    .1    .1   1.7   1.8   2.5   2.5
 340.  *    .1    .4   1.5   2.2    .1    .1    .4    .4   2.0   2.2
1.1    .8    .0    .0    .1    .1   1.7   1.7   2.2   2.2
 350.  *    .2    .4   1.5   2.3    .2    .2    .4    .4   1.5   1.9
1.4   1.1    .0    .0    .1    .1   1.8   1.8   2.3   2.2
 360.  *    .4    .4   1.6   2.4    .4    .4    .4    .4   1.2   1.1
1.4   1.2    .1    .0    .1    .0   1.8   1.7   2.4   2.3
 ------*------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.7   2.4   4.3   3.8   1.6   1.4   1.7   1.4   2.8   2.5
2.5   2.4   2.4   2.4   2.7   2.9   3.3   3.0   3.8   3.8
 DEGR. *  100   110   280   280   170   180   190   180   280   320
40    40   260   260   240   250   280   280   280   280
```

THE HIGHEST CONCENTRATION OF   4.30 PPM OCCURRED AT RECEPTOR REC3 .

#6 of 36
Exit 149 I-25/Woodmen Road NB ramps
2035 No-Build PM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Road 2035 NoBuild PM
RUN: I-25 Analysis

DATE :  2/27/12
TIME : 10: 7:23

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =     .0 CM/S        VD =     .0 CM/S        Z0 = 108. CM
        U =   1.0 M/S          CLAS =    4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M    AMB =    .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. I-25 Ramp NB Appr   *     -6.0   -3280.0      -6.0         .0 *
3280.   360. AG   2210.   6.2    .0 44.0
       2. I-25 Ramp NB Dptr   *     -6.0        .0      -6.0    3280.0 *
3280.   360. AG    895.   7.2    .0 44.0
       3. Woodmen EB Appr     *  -3280.0     -48.0        .0     -48.0 *
3280.    90. AG   2980.   6.2    .0 56.0
       4. Woodmen EB Dptr     *       .0     -48.0    3280.0     -48.0 *
3280.    90. AG   3655.   6.2    .0 56.0
       5. Woodmen WB Appr     *   3280.0      24.0        .0      24.0 *
3280.   270. AG   2985.   6.2    .0 80.0
       6. Woodmen WB Dptr     *       .0      24.0   -3280.0      24.0 *
3280.   270. AG   3625.   6.2    .0 80.0
       7. Woodmen EB Left Q   *    -30.0     -18.0    -795.7     -18.0 *
766.   270. AG    206. 100.0    .0 24.0 1.16   38.9
```

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       8. Woodmen EB Thru Q   *    -30.0     -48.0   -6534.3     -48.0 *
6504.   270. AG    347. 100.0    .0 36.0 4.47 330.4
       9. Woodmen WB Thru Q   *     30.0      24.0     315.9      24.0 *
286.    90. AG    400. 100.0    .0 60.0  .90  14.5
      10. Woodmen WB Right Q  *     30.0      60.0     118.6      60.0 *
89.    90. AG     80. 100.0    .0 12.0  .31   4.5
      11. I-25 Ramp NB Left Q *    -18.0     -66.0     -18.0    -276.7 *
211.   180. AG    167. 100.0    .0 24.0  .75  10.7
      12. I-25 Ramp NB Right Q*     12.0     -66.0      12.0    -304.0 *
238.   180. AG    251. 100.0    .0 36.0  .85  12.1
```

PAGE 2
JOB: Exit 149 Woodmen Road 2035 NoBuild PM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 10: 7:23

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
7. Woodmen EB Left Q	150	116	3.0	715	1600	49.70	2	3
8. Woodmen EB Thru Q	150	130	3.0	2265	1700	49.70	2	3
9. Woodmen WB Thru Q	150	90	3.0	2805	1700	49.70	2	3
10. Woodmen WB Right Q	150	90	3.0	180	1600	49.70	2	3
11. I-25 Ramp NB Left Q	150	94	3.0	820	1600	49.70	2	3
12. I-25 Ramp NB Right Q	150	94	3.0	1390	1600	49.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9
3. REC 3	40.0	-76.0	5.9
4. REC 4	-40.0	-76.0	5.9
5. REC 5	-28.0	146.1	5.9
6. REC 6	-28.0	228.1	5.9
7. REC 7	16.0	158.1	5.9

8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Road 2035 NoBuild PM
RUN: I-25 Analysis

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)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.4	.4	1.6	2.4	.4	.4	.4	.4	1.1	1.1	1.4	1.2	.1	.0	.1	.0	1.7	1.6	2.4	2.3
10.	.4	.2	1.6	2.3	.4	.4	.2	.2	1.0	.9	1.8	1.8	.1	.1	.0	.0	1.6	1.6	2.4	2.4
20.	.4	.1	1.6	2.0	.4	.4	.1	.1	.9	.6	2.0	1.9	.1	.1	.0	.0	1.6	1.6	2.3	2.3
30.	.3	.0	1.6	1.9	.3	.3	.0	.0	.9	.7	2.2	2.3	.1	.1	.0	.0	1.6	1.6	2.4	2.4
40.	.3	.0	1.7	2.2	.3	.3	.0	.0	.9	.6	2.4	2.4	.2	.2	.0	.0	1.7	1.6	2.6	2.6
50.	.2	.0	2.0	2.3	.2	.2	.0	.0	.9	.5	2.4	2.0	.2	.2	.0	.0	1.9	1.6	2.9	3.0
60.	.2	.0	2.0	2.7	.2	.2	.0	.0	.8	.5	2.3	2.0	.2	.2	.0	.0	1.9	1.6	3.0	3.0
70.	.4	.1	2.0	2.9	.2	.2	.0	.0	.8	.5	2.2	1.9	.3	.2	.1	.1	1.9	1.7	3.2	3.5
80.	1.2	.4	2.0	3.1	.3	.2	.1	.0	.7	.5	2.1	1.9	.9	.9	.4	.3	1.9	1.8	3.0	3.3
90.	2.2	1.4	1.6	2.8	.6	.4	.3	.2	.4	.3	1.8	1.7	1.8	1.6	1.2	1.0	1.5	1.5	2.4	2.5
100.	2.7	2.3	.7	2.1	1.1	.6	.7	.4	.1	.0	1.5	1.4	2.2	1.9	1.9	1.6	.7	.7	1.4	1.3

110.	*	2.6	2.4	.2	1.6	1.3	.7	.9	.4	.0	.0	1.4	1.4	1.8	1.9	2.1	1.8	.2	.2	.9	.7
120.	*	2.1	2.3	.1	1.4	1.3	.8	1.0	.5	.0	.0	1.4	1.4	1.6	2.0	2.2	2.0	.1	.1	.8	.5
130.	*	1.7	2.0	.1	1.4	1.4	.9	1.0	.7	.0	.0	1.4	1.3	1.6	2.1	2.1	1.9	.1	.1	.8	.5
140.	*	1.5	1.8	.1	1.7	1.4	1.1	1.1	.8	.0	.0	1.7	1.2	1.9	2.1	2.0	1.8	.1	.1	.7	.4
150.	*	1.5	1.7	.0	1.7	1.0	1.0	1.1	.8	.0	.0	1.6	1.0	1.9	2.0	2.0	1.8	.0	.0	.5	.1
160.	*	1.8	1.5	.1	1.7	1.2	.9	1.1	.8	.0	.0	1.6	.9	2.3	1.9	1.8	1.6	.0	.0	.4	.2
170.	*	2.3	1.7	.3	1.5	1.6	1.1	1.1	.8	.2	.1	1.2	.7	2.1	1.8	1.9	1.6	.0	.0	.2	.2
180.	*	2.3	2.1	.9	.9	1.6	1.4	1.5	1.4	.8	.5	.8	.5	1.9	1.8	2.2	1.8	.1	.1	.2	.1
190.	*	2.0	2.0	1.4	.3	1.3	1.0	1.7	1.2	1.2	.8	.3	.2	1.7	1.6	2.4	1.8	.2	.1	.0	.0
200.	*	1.6	1.8	1.7	.0	1.1	.7	1.3	1.0	1.5	1.0	.0	.0	1.6	1.6	2.5	1.9	.3	.2	.0	.0
210.	*	1.6	1.6	1.7	.0	1.0	.6	1.3	.9	1.5	1.1	.0	.0	1.6	1.6	2.4	2.3	.5	.2	.0	.0
220.	*	1.8	1.8	1.6	.1	1.0	.6	1.3	.9	1.6	1.2	.0	.0	1.8	1.8	2.4	2.2	.7	.3	.1	.1
230.	*	1.9	2.0	1.4	.1	1.1	1.0	1.2	1.0	1.4	1.2	.0	.0	1.9	1.9	2.3	2.2	.8	.5	.1	.1
240.	*	2.0	2.0	1.5	.1	1.2	.9	1.4	1.1	1.3	1.2	.0	.0	2.0	2.0	2.5	2.5	.8	.5	.1	.1
250.	*	2.3	2.2	1.6	.3	1.2	.9	1.4	1.1	1.3	1.2	.0	.0	2.2	2.2	2.5	2.8	.9	.7	.3	.3
260.	*	2.5	2.3	2.6	1.3	1.1	.8	1.3	1.0	1.5	1.4	.2	.1	2.5	2.5	2.4	2.6	1.8	1.6	1.3	1.3
270.	*	2.0	1.6	4.0	2.9	.7	.5	.9	.6	2.3	1.8	1.0	.5	1.9	1.8	1.6	1.8	3.0	2.6	2.9	2.9
280.	*	.7	.7	4.2	3.7	.2	.0	.4	.2	2.8	2.2	1.4	.9	.7	.7	.6	.6	3.3	2.9	3.7	3.7
290.	*	.2	.3	3.5	3.6	.0	.0	.2	.2	2.8	2.2	1.5	.9	.2	.2	.1	.1	2.2	2.2	3.5	3.5
300.	*	.1	.2	2.5	3.1	.0	.0	.2	.2	2.6	2.3	1.3	1.0	.1	.1	.1	.1	1.8	1.8	3.1	3.1
310.	*	.1	.2	2.1	2.7	.0	.0	.2	.2	2.6	2.3	1.3	.9	.1	.1	.1	.1	1.6	2.0	2.7	2.7

320.	*	.1	.3	1.7	2.5	.0	.0	.3	.3	2.4	2.4	1.3	.9	.1	.1	.1	.1	1.7	1.8	2.5	2.5
330.	*	.0	.3	1.5	2.3	.0	.0	.3	.3	2.2	2.3	1.1	.8	.0	.0	.1	.1	1.6	1.7	2.3	2.3
340.	*	.1	.4	1.5	2.2	.1	.1	.4	.4	2.0	2.1	1.1	.8	.0	.0	.1	.1	1.7	1.7	2.2	2.2
350.	*	.2	.4	1.4	2.3	.2	.2	.4	.4	1.4	1.8	1.4	1.0	.0	.0	.1	.1	1.7	1.7	2.3	2.3
360.	*	.4	.4	1.6	2.4	.4	.4	.4	.4	1.1	1.1	1.4	1.2	.1	.0	.1	.0	1.7	1.6	2.4	2.3
MAX	*	2.7	2.4	4.2	3.7	1.6	1.4	1.7	1.4	2.8	2.4	2.4	2.4	2.5	2.5	2.5	2.8	3.3	2.9	3.7	3.7
DEGR.	*	100	110	280	280	170	180	190	180	280	320	40	40	260	260	240	250	280	280	280	280

THE HIGHEST CONCENTRATION OF 4.20 PPM OCCURRED AT RECEPTOR REC3 .

#7 of 36
Exit 149 I-25/Woodmen Road NB ramps
2015 Proposed Action AM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Road 2015 Build AM
RUN: I-25 Analysis

DATE :  2/27/12
TIME :  9:19:27

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *     -6.0   -3280.0      -6.0        .0 *
3280.   360. AG   1335.   8.0    .0 44.0
       2. I-25 Ramp NB Dptr   *     -6.0        .0      -6.0    3280.0 *
3280.   360. AG    625.   9.4    .0 44.0
       3. Woodmen EB Appr     *  -3280.0     -48.0        .0     -48.0 *
3280.    90. AG   1690.   8.0    .0 56.0
       4. Woodmen EB Dptr     *       .0     -48.0    3280.0     -48.0 *
3280.    90. AG   2170.   8.0    .0 56.0
       5. Woodmen WB Appr     *   3280.0      24.0        .0      24.0 *
3280.   270. AG   2950.   8.0    .0 80.0
       6. Woodmen WB Dptr     *       .0      24.0   -3280.0      24.0 *
3280.   270. AG   3180.   8.0    .0 80.0
       7. Woodmen EB Left Q   *    -30.0     -18.0    -137.2     -18.0 *
107.   270. AG    109. 100.0    .0 24.0  .91   5.4
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       8. Woodmen EB Thru Q   *    -30.0      -48.0   -1662.0     -48.0 *
1632.   270. AG    158. 100.0    .0 36.0 1.49  82.9
       9. Woodmen WB Thru Q   *     30.0       24.0     165.1      24.0 *
135.    90. AG    170. 100.0    .0 60.0  .73   6.9
      10. Woodmen WB Right Q  *     30.0       60.0      80.4      60.0 *
50.    90. AG     34. 100.0    .0 12.0  .29   2.6
      11. I-25 Ramp NB Left Q *    -18.0      -66.0     -18.0    -140.8 *
75.   180. AG     95. 100.0    .0 24.0  .55   3.8
      12. I-25 Ramp NB Right Q*     12.0      -66.0      12.0    -169.3 *
103.   180. AG    143. 100.0    .0 36.0  .77   5.3
```

PAGE 2
JOB: Exit 149 Woodmen Road 2015 Build AM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 9:19:27

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
7. Woodmen EB Left Q	90	72	3.0	420	1600	25.30	2	3
8. Woodmen EB Thru Q	90	70	3.0	1270	1700	25.30	2	3
9. Woodmen WB Thru Q	90	45	3.0	2745	1700	25.30	2	3
10. Woodmen WB Right Q	90	45	3.0	205	1600	25.30	2	3
11. I-25 Ramp NB Left Q	90	63	3.0	435	1600	25.30	2	3
12. I-25 Ramp NB Right Q	90	63	3.0	900	1600	25.30	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9
3. REC 3	40.0	-76.0	5.9
4. REC 4	-40.0	-76.0	5.9
5. REC 5	-28.0	146.1	5.9
6. REC 6	-28.0	228.1	5.9
7. REC 7	16.0	158.1	5.9

8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Road 2015 Build AM
RUN: I-25 Analysis

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.	.4	.4	1.4	1.5	.4	.4	.4	.3	.8	.8	.9	.8	.1	.0	.1	.0	1.4	1.0	1.5	1.3
10.	.4	.2	1.2	1.5	.4	.4	.2	.2	.7	.6	1.2	1.0	.1	.1	.0	.0	1.1	.9	1.5	1.3
20.	.3	.1	1.2	1.3	.3	.3	.1	.1	.6	.5	1.4	1.1	.1	.1	.0	.0	1.1	.9	1.5	1.3
30.	.3	.0	1.2	1.5	.3	.3	.0	.0	.6	.4	1.4	1.1	.2	.2	.0	.0	1.0	.9	1.6	1.4
40.	.2	.0	1.2	1.5	.2	.2	.0	.0	.7	.4	1.4	1.0	.2	.2	.0	.0	1.0	1.0	1.8	1.6
50.	.2	.0	1.3	1.7	.2	.2	.0	.0	.6	.4	1.4	.8	.2	.2	.0	.0	1.1	1.1	1.8	1.8
60.	.2	.0	1.4	1.8	.2	.2	.0	.0	.6	.4	1.3	.7	.2	.2	.0	.0	1.3	1.3	1.9	1.9
70.	.3	.1	1.4	2.1	.2	.2	.0	.0	.6	.5	1.2	.8	.3	.3	.1	.1	1.4	1.4	2.0	2.1
80.	1.0	.4	1.6	2.2	.3	.2	.1	.0	.6	.4	1.2	.7	.8	.8	.4	.4	1.6	1.6	2.1	2.3
90.	1.8	1.1	1.3	2.1	.6	.5	.4	.2	.4	.2	.9	.5	1.6	1.5	1.0	1.0	1.3	1.3	1.6	1.6
100.	2.1	1.6	.6	1.5	.9	.7	.6	.4	.1	.0	.6	.3	1.9	1.7	1.3	1.3	.6	.6	.9	.8

110.	*	2.0	1.6	.2	1.0	1.0	.7	.6	.5	.0	.0
.4	.3	1.6	1.8	1.3	1.2	.2	.2	.5	.3		
120.	*	1.8	1.6	.1	.9	.9	.7	.7	.5	.0	.0
.3	.3	1.5	1.5	1.3	1.1	.1	.1	.4	.2		
130.	*	1.5	1.5	.1	.9	1.0	.7	.7	.4	.0	.0
.3	.3	1.4	1.6	1.3	1.0	.1	.1	.2	.1		
140.	*	1.4	1.2	.1	1.0	.9	.7	.7	.4	.0	.0
.4	.4	1.4	1.5	1.2	.8	.1	.1	.2	.1		
150.	*	1.4	1.1	.0	.9	.9	.7	.7	.4	.0	.0
.4	.4	1.4	1.3	1.2	.8	.0	.0	.2	.1		
160.	*	1.7	1.1	.0	.8	.9	.8	.7	.5	.0	.0
.5	.5	1.5	1.2	1.2	.8	.0	.0	.2	.1		
170.	*	1.7	1.2	.1	.6	1.1	.9	.7	.6	.1	.1
.5	.5	1.4	1.2	1.2	.8	.0	.0	.2	.1		
180.	*	1.8	1.6	.4	.5	1.2	.9	1.1	.8	.3	.3
.4	.4	1.4	1.3	1.3	1.0	.1	.1	.1	.1		
190.	*	1.4	1.6	.7	.2	1.0	.6	1.2	1.0	.4	.4
.2	.2	1.2	1.1	1.5	1.0	.2	.1	.0	.0		
200.	*	1.3	1.2	.8	.0	.7	.5	1.1	.8	.4	.4
.0	.0	1.2	1.1	1.4	1.1	.2	.1	.0	.0		
210.	*	1.2	1.4	.8	.0	.7	.5	.9	.7	.3	.3
.0	.0	1.1	1.1	1.6	1.2	.2	.1	.0	.0		
220.	*	1.3	1.4	.9	.0	.6	.5	.7	.7	.4	.3
.0	.0	1.2	1.2	1.6	1.4	.2	.2	.0	.0		
230.	*	1.4	1.5	.9	.0	.7	.5	.8	.7	.4	.3
.0	.0	1.3	1.3	1.7	1.6	.3	.2	.0	.0		
240.	*	1.5	1.6	.8	.1	.8	.5	1.0	.7	.5	.3
.0	.0	1.4	1.4	1.8	1.6	.3	.2	.1	.1		
250.	*	1.8	1.5	1.1	.2	.9	.5	1.1	.7	.5	.3
.0	.0	1.8	1.8	1.8	1.6	.5	.3	.2	.2		
260.	*	1.9	1.7	1.4	.8	.8	.5	1.0	.7	.5	.2
.0	.0	1.9	1.9	1.7	1.7	1.1	.9	.8	.7		
270.	*	1.5	1.3	2.4	1.7	.5	.3	.7	.5	1.1	.5
.5	.3	1.5	1.5	1.2	1.3	1.8	1.8	1.7	1.7		
280.	*	.6	.5	2.7	2.2	.1	.0	.3	.2	1.6	.7
.9	.5	.6	.6	.4	.4	2.2	1.9	2.2	2.1		
290.	*	.2	.3	2.3	2.1	.0	.0	.2	.2	1.7	1.0
1.0	.7	.2	.2	.2	.1	1.9	1.7	2.0	2.0		
300.	*	.1	.2	1.9	1.8	.0	.0	.2	.2	1.5	1.0
.7	.7	.1	.1	.1	.1	1.4	1.4	1.7	1.7		
310.	*	.1	.2	1.6	1.8	.0	.0	.2	.2	1.7	.8
.7	.5	.1	.1	.1	.1	1.4	1.4	1.6	1.6		
320.	*	.1	.2	1.3	1.6	.0	.0	.2	.2	1.6	.8

```
.7     .4     .1     .1     .1     .1    1.4    1.3    1.4    1.4
 330.   *     .1     .3    1.2    1.5     .0     .0     .3     .3    1.5     .9
.8     .4     .1     .1     .1     .1    1.2    1.2    1.3    1.3
 340.   *     .1     .3    1.1    1.4     .1     .1     .3     .3    1.2    1.0
.8     .4     .0     .0     .1     .1    1.3    1.1    1.3    1.2
 350.   *     .2     .4    1.2    1.5     .2     .2     .4     .4    1.0     .9
.9     .7     .0     .0     .1     .1    1.3    1.1    1.3    1.2
 360.   *     .4     .4    1.4    1.5     .4     .4     .4     .3     .8     .8
.9     .8     .1     .0     .1     .0    1.4    1.0    1.5    1.3
 ------*-----------------------------------------------------------------------
--------------------------------------------------------
 MAX    *    2.1    1.7    2.7    2.2    1.2     .9    1.2    1.0    1.7    1.0
1.4    1.1    1.9    1.9    1.8    1.7    2.2    1.9    2.2    2.3
 DEGR. *   100    260    280     80    180    170    190    190    290    340
30     20    100    260    240    260    280    280    280     80
```

THE HIGHEST CONCENTRATION OF 2.70 PPM OCCURRED AT RECEPTOR REC3 .

#8 of 36
Exit 149 I-25/Woodmen Road NB ramps
2025 Proposed Action AM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Road 2025 Build PM
RUN: I-25 Analysis

DATE :  2/27/12
TIME :  9:57: 9

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *     -6.0   -3280.0      -6.0         .0 *
3280.   360. AG   2235.   6.4    .0 44.0
       2. I-25 Ramp NB Dptr   *     -6.0        .0      -6.0     3280.0 *
3280.   360. AG    900.   7.5    .0 44.0
       3. Woodmen EB Appr     *  -3280.0     -48.0        .0      -48.0 *
3280.    90. AG   2780.   6.4    .0 56.0
       4. Woodmen EB Dptr     *       .0     -48.0    3280.0      -48.0 *
3280.    90. AG   3490.   6.4    .0 56.0
       5. Woodmen WB Appr     *   3280.0      24.0        .0       24.0 *
3280.   270. AG   2780.   6.4    .0 80.0
       6. Woodmen WB Dptr     *       .0      24.0   -3280.0       24.0 *
3280.   270. AG   3405.   6.4    .0 80.0
       7. Woodmen EB Left Q   *    -30.0     -18.0    -791.3      -18.0 *
```

```
761.    270. AG    214. 100.0    .0 24.0 1.16  38.7
       8. Woodmen EB Thru Q   *     -30.0      -48.0    -5638.8      -48.0 *
5609.   270. AG    357. 100.0    .0 36.0 3.78 284.9
       9. Woodmen WB Thru Q   *      30.0       24.0      276.5       24.0 *
246.    90. AG    426. 100.0    .0 60.0  .87  12.5
      10. Woodmen WB Right Q  *      30.0       60.0      117.0       60.0 *
87.     90. AG     85. 100.0    .0 12.0  .33   4.4
      11. I-25 Ramp NB Left Q *     -18.0      -66.0      -18.0     -256.5 *
190.   180. AG    170. 100.0    .0 24.0  .72   9.7
      12. I-25 Ramp NB Right Q*      12.0      -66.0       12.0     -289.4 *
223.   180. AG    256. 100.0    .0 36.0  .85  11.3
```

PAGE 2
JOB: Exit 149 Woodmen Road 2025 Build PM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 9:57: 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
7. Woodmen EB Left Q	140	108	3.0	715	1600	51.70	2	3
8. Woodmen EB Thru Q	140	120	3.0	2065	1700	51.70	2	3
9. Woodmen WB Thru Q	140	86	3.0	2595	1700	51.70	2	3
10. Woodmen WB Right Q	140	86	3.0	185	1600	51.70	2	3
11. I-25 Ramp NB Left Q	140	86	3.0	810	1600	51.70	2	3
12. I-25 Ramp NB Right Q	140	86	3.0	1425	1600	51.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9
3. REC 3	40.0	-76.0	5.9
4. REC 4	-40.0	-76.0	5.9
5. REC 5	-28.0	146.1	5.9
6. REC 6	-28.0	228.1	5.9
7. REC 7	16.0	158.1	5.9

8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Road 2025 Build PM
RUN: I-25 Analysis

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)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.4	.4	1.6	2.4	.4	.4	.4	.4	1.2	1.1	1.4	1.2	.1	.0	.1	.0	1.8	1.7	2.4	2.3
10.	.4	.2	1.8	2.2	.4	.4	.2	.2	1.1	.9	1.9	1.9	.1	.1	.0	.0	1.7	1.6	2.3	2.3
20.	.4	.1	1.6	2.0	.4	.4	.1	.1	.9	.6	2.1	1.9	.1	.1	.0	.0	1.7	1.6	2.3	2.3
30.	.3	.0	1.7	1.9	.3	.3	.0	.0	.9	.7	2.2	2.2	.1	.1	.0	.0	1.7	1.5	2.4	2.6
40.	.3	.0	1.8	2.2	.3	.3	.0	.0	.9	.6	2.5	2.4	.2	.2	.0	.0	1.7	1.4	2.6	2.7
50.	.2	.0	1.9	2.3	.2	.2	.0	.0	.9	.5	2.4	2.0	.2	.2	.0	.0	1.7	1.3	3.0	2.9
60.	.2	.0	2.0	2.7	.2	.2	.0	.0	.7	.5	2.3	2.0	.2	.2	.0	.0	1.8	1.4	3.1	3.1
70.	.4	.1	2.0	2.7	.2	.2	.0	.0	.7	.5	2.2	1.9	.3	.2	.1	.1	1.8	1.6	3.2	3.6
80.	1.1	.4	2.0	3.1	.3	.2	.1	.0	.6	.5	2.0	1.9	.8	.9	.4	.3	1.8	1.8	3.0	3.4
90.	2.2	1.4	1.5	2.8	.6	.4	.3	.2	.4	.3	1.8	1.7	1.8	1.6	1.0	.9	1.5	1.5	2.3	2.4
100.	2.7	2.2	.7	2.1	.9	.6	.7	.4	.1	.0	1.5	1.4	2.1	1.9	1.8	1.5	.7	.7	1.3	1.3

110.	*	2.5	2.4	.2	1.6	1.1	.7	.8	.4	.0	.0
1.4	1.3	1.8	1.9	2.1	1.6	.2	.2	.9	.7		
120.	*	2.1	2.4	.1	1.4	1.3	.8	1.0	.5	.0	.0
1.4	1.2	1.6	2.0	2.2	1.8	.1	.1	.8	.5		
130.	*	1.8	2.1	.1	1.4	1.4	.9	1.0	.6	.0	.0
1.4	1.0	1.6	2.0	2.0	1.8	.1	.1	.8	.4		
140.	*	1.5	1.8	.1	1.7	1.3	1.1	1.1	.7	.0	.0
1.6	.9	1.8	2.1	2.1	1.9	.1	.1	.7	.3		
150.	*	1.6	1.6	.0	1.7	1.0	1.1	1.0	.8	.0	.0
1.6	.7	1.8	1.9	2.0	1.8	.0	.0	.4	.2		
160.	*	1.8	1.5	.0	1.8	1.2	.9	1.0	.8	.0	.0
1.4	.6	2.1	1.8	1.9	1.7	.0	.0	.4	.2		
170.	*	2.3	1.8	.3	1.5	1.6	1.1	1.1	1.0	.2	.1
1.3	.7	2.0	1.8	2.0	1.7	.0	.0	.3	.2		
180.	*	2.1	2.1	.9	.9	1.6	1.4	1.6	1.4	.7	.5
.7	.5	1.7	1.6	2.3	1.9	.1	.1	.2	.1		
190.	*	1.9	2.0	1.4	.3	1.3	1.1	1.7	1.3	1.1	.7
.3	.2	1.7	1.6	2.5	1.9	.2	.2	.0	.0		
200.	*	1.5	1.9	1.7	.0	1.1	.7	1.2	1.0	1.5	.9
.0	.0	1.5	1.5	2.5	2.0	.3	.2	.0	.0		
210.	*	1.6	1.6	1.7	.0	1.0	.6	1.3	.9	1.5	1.0
.0	.0	1.7	1.7	2.4	2.2	.5	.1	.0	.0		
220.	*	1.8	1.7	1.6	.1	1.0	.7	1.3	1.0	1.5	1.1
.0	.0	1.8	1.8	2.4	2.3	.7	.3	.1	.1		
230.	*	1.8	2.0	1.5	.1	1.1	.9	1.2	1.0	1.5	1.2
.0	.0	1.8	1.8	2.4	2.3	.7	.5	.1	.1		
240.	*	2.0	2.0	1.5	.1	1.2	1.0	1.4	1.1	1.4	1.1
.0	.0	2.0	1.9	2.7	2.6	.8	.5	.1	.1		
250.	*	2.3	2.2	1.6	.3	1.2	.9	1.4	1.1	1.3	1.1
.0	.0	2.3	2.2	2.6	2.9	1.0	.7	.3	.3		
260.	*	2.5	2.3	2.7	1.3	1.1	.8	1.3	1.0	1.5	1.3
.2	.1	2.4	2.4	2.5	2.7	1.9	1.6	1.3	1.3		
270.	*	1.9	1.6	3.9	3.0	.7	.4	.8	.6	2.3	1.7
1.0	.5	1.8	1.8	1.6	1.8	3.0	2.6	2.9	2.9		
280.	*	.7	.7	4.3	3.8	.2	.0	.4	.2	2.8	2.2
1.5	.9	.7	.7	.5	.6	3.3	3.0	3.8	3.8		
290.	*	.2	.3	3.5	3.5	.0	.0	.2	.2	2.7	2.2
1.4	.9	.2	.2	.1	.1	2.3	2.1	3.5	3.5		
300.	*	.1	.2	2.5	3.0	.0	.0	.2	.2	2.7	2.4
1.4	1.0	.1	.1	.1	.1	1.8	1.7	3.0	3.0		
310.	*	.1	.2	2.2	2.8	.0	.0	.2	.2	2.8	2.4
1.3	.9	.1	.1	.1	.1	1.5	2.0	2.8	2.8		
320.	*	.1	.3	1.7	2.5	.0	.0	.3	.3	2.3	2.5

```
1.3    .9    .1    .1    .1    .1   1.7   1.8   2.5   2.5
 330.  *    .0    .3   1.5   2.5    .0    .0    .3    .3   2.2   2.4
1.2    .9    .0    .0    .1    .1   1.7   1.8   2.5   2.5
 340.  *    .1    .4   1.5   2.2    .1    .1    .4    .4   2.0   2.2
1.1    .8    .0    .0    .1    .1   1.7   1.7   2.2   2.2
 350.  *    .2    .4   1.5   2.3    .2    .2    .4    .4   1.5   1.9
1.4   1.1    .0    .0    .1    .1   1.8   1.8   2.3   2.2
 360.  *    .4    .4   1.6   2.4    .4    .4    .4    .4   1.2   1.1
1.4   1.2    .1    .0    .1    .0   1.8   1.7   2.4   2.3
 ------*----------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.7   2.4   4.3   3.8   1.6   1.4   1.7   1.4   2.8   2.5
2.5   2.4   2.4   2.4   2.7   2.9   3.3   3.0   3.8   3.8
 DEGR. *  100   110   280   280   170   180   190   180   280   320
40    40   260   260   240   250   280   280   280   280
```

THE HIGHEST CONCENTRATION OF 4.30 PPM OCCURRED AT RECEPTOR REC3 .

#9 of 36
Exit 149 I-25/Woodmen Road NB ramps
2035 Proposed Action AM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Road 2035 Build AM
RUN: I-25 Analysis

DATE :  2/27/12
TIME : 10: 3:28

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =     .0 CM/S       VD =     .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S          CLAS =    4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *     -6.0   -3280.0      -6.0        .0 *
3280.   360. AG   1855.   6.2    .0 44.0
       2. I-25 Ramp NB Dptr   *     -6.0        .0      -6.0    3280.0 *
3280.   360. AG    885.   7.2    .0 44.0
       3. Woodmen EB Appr     *  -3280.0     -48.0        .0     -48.0 *
3280.    90. AG   2340.   6.2    .0 56.0
       4. Woodmen EB Dptr     *       .0     -48.0    3280.0     -48.0 *
3280.    90. AG   2925.   6.2    .0 56.0
       5. Woodmen WB Appr     *   3280.0      24.0        .0      24.0 *
3280.   270. AG   4000.   6.2    .0 80.0
       6. Woodmen WB Dptr     *       .0      24.0   -3280.0      24.0 *
3280.   270. AG   4385.   6.2    .0 80.0
       7. Woodmen EB Left  Q  *    -30.0     -18.0    -697.6     -18.0 *
668.   270. AG    213. 100.0    .0 24.0 1.15   33.9
```

```
      8. Woodmen EB Thru Q   *     -30.0     -48.0   -4587.0     -48.0 *
4557.   270. AG    346. 100.0    .0 36.0 3.40 231.5
      9. Woodmen WB Thru Q   *      30.0      24.0     307.4      24.0 *
277.    90. AG    302. 100.0    .0 60.0  .86  14.1
     10. Woodmen WB Right Q  *      30.0      60.0     130.4      60.0 *
100.    90. AG     60. 100.0    .0 12.0  .33   5.1
     11. I-25 Ramp NB Left  Q*     -18.0     -66.0     -18.0    -291.4 *
225.   180. AG    199. 100.0    .0 24.0  .93  11.5
     12. I-25 Ramp NB Right Q*      12.0     -66.0      12.0    -852.9 *
787.   180. AG    298. 100.0    .0 36.0 1.14  40.0
```

PAGE 2
JOB: Exit 149 Woodmen Road 2035 Build AM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 10: 3:28

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
7. Woodmen EB Left Q	150	120	3.0	615	1600	49.60	2	3
8. Woodmen EB Thru Q	150	130	3.0	1725	1700	49.60	2	3
9. Woodmen WB Thru Q	150	68	3.0	3730	1700	49.60	2	3
10. Woodmen WB Right Q	150	68	3.0	270	1600	49.60	2	3
11. I-25 Ramp NB Left Q	150	112	3.0	655	1600	49.60	2	3
12. I-25 Ramp NB Right Q	150	112	3.0	1200	1600	49.60	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9
3. REC 3	40.0	-76.0	5.9
4. REC 4	-40.0	-76.0	5.9
5. REC 5	-28.0	146.1	5.9
6. REC 6	-28.0	228.1	5.9
7. REC 7	16.0	158.1	5.9

8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Road 2035 Build AM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	.4	.4	1.5	2.4	.4	.4	.4	.4	1.1	1.2	1.3	1.4	.1	.0	.1	.0	1.6	1.5	2.4	2.3
10.	.4	.2	1.4	2.1	.4	.4	.2	.2	1.1	.9	1.9	1.9	.1	.1	.0	.0	1.4	1.4	2.2	2.2
20.	.4	.1	1.4	1.9	.4	.4	.1	.1	.9	.6	2.0	2.1	.1	.1	.0	.0	1.4	1.4	2.2	2.3
30.	.3	.0	1.5	1.8	.3	.3	.0	.0	.9	.6	2.2	2.3	.2	.2	.0	.0	1.5	1.4	2.3	2.5
40.	.3	.0	1.5	2.0	.3	.3	.0	.0	.9	.6	2.4	2.4	.2	.2	.0	.0	1.5	1.3	2.6	2.6
50.	.2	.0	1.7	2.0	.2	.2	.0	.0	.8	.5	2.4	2.1	.2	.2	.0	.0	1.6	1.4	2.7	2.8
60.	.2	.0	1.8	2.4	.2	.2	.0	.0	.7	.5	2.3	2.1	.2	.2	.0	.0	1.6	1.4	3.0	3.0
70.	.4	.1	1.8	2.7	.2	.2	.0	.0	.7	.5	2.3	2.0	.3	.4	.1	.1	1.7	1.5	3.1	3.3
80.	1.2	.5	1.8	2.9	.3	.2	.1	.0	.7	.4	2.2	1.9	1.0	.9	.5	.4	1.8	1.7	2.9	3.0
90.	2.2	1.4	1.4	2.8	.6	.5	.4	.3	.4	.2	1.9	1.7	1.9	1.9	1.2	1.1	1.4	1.4	2.1	2.3
100.	2.7	2.2	.6	2.0	1.0	.7	.7	.5	.1	.0	1.6	1.5	2.3	2.0	1.9	1.7	.6	.6	1.3	1.1

110.	*	2.4	2.3	.2	1.7	1.2	.8	.8	.5	.0	.0
1.5	1.5	2.0	2.2	2.2	1.8	.2	.2	.8	.7		
120.	*	2.0	2.1	.1	1.5	1.2	.9	.9	.6	.0	.0
1.5	1.5	1.7	2.2	2.0	1.8	.1	.1	.8	.6		
130.	*	1.8	1.9	.1	1.6	1.2	1.0	1.0	.6	.0	.0
1.6	1.6	1.7	2.2	2.0	1.8	.1	.1	.7	.5		
140.	*	1.6	1.8	.1	1.8	1.2	1.0	.9	.7	.0	.0
1.8	1.7	1.9	2.2	2.0	1.8	.1	.1	.8	.5		
150.	*	1.6	1.4	.0	2.0	1.1	.9	1.0	.6	.0	.0
1.9	1.7	2.2	2.2	1.7	1.5	.0	.0	.8	.4		
160.	*	2.1	1.4	.1	2.1	1.3	1.0	1.0	.7	.1	.1
2.0	1.7	2.4	2.1	1.7	1.5	.0	.0	.7	.3		
170.	*	2.5	1.9	.5	2.0	1.9	1.3	1.3	.9	.5	.5
1.7	1.4	2.2	1.9	1.8	1.5	.0	.0	.5	.2		
180.	*	2.5	2.4	1.3	1.3	1.8	1.5	1.5	1.5	1.2	1.2
1.1	.9	1.9	1.8	2.1	1.7	.3	.1	.2	.1		
190.	*	2.1	2.2	1.9	.6	1.4	1.1	1.6	1.4	1.8	1.7
.4	.3	1.6	1.6	2.5	1.8	.5	.2	.0	.0		
200.	*	1.7	2.0	2.0	.0	1.1	.8	1.4	1.1	1.9	1.7
.0	.0	1.6	1.6	2.5	1.9	.6	.4	.0	.0		
210.	*	1.7	1.9	1.9	.0	1.0	.7	1.2	1.0	1.8	1.5
.0	.0	1.7	1.7	2.5	2.0	.8	.4	.0	.0		
220.	*	1.8	1.7	1.7	.0	1.0	.8	1.3	1.0	1.6	1.4
.0	.0	1.8	1.8	2.1	2.1	.9	.5	.0	.0		
230.	*	1.9	1.9	1.6	.1	1.1	.9	1.3	1.0	1.6	1.5
.0	.0	1.9	1.9	2.3	2.2	.8	.6	.1	.1		
240.	*	2.1	2.1	1.5	.1	1.3	.8	1.3	1.0	1.5	1.5
.0	.0	2.2	2.2	2.4	2.3	.8	.6	.1	.1		
250.	*	2.5	2.4	1.7	.2	1.3	.9	1.5	1.0	1.4	1.4
.0	.0	2.4	2.4	2.6	2.6	.9	.6	.2	.2		
260.	*	2.7	2.5	2.6	1.2	1.2	.7	1.4	.9	1.6	1.5
.2	.1	2.7	2.6	2.6	2.6	1.6	1.4	1.2	1.2		
270.	*	2.0	1.8	3.9	2.8	.6	.5	.8	.7	2.4	2.0
.8	.5	2.0	2.0	1.7	1.9	2.8	2.6	2.8	2.8		
280.	*	.8	.6	4.3	3.6	.2	.0	.4	.2	2.8	2.4
1.4	.9	.8	.7	.5	.6	3.0	2.7	3.6	3.6		
290.	*	.2	.3	3.5	3.5	.0	.0	.2	.2	2.9	2.4
1.5	1.0	.2	.2	.2	.1	2.2	2.0	3.5	3.4		
300.	*	.1	.2	2.5	3.0	.0	.0	.2	.2	2.9	2.6
1.4	1.1	.1	.1	.1	.1	1.8	1.6	3.0	3.0		
310.	*	.1	.2	2.1	2.7	.0	.0	.2	.2	2.6	2.5
1.2	1.0	.1	.1	.1	.1	1.5	1.7	2.7	2.7		
320.	*	.1	.3	1.5	2.5	.0	.0	.3	.3	2.6	2.5

```
1.2    .8    .1    .1    .1    .1   1.5   1.6   2.5   2.5
 330.  *    .1    .3   1.4   2.4    .0    .0    .3    .3   2.4   2.3
1.1    .8    .1    .1    .1    .1   1.5   1.6   2.4   2.4
 340.  *    .1    .4   1.3   2.2    .1    .1    .4    .4   1.9   2.3
1.1    .7    .0    .0    .1    .1   1.5   1.5   2.2   2.2
 350.  *    .2    .4   1.4   2.1    .2    .2    .4    .4   1.5   1.9
1.3    .9    .0    .0    .1    .1   1.5   1.5   2.1   2.1
 360.  *    .4    .4   1.5   2.4    .4    .4    .4    .4   1.1   1.2
1.3   1.4    .1    .0    .1    .0   1.6   1.5   2.4   2.3
 ------*----------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.7   2.5   4.3   3.6   1.9   1.5   1.6   1.5   2.9   2.6
2.4   2.4   2.7   2.6   2.6   2.6   3.0   2.7   3.6   3.6
 DEGR. *  100   260   280   280   170   180   190   180   290   300
40    40   260   260   250   260   280   280   280   280
```

THE HIGHEST CONCENTRATION OF   4.30 PPM OCCURRED AT RECEPTOR REC3 .

#10 of 36
Exit 149 I-25/Woodmen Road NB ramps
2015 Proposed Action PM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Road 2015 Build PM
RUN: I-25 Analysis

DATE :  2/27/12
TIME :  9:25:40

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *     -6.0   -3280.0      -6.0        .0 *
3280.   360. AG   1870.   8.0    .0 44.0
       2. I-25 Ramp NB Dptr   *     -6.0        .0      -6.0    3280.0 *
3280.   360. AG    745.   9.4    .0 44.0
       3. Woodmen EB Appr     *  -3280.0     -48.0        .0     -48.0 *
3280.    90. AG   2340.   8.0    .0 56.0
       4. Woodmen EB Dptr     *       .0     -48.0    3280.0     -48.0 *
3280.    90. AG   2970.   8.0    .0 56.0
       5. Woodmen WB Appr     *   3280.0      24.0        .0      24.0 *
3280.   270. AG   2370.   8.0    .0 80.0
       6. Woodmen WB Dptr     *       .0      24.0   -3280.0      24.0 *
3280.   270. AG   2865.   8.0    .0 80.0
       7. Woodmen EB Left Q   *    -30.0     -18.0    -282.5     -18.0 *
253.   270. AG    104. 100.0    .0 24.0 1.03  12.8
```

```
       8. Woodmen EB Thru Q   *    -30.0     -48.0   -3353.8     -48.0 *
3324.   270. AG    158. 100.0    .0 36.0 2.07 168.9
       9. Woodmen WB Thru Q   *     30.0      24.0     165.3      24.0 *
135.    90. AG    211. 100.0    .0 60.0  .81   6.9
      10. Woodmen WB Right Q  *     30.0      60.0      79.0      60.0 *
49.    90. AG     42. 100.0    .0 12.0  .31   2.5
      11. I-25 Ramp NB Left Q *    -18.0     -66.0     -18.0    -164.3 *
98.   180. AG     83. 100.0    .0 24.0  .61   5.0
      12. I-25 Ramp NB Right Q*     12.0     -66.0      12.0    -187.8 *
122.   180. AG    124. 100.0    .0 36.0  .76   6.2
```

PAGE 2
JOB: Exit 149 Woodmen Road 2015 Build PM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 9:25:40

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
7. Woodmen EB Left Q	90	69	3.0	585	1600	25.30	2	3
8. Woodmen EB Thru Q	90	70	3.0	1755	1700	25.30	2	3
9. Woodmen WB Thru Q	90	56	3.0	2210	1700	25.30	2	3
10. Woodmen WB Right Q	90	56	3.0	160	1600	25.30	2	3
11. I-25 Ramp NB Left Q	90	55	3.0	655	1600	25.30	2	3
12. I-25 Ramp NB Right Q	90	55	3.0	1215	1600	25.30	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9
3. REC 3	40.0	-76.0	5.9
4. REC 4	-40.0	-76.0	5.9
5. REC 5	-28.0	146.1	5.9
6. REC 6	-28.0	228.1	5.9
7. REC 7	16.0	158.1	5.9

8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Road 2015 Build PM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	.4	.4	1.5	1.8	.4	.4	.4	.4	1.0	.8	1.1	.8	.1	.0	.1	.0	1.5	1.1	1.8	1.7
10.	.5	.2	1.4	1.8	.5	.5	.2	.2	.8	.6	1.4	1.2	.1	.1	.0	.0	1.3	1.0	1.7	1.7
20.	.4	.1	1.3	1.6	.4	.4	.1	.1	.7	.5	1.6	1.2	.1	.1	.0	.0	1.2	1.0	1.6	1.6
30.	.3	.0	1.3	1.7	.3	.3	.0	.0	.6	.5	1.7	1.2	.1	.1	.0	.0	1.1	1.0	1.8	1.8
40.	.3	.0	1.4	1.8	.3	.3	.0	.0	.7	.4	1.7	1.2	.2	.2	.0	.0	1.2	1.1	1.8	1.8
50.	.3	.0	1.5	2.0	.3	.3	.0	.0	.6	.5	1.8	1.1	.2	.2	.0	.0	1.3	1.3	2.1	2.1
60.	.2	.0	1.5	2.0	.2	.2	.0	.0	.7	.5	1.6	.9	.2	.2	.0	.0	1.4	1.4	2.1	2.1
70.	.3	.1	1.6	2.3	.2	.2	.0	.0	.8	.5	1.7	.9	.3	.2	.1	.1	1.6	1.6	2.3	2.4
80.	.9	.3	1.9	2.6	.3	.2	.1	.0	.8	.5	1.6	.9	.8	.7	.3	.3	1.9	1.9	2.3	2.5
90.	1.7	1.0	1.6	2.3	.6	.4	.3	.2	.4	.3	1.2	.7	1.6	1.5	.9	.9	1.6	1.6	2.0	1.9
100.	2.2	1.5	.8	1.5	.9	.6	.6	.4	.1	.0	.9	.4	1.9	1.6	1.3	1.2	.8	.8	1.2	1.0

110. * 1.9 1.6 .2 1.1 1.0 .6 .6 .4 .0 .0
.7 .4 1.7 1.7 1.3 1.1 .2 .2 .6 .4
120. * 1.7 1.6 .1 1.0 1.0 .6 .7 .4 .0 .0
.6 .4 1.5 1.6 1.3 1.0 .1 .1 .5 .2
130. * 1.5 1.6 .1 1.1 1.1 .8 .6 .4 .0 .0
.6 .5 1.4 1.5 1.4 1.0 .1 .1 .5 .2
140. * 1.5 1.4 .1 1.1 1.0 .8 .7 .5 .0 .0
.5 .5 1.5 1.6 1.2 .8 .1 .1 .3 .3
150. * 1.5 1.2 .0 1.1 .9 .9 .7 .5 .0 .0
.6 .6 1.5 1.4 1.3 .8 .0 .0 .2 .2
160. * 1.6 1.1 .0 1.0 1.0 1.0 .8 .7 .0 .0
.6 .6 1.6 1.4 1.2 .7 .0 .0 .3 .2
170. * 1.9 1.4 .2 1.0 1.2 1.1 .9 .8 .2 .2
.7 .7 1.5 1.4 1.4 .8 .0 .0 .3 .2
180. * 2.1 1.7 .5 .6 1.3 1.2 1.3 1.1 .4 .4
.5 .5 1.5 1.4 1.5 1.0 .2 .1 .2 .1
190. * 1.5 1.6 .8 .2 1.0 .8 1.3 1.1 .5 .5
.2 .2 1.3 1.2 1.7 1.2 .2 .2 .0 .0
200. * 1.3 1.5 .9 .1 .9 .6 1.0 1.0 .6 .5
.1 .1 1.2 1.2 1.6 1.2 .2 .2 .0 .0
210. * 1.3 1.3 .9 .0 .7 .5 1.0 .8 .6 .4
.0 .0 1.2 1.2 1.6 1.5 .2 .2 .0 .0
220. * 1.3 1.5 .9 .1 .7 .5 1.0 .8 .6 .4
.0 .0 1.3 1.3 1.7 1.6 .4 .2 .1 .1
230. * 1.5 1.6 1.0 .1 .9 .6 1.0 .9 .7 .4
.0 .0 1.4 1.4 1.7 1.5 .4 .2 .1 .1
240. * 1.5 1.5 1.0 .1 .8 .6 1.0 .8 .7 .4
.0 .0 1.5 1.4 1.9 1.7 .4 .3 .1 .1
250. * 1.8 1.6 1.1 .3 .8 .6 1.0 .8 .7 .4
.0 .0 1.9 1.8 1.8 2.0 .7 .4 .3 .3
260. * 2.0 1.7 1.6 .9 .8 .6 1.0 .8 .9 .3
.2 .0 1.9 1.9 1.9 1.8 1.3 1.1 .9 .9
270. * 1.5 1.3 2.8 2.0 .5 .4 .7 .5 1.4 .6
.6 .3 1.5 1.5 1.2 1.3 2.3 2.1 1.9 1.9
280. * .7 .6 3.2 2.6 .1 .0 .3 .2 1.7 .9
1.0 .6 .6 .6 .5 .5 2.5 2.4 2.6 2.5
290. * .2 .3 2.7 2.4 .0 .0 .2 .2 1.8 1.0
1.0 .6 .2 .2 .2 .1 2.0 2.1 2.3 2.2
300. * .1 .2 2.3 2.1 .0 .0 .2 .2 1.8 1.0
.9 .6 .1 .1 .1 .1 1.6 1.6 2.1 2.0
310. * .1 .3 2.0 1.9 .0 .0 .3 .3 1.8 1.1
.9 .6 .1 .1 .1 .1 1.5 1.7 1.9 1.8
320. * .1 .3 1.6 1.7 .0 .0 .3 .3 1.7 1.2

```
.9    .6    .1    .1    .1    .1   1.5   1.5   1.7   1.7
 330.  *    .0    .3   1.5   1.7    .0    .0    .3    .3   1.6   1.3
.9    .6    .0    .0    .1    .1   1.4   1.3   1.7   1.7
 340.  *    .1    .4   1.5   1.6    .1    .1    .4    .4   1.4   1.2
.8    .6    .0    .0    .1    .1   1.4   1.3   1.5   1.5
 350.  *    .2    .5   1.5   1.7    .2    .2    .5    .5   1.3   1.0
1.0    .8    .0    .0    .1    .1   1.4   1.2   1.6   1.6
 360.  *    .4    .4   1.5   1.8    .4    .4    .4    .4   1.0    .8
1.1    .8    .1    .0    .1    .0   1.5   1.1   1.8   1.7
 ------*------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.2   1.7   3.2   2.6   1.3   1.2   1.3   1.1   1.8   1.3
1.8   1.2   1.9   1.9   1.9   2.0   2.5   2.4   2.6   2.5
 DEGR. *  100   180   280   280   180   180   180   180   290   330
50    10   100   260   240   250   280   280   280    80
```

THE HIGHEST CONCENTRATION OF   3.20 PPM OCCURRED AT RECEPTOR REC3 .

#11 of 36
Exit 149 I-25/Woodmen Road NB ramps
2025 Proposed Action PM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Road 2025 Build PM
RUN: I-25 Analysis

DATE :  2/27/12
TIME :  9:57: 9

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S        VD =    .0 CM/S        Z0 = 108. CM
        U =  1.0 M/S          CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *     -6.0   -3280.0      -6.0        .0 *
3280.   360. AG   2235.   6.4    .0 44.0
       2. I-25 Ramp NB Dptr   *     -6.0        .0      -6.0    3280.0 *
3280.   360. AG    900.   7.5    .0 44.0
       3. Woodmen EB Appr     *  -3280.0     -48.0        .0     -48.0 *
3280.    90. AG   2780.   6.4    .0 56.0
       4. Woodmen EB Dptr     *       .0     -48.0    3280.0     -48.0 *
3280.    90. AG   3490.   6.4    .0 56.0
       5. Woodmen WB Appr     *   3280.0      24.0        .0      24.0 *
3280.   270. AG   2780.   6.4    .0 80.0
       6. Woodmen WB Dptr     *       .0      24.0   -3280.0      24.0 *
3280.   270. AG   3405.   6.4    .0 80.0
       7. Woodmen EB Left Q   *    -30.0     -18.0    -791.3     -18.0 *
761.   270. AG    214. 100.0    .0 24.0 1.16   38.7
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       8. Woodmen EB Thru Q   *    -30.0     -48.0   -5638.8     -48.0 *
5609.   270. AG    357. 100.0    .0 36.0 3.78 284.9
       9. Woodmen WB Thru Q   *     30.0      24.0     276.5      24.0 *
246.    90. AG    426. 100.0    .0 60.0  .87  12.5
      10. Woodmen WB Right Q  *     30.0      60.0     117.0      60.0 *
87.    90. AG     85. 100.0    .0 12.0  .33   4.4
      11. I-25 Ramp NB Left Q *    -18.0     -66.0     -18.0    -256.5 *
190.   180. AG    170. 100.0    .0 24.0  .72   9.7
      12. I-25 Ramp NB Right Q*     12.0     -66.0      12.0    -289.4 *
223.   180. AG    256. 100.0    .0 36.0  .85  11.3
```

PAGE 2
JOB: Exit 149 Woodmen Road 2025 Build PM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 9:57: 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
7. Woodmen EB Left Q	140	108	3.0	715	1600	51.70	2	3
8. Woodmen EB Thru Q	140	120	3.0	2065	1700	51.70	2	3
9. Woodmen WB Thru Q	140	86	3.0	2595	1700	51.70	2	3
10. Woodmen WB Right Q	140	86	3.0	185	1600	51.70	2	3
11. I-25 Ramp NB Left Q	140	86	3.0	810	1600	51.70	2	3
12. I-25 Ramp NB Right Q	140	86	3.0	1425	1600	51.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	X (FT)	Y (FT)	Z (FT)
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9
3. REC 3	40.0	-76.0	5.9
4. REC 4	-40.0	-76.0	5.9
5. REC 5	-28.0	146.1	5.9
6. REC 6	-28.0	228.1	5.9
7. REC 7	16.0	158.1	5.9

8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Road 2025 Build PM
RUN: I-25 Analysis

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)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.4	.4	1.6	2.4	.4	.4	.4	.4	1.2	1.1	1.4	1.2	.1	.0	.1	.0	1.8	1.7	2.4	2.3
10.	.4	.2	1.8	2.2	.4	.4	.2	.2	1.1	.9	1.9	1.9	.1	.1	.0	.0	1.7	1.6	2.3	2.3
20.	.4	.1	1.6	2.0	.4	.4	.1	.1	.9	.6	2.1	1.9	.1	.1	.0	.0	1.7	1.6	2.3	2.3
30.	.3	.0	1.7	1.9	.3	.3	.0	.0	.9	.7	2.2	2.2	.1	.1	.0	.0	1.7	1.5	2.4	2.6
40.	.3	.0	1.8	2.2	.3	.3	.0	.0	.9	.6	2.5	2.4	.2	.2	.0	.0	1.7	1.4	2.6	2.7
50.	.2	.0	1.9	2.3	.2	.2	.0	.0	.9	.5	2.4	2.0	.2	.2	.0	.0	1.7	1.3	3.0	2.9
60.	.2	.0	2.0	2.7	.2	.2	.0	.0	.7	.5	2.3	2.0	.2	.2	.0	.0	1.8	1.4	3.1	3.1
70.	.4	.1	2.0	2.7	.2	.2	.0	.0	.7	.5	2.2	1.9	.3	.2	.1	.1	1.8	1.6	3.2	3.6
80.	1.1	.4	2.0	3.1	.3	.2	.1	.0	.6	.5	2.0	1.9	.8	.9	.4	.3	1.8	1.8	3.0	3.4
90.	2.2	1.4	1.5	2.8	.6	.4	.3	.2	.4	.3	1.8	1.7	1.8	1.6	1.0	.9	1.5	1.5	2.3	2.4
100.	2.7	2.2	.7	2.1	.9	.6	.7	.4	.1	.0	1.5	1.4	2.1	1.9	1.8	1.5	.7	.7	1.3	1.3

```
 110.  *   2.5   2.4    .2   1.6   1.1    .7    .8    .4    .0    .0
1.4   1.3   1.8   1.9   2.1   1.6    .2    .2    .9    .7
 120.  *   2.1   2.4    .1   1.4   1.3    .8   1.0    .5    .0    .0
1.4   1.2   1.6   2.0   2.2   1.8    .1    .1    .8    .5
 130.  *   1.8   2.1    .1   1.4   1.4    .9   1.0    .6    .0    .0
1.4   1.0   1.6   2.0   2.0   1.8    .1    .1    .8    .4
 140.  *   1.5   1.8    .1   1.7   1.3   1.1   1.1    .7    .0    .0
1.6    .9   1.8   2.1   2.1   1.9    .1    .1    .7    .3
 150.  *   1.6   1.6    .0   1.7   1.0   1.1   1.0    .8    .0    .0
1.6    .7   1.8   1.9   2.0   1.8    .0    .0    .4    .2
 160.  *   1.8   1.5    .0   1.8   1.2    .9   1.0    .8    .0    .0
1.4    .6   2.1   1.8   1.9   1.7    .0    .0    .4    .2
 170.  *   2.3   1.8    .3   1.5   1.6   1.1   1.1   1.0    .2    .1
1.3    .7   2.0   1.8   2.0   1.7    .0    .0    .3    .2
 180.  *   2.1   2.1    .9    .9   1.6   1.4   1.6   1.4    .7    .5
.7    .5   1.7   1.6   2.3   1.9    .1    .1    .2    .1
 190.  *   1.9   2.0   1.4    .3   1.3   1.1   1.7   1.3   1.1    .7
.3    .2   1.7   1.6   2.5   1.9    .2    .2    .0    .0
 200.  *   1.5   1.9   1.7    .0   1.1    .7   1.2   1.0   1.5    .9
.0    .0   1.5   1.5   2.5   2.0    .3    .2    .0    .0
 210.  *   1.6   1.6   1.7    .0   1.0    .6   1.3    .9   1.5   1.0
.0    .0   1.7   1.7   2.4   2.2    .5    .1    .0    .0
 220.  *   1.8   1.7   1.6    .1   1.0    .7   1.3   1.0   1.5   1.1
.0    .0   1.8   1.8   2.4   2.3    .7    .3    .1    .1
 230.  *   1.8   2.0   1.5    .1   1.1    .9   1.2   1.0   1.5   1.2
.0    .0   1.8   1.8   2.4   2.3    .7    .5    .1    .1
 240.  *   2.0   2.0   1.5    .1   1.2   1.0   1.4   1.1   1.4   1.1
.0    .0   2.0   1.9   2.7   2.6    .8    .5    .1    .1
 250.  *   2.3   2.2   1.6    .3   1.2    .9   1.4   1.1   1.3   1.1
.0    .0   2.3   2.2   2.6   2.9   1.0    .7    .3    .3
 260.  *   2.5   2.3   2.7   1.3   1.1    .8   1.3   1.0   1.5   1.3
.2    .1   2.4   2.4   2.5   2.7   1.9   1.6   1.3   1.3
 270.  *   1.9   1.6   3.9   3.0    .7    .4    .8    .6   2.3   1.7
1.0    .5   1.8   1.8   1.6   1.8   3.0   2.6   2.9   2.9
 280.  *    .7    .7   4.3   3.8    .2    .0    .4    .2   2.8   2.2
1.5    .9    .7    .7    .5    .6   3.3   3.0   3.8   3.8
 290.  *    .2    .3   3.5   3.5    .0    .0    .2    .2   2.7   2.2
1.4    .9    .2    .2    .1    .1   2.3   2.1   3.5   3.5
 300.  *    .1    .2   2.5   3.0    .0    .0    .2    .2   2.7   2.4
1.4   1.0    .1    .1    .1    .1   1.8   1.7   3.0   3.0
 310.  *    .1    .2   2.2   2.8    .0    .0    .2    .2   2.8   2.4
1.3    .9    .1    .1    .1    .1   1.5   2.0   2.8   2.8
 320.  *    .1    .3   1.7   2.5    .0    .0    .3    .3   2.3   2.5
```

```
1.3    .9    .1    .1    .1    .1   1.7   1.8   2.5   2.5
 330.  *    .0    .3   1.5   2.5    .0    .0    .3    .3   2.2   2.4
1.2    .9    .0    .0    .1    .1   1.7   1.8   2.5   2.5
 340.  *    .1    .4   1.5   2.2    .1    .1    .4    .4   2.0   2.2
1.1    .8    .0    .0    .1    .1   1.7   1.7   2.2   2.2
 350.  *    .2    .4   1.5   2.3    .2    .2    .4    .4   1.5   1.9
1.4   1.1    .0    .0    .1    .1   1.8   1.8   2.3   2.2
 360.  *    .4    .4   1.6   2.4    .4    .4    .4    .4   1.2   1.1
1.4   1.2    .1    .0    .1    .0   1.8   1.7   2.4   2.3
 ------*----------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.7   2.4   4.3   3.8   1.6   1.4   1.7   1.4   2.8   2.5
2.5   2.4   2.4   2.4   2.7   2.9   3.3   3.0   3.8   3.8
 DEGR. *  100   110   280   280   170   180   190   180   280   320
40    40   260   260   240   250   280   280   280   280
```

THE HIGHEST CONCENTRATION OF   4.30 PPM OCCURRED AT RECEPTOR REC3 .

#12 of 36
Exit 149 I-25/Woodmen Road NB ramps
2035 Proposed Action PM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Road 2035 Build PM
RUN: I-25 Analysis

DATE :  2/27/12
TIME : 10: 5:51

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *     -6.0   -3280.0      -6.0        .0 *
3280.   360. AG   2600.   6.2    .0 44.0
       2. I-25 Ramp NB Dptr   *     -6.0        .0      -6.0    3280.0 *
3280.   360. AG   1055.   7.2    .0 44.0
       3. Woodmen EB Appr     *  -3280.0     -48.0        .0     -48.0 *
3280.    90. AG   3215.   6.2    .0 56.0
       4. Woodmen EB Dptr     *       .0     -48.0    3280.0     -48.0 *
3280.    90. AG   4005.   6.2    .0 56.0
       5. Woodmen WB Appr     *   3280.0      24.0        .0      24.0 *
3280.   270. AG   3185.   6.2    .0 80.0
       6. Woodmen WB Dptr     *       .0      24.0   -3280.0      24.0 *
3280.   270. AG   3940.   6.2    .0 80.0
       7. Woodmen EB Left  Q  *    -30.0     -18.0   -1488.8     -18.0 *
1459.   270. AG    206. 100.0    .0 24.0 1.37  74.1
```

```
       8. Woodmen EB Thru Q   *     -30.0      -48.0   -6912.9      -48.0 *
6883.   270. AG    347. 100.0    .0 36.0 4.67 349.7
       9. Woodmen WB Thru Q   *      30.0       24.0     399.2       24.0 *
369.    90. AG    409. 100.0    .0 60.0  .99  18.8
      10. Woodmen WB Right Q  *      30.0       60.0     135.6       60.0 *
106.    90. AG     82. 100.0    .0 12.0  .37   5.4
      11. I-25 Ramp NB Left  Q*     -18.0      -66.0     -18.0     -308.5 *
242.   180. AG    164. 100.0    .0 24.0  .85  12.3
      12. I-25 Ramp NB Right Q*      12.0      -66.0      12.0     -386.5 *
321.   180. AG    245. 100.0    .0 36.0  .96  16.3
```

PAGE 2
JOB: Exit 149 Woodmen Road 2035 Build PM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 10: 5:51

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
7. Woodmen EB Left Q	150	116	3.0	845	1600	49.70	2	3
8. Woodmen EB Thru Q	150	130	3.0	2370	1700	49.70	2	3
9. Woodmen WB Thru Q	150	92	3.0	2975	1700	49.70	2	3
10. Woodmen WB Right Q	150	92	3.0	210	1600	49.70	2	3
11. I-25 Ramp NB Left Q	150	92	3.0	965	1600	49.70	2	3
12. I-25 Ramp NB Right Q	150	92	3.0	1635	1600	49.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9
3. REC 3	40.0	-76.0	5.9
4. REC 4	-40.0	-76.0	5.9
5. REC 5	-28.0	146.1	5.9
6. REC 6	-28.0	228.1	5.9
7. REC 7	16.0	158.1	5.9

8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Road 2035 Build PM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	.5	.5	1.7	2.4	.5	.5	.5	.5	1.2	1.1	1.5	1.5	.1	.1	.1	.1	1.8	1.7	2.4	2.3
10.	.5	.2	1.8	2.4	.5	.5	.2	.2	1.2	1.0	2.0	1.9	.1	.1	.0	.0	1.6	1.6	2.4	2.4
20.	.4	.1	1.7	2.2	.4	.4	.1	.1	1.0	.7	2.1	2.2	.1	.1	.0	.0	1.6	1.6	2.4	2.4
30.	.4	.0	1.7	2.0	.4	.4	.0	.0	1.0	.7	2.4	2.4	.1	.1	.0	.0	1.7	1.7	2.4	2.4
40.	.3	.0	1.9	2.4	.3	.3	.0	.0	1.0	.8	2.4	2.5	.2	.2	.0	.0	1.8	1.8	2.8	2.7
50.	.3	.0	2.1	2.5	.3	.3	.0	.0	1.0	.7	2.5	2.3	.2	.2	.0	.0	2.1	2.0	3.1	3.1
60.	.3	.0	2.2	3.0	.3	.3	.0	.0	1.0	.6	2.6	2.2	.2	.2	.0	.0	2.1	2.0	3.1	3.1
70.	.4	.1	2.3	3.0	.2	.2	.0	.0	1.0	.5	2.4	2.0	.4	.2	.1	.1	2.1	2.0	3.5	3.7
80.	1.2	.7	2.3	3.4	.3	.2	.1	.0	.8	.5	2.3	1.9	.9	.9	.5	.5	2.2	2.1	3.3	3.6
90.	2.5	1.5	1.8	2.9	.8	.5	.4	.2	.5	.3	1.9	1.7	2.1	1.9	1.3	1.2	1.8	1.7	2.5	2.7
100.	3.0	2.5	.8	2.1	1.2	.6	.9	.4	.1	.0	1.5	1.4	2.5	2.3	2.2	1.9	.8	.8	1.5	1.3

```
 110.  *   2.8   2.7    .3   1.6   1.4    .9   1.1    .5    .0    .0
1.4   1.4   2.2   2.2   2.5   2.2    .3    .3    .8    .8
 120.  *   2.2   2.5    .1   1.5   1.6   1.0   1.1    .6    .0    .0
1.5   1.5   1.8   2.1   2.5   2.3    .1    .1    .8    .5
 130.  *   1.8   2.2    .1   1.5   1.6   1.1   1.2    .8    .0    .0
1.5   1.5   1.8   2.2   2.3   2.1    .1    .1    .8    .6
 140.  *   1.6   1.8    .1   1.7   1.5   1.1   1.1    .8    .0    .0
1.7   1.5   1.9   2.2   2.1   1.8    .1    .1    .8    .6
 150.  *   1.7   1.7    .0   1.8   1.0   1.0   1.1    .8    .0    .0
1.8   1.6   2.3   2.2   2.0   1.8    .0    .0    .7    .3
 160.  *   2.1   1.6    .1   2.0   1.4   1.2   1.3    .8    .0    .0
1.8   1.5   2.3   2.0   1.9   1.7    .0    .0    .5    .2
 170.  *   2.6   2.0    .4   1.7   1.7   1.5   1.2   1.2    .4    .3
1.5   1.2   2.2   1.9   2.0   1.7    .0    .0    .3    .2
 180.  *   2.6   2.4   1.1   1.2   1.7   1.6   1.7   1.5    .9    .8
1.0    .8   1.9   1.8   2.3   1.9    .2    .1    .2    .1
 190.  *   2.1   2.2   1.7    .4   1.3   1.2   1.7   1.5   1.5   1.3
.3     .2   1.8   1.7   2.5   2.0    .4    .2    .1    .0
 200.  *   1.7   1.9   1.8    .1   1.3    .7   1.5   1.1   1.7   1.4
.1     .1   1.6   1.6   2.6   2.1    .5    .2    .0    .0
 210.  *   1.7   1.6   1.8    .0   1.1    .7   1.3    .9   1.7   1.5
.0     .0   1.7   1.7   2.6   2.3    .6    .3    .0    .0
 220.  *   1.9   1.8   1.7    .1   1.1    .8   1.3   1.1   1.6   1.4
.0     .0   1.9   1.9   2.6   2.4    .7    .5    .1    .1
 230.  *   1.9   2.1   1.6    .1   1.1   1.0   1.4   1.2   1.5   1.4
.0     .0   1.9   1.9   2.5   2.5    .8    .5    .1    .1
 240.  *   2.0   2.0   1.5    .1   1.2   1.0   1.5   1.3   1.4   1.3
.0     .0   2.0   2.0   2.5   2.8    .8    .5    .1    .1
 250.  *   2.5   2.3   1.7    .3   1.4   1.0   1.4   1.2   1.4   1.4
.0     .0   2.5   2.5   2.5   2.8   1.0    .7    .3    .3
 260.  *   2.7   2.5   2.7   1.4   1.3    .9   1.4   1.1   1.6   1.5
.2     .1   2.7   2.6   2.7   2.9   1.8   1.6   1.4   1.4
 270.  *   2.0   1.9   4.2   3.2    .8    .5   1.1    .8   2.5   2.0
1.1    .5   2.0   2.0   1.8   1.9   3.3   2.9   3.2   3.2
 280.  *    .9    .8   4.6   4.0    .2    .0    .4    .2   2.9   2.3
1.5    .9    .9    .9    .7    .8   3.4   3.3   4.0   4.0
 290.  *    .2    .3   3.7   3.6    .0    .0    .2    .2   3.0   2.6
1.6   1.2    .2    .2    .2    .1   2.6   2.4   3.6   3.6
 300.  *    .1    .3   2.8   3.2    .0    .0    .3    .3   2.7   2.4
1.3   1.0    .1    .1    .1    .1   1.9   2.0   3.2   3.2
 310.  *    .1    .3   2.2   2.9    .0    .0    .3    .3   2.7   2.4
1.3    .9    .1    .1    .1    .1   1.7   2.1   2.9   2.9
 320.  *    .1    .3   1.8   2.6    .0    .0    .3    .3   2.5   2.4
```

```
1.3    .9    .1    .1    .1    .1   1.8   1.9   2.6   2.6
 330.  *    .0    .4   1.6   2.3    .0    .0    .4    .4   2.1   2.4
1.2    .8    .0    .0    .1    .1   1.8   1.8   2.3   2.3
 340.  *    .1    .4   1.5   2.3    .1    .1    .4    .4   2.0   2.3
1.2    .8    .0    .0    .1    .1   1.8   1.7   2.3   2.3
 350.  *    .2    .5   1.7   2.3    .2    .2    .5    .5   1.6   1.8
1.5   1.0    .0    .0    .1    .1   1.8   1.7   2.3   2.3
 360.  *    .5    .5   1.7   2.4    .5    .5    .5    .5   1.2   1.1
1.5   1.5    .1    .1    .1    .1   1.8   1.7   2.4   2.3
 ------*----------------------------------------------------------------
--------------------------------------------------------
 MAX   *   3.0   2.7   4.6   4.0   1.7   1.6   1.7   1.5   3.0   2.6
2.6   2.5   2.7   2.6   2.7   2.9   3.4   3.3   4.0   4.0
 DEGR. *  100   110   280   280   170   180   180   180   290   290
60    40   260   260   260   260   280   280   280   280
```

THE HIGHEST CONCENTRATION OF 4.60 PPM OCCURRED AT RECEPTOR REC3 .

#13 of 36
Exit 151 Briargate/Voyager Intersection
2015 No-Action AM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2015 No Build AM
RUN: I-25 Analysis

DATE :  2/28/12
TIME : 10:50:31

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 =  11. CM
        U =  1.0 M/S         CLAS =   4  (D)     ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0        .0 *
3280.   360. AG   1310.   8.7    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0    3280.0 *
3280.   360. AG   1525.   8.7    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0     -24.0 *
3280.    90. AG   1155.   8.7    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0     -24.0 *
3280.    90. AG    675.   8.7    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0      30.0 *
3280.   270. AG   1090.   8.7    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0      30.0 *
3280.   270. AG   1335.   8.7    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0        .0 *
3280.   180. AG    995.   8.7    .0 44.0
```

```
       8. Voyager SB Dptr     *    -24.0         .0      -24.0   -3280.0 *
3280.   180. AG   1015.   8.7    .0 44.0
       9. Briargate EB Left Q *    -48.0        6.0      -86.8       6.0 *
39.    270. AG    292. 100.0    .0 24.0  .75   2.0
      10. Briargate EB Thru Q *    -48.0      -24.0      -89.0     -24.0 *
41.    270. AG    381. 100.0    .0 36.0  .39   2.1
      11. Briargate EB Right Q*    -48.0      -48.0     -370.1     -48.0 *
322.   270. AG    106. 100.0    .0 12.0 1.02  16.4
      12. Briargate WB Left Q *     48.0       12.0       67.1      12.0 *
19.     90. AG    148. 100.0    .0 12.0  .50   1.0
      13. Briargate WB Thru Q *     48.0       30.0      132.2      30.0 *
84.     90. AG    216. 100.0    .0 24.0  .59   4.3
      14. Briargate WB Right Q*     48.0       48.0       76.5      48.0 *
29.     90. AG     25. 100.0    .0 12.0  .35   1.4
      15. Voyager NB Left Q   *       .0      -54.0         .0    -116.6 *
63.    180. AG    267. 100.0    .0 24.0  .74   3.2
      16. Voyager NB Thru Q   *     24.0      -54.0       24.0    -202.2 *
148.   180. AG    216. 100.0    .0 24.0  .89   7.5
      17. Voyager NB Right Q  *     42.0      -54.0       42.0     -66.5 *
13.    180. AG    108. 100.0    .0 12.0  .09    .6
      18. Voyager SB Left Q   *     -6.0       54.0       -6.0     617.2 *
563.   360. AG    146. 100.0    .0 12.0 1.38  28.6
      19. Voyager SB Thru Q   *    -24.0       54.0      -24.0     124.8 *
71.    360. AG    242. 100.0    .0 24.0  .59   3.6
      20. Voyager SB Right Q  *    -42.0       54.0      -42.0      78.6 *
25.    360. AG     25. 100.0    .0 12.0  .30   1.3
```

PAGE 2
JOB: Exit 151 Briargate 2015 No Build AM
RUN: I-25 Analysis

DATE : 2/28/12
TIME : 10:50:31

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
9. Briargate EB Left Q	80	69	3.0	180	1600	63.20	2	3
10. Briargate EB Thru Q	80	60	3.0	375	1700	63.20	2	3
11. Briargate EB Right Q	80	50	3.0	510	1600	63.20	2	3
12. Briargate WB Left Q	80	70	3.0	50	1600	63.20	2	3
13. Briargate WB Thru Q	80	51	3.0	605	1700	63.20	2	3
14. Briargate WB Right Q	80	12	3.0	435	1600	63.20	2	3
15. Voyager NB Left Q	80	63	3.0	355	1600	63.20	2	3
16. Voyager NB Thru Q	80	51	3.0	910	1700	63.20	2	3
17. Voyager NB Right Q	80	51	3.0	45	1600	63.20	2	3
18. Voyager SB Left Q	80	69	3.0	165	1600	63.20	2	3
19. Voyager SB Thru Q	80	57	3.0	455	1700	63.20	2	3
20. Voyager SB Right Q	80	12	3.0	375	1600	63.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

COORDINATES (FT) apply to X, Y, Z columns.

PAGE 3
JOB: Exit 151 Briargate 2015 No Build AM
RUN: I-25 Analysis

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)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.6	1.2	1.4	2.5	.6	.6	1.2	1.2	1.1	1.1	1.7	1.5	.2	.2	.3	.1	.8	.5	1.0	1.0
10.	1.3	.3	.9	2.3	1.2	1.1	.3	.3	.5	.4	1.7	1.7	.5	.2	.0	.0	.4	.4	1.3	1.1
20.	1.3	.1	.7	1.5	1.0	1.0	.1	.1	.3	.3	1.4	1.4	.5	.3	.0	.0	.4	.4	1.6	1.2
30.	1.4	.1	.7	1.3	.9	.9	.1	.1	.3	.2	1.5	1.3	.5	.3	.0	.0	.4	.4	1.9	1.1
40.	1.5	.0	.6	1.1	.8	.8	.0	.0	.2	.2	1.6	1.2	.4	.3	.0	.0	.4	.4	1.9	1.2
50.	1.4	.0	.5	1.2	.7	.7	.0	.0	.2	.2	1.5	1.0	.4	.3	.0	.0	.4	.4	1.8	1.3
60.	1.4	.0	.5	1.1	.7	.7	.0	.0	.2	.2	1.2	1.0	.5	.3	.0	.0	.5	.5	2.0	1.5
70.	1.3	.0	.5	1.2	.6	.6	.0	.0	.2	.2	1.1	.8	.6	.5	.0	.0	.5	.5	1.8	1.5
80.	1.3	.1	.7	1.4	.6	.6	.0	.0	.3	.2	1.0	.8	.8	.7	.1	.1	.7	.7	1.3	1.5
90.	1.7	.5	.6	1.5	.8	.7	.1	.1	.2	.0	1.0	.5	1.3	1.3	.5	.5	.6	.6	1.0	1.1
100.	1.8	.8	.1	1.4	1.1	.8	.3	.2	.0	.0	.8	.5	1.4	1.6	.7	.7	.1	.1	.6	.4

110.	*	1.4	.8	.0	1.3	1.4	.8	.3	.2	.0	.0
.8	.5	1.4	1.6	.5	.5	.0	.0	.6	.4		
120.	*	1.0	1.1	.0	1.3	1.7	.9	.3	.2	.0	.0
.8	.5	1.5	1.6	.5	.5	.0	.0	.5	.3		
130.	*	1.0	1.1	.0	1.3	1.6	1.0	.2	.2	.0	.0
.7	.5	1.8	1.3	.4	.4	.0	.0	.3	.2		
140.	*	1.3	1.0	.0	1.2	1.6	1.0	.3	.2	.0	.0
.7	.6	1.7	1.0	.4	.4	.0	.0	.2	.2		
150.	*	1.7	1.0	.0	1.1	1.6	1.1	.4	.3	.0	.0
.7	.7	1.3	.9	.4	.4	.0	.0	.4	.2		
160.	*	1.9	1.2	.0	.9	1.4	1.4	.5	.3	.0	.0
.8	.8	1.2	.9	.5	.4	.0	.0	.4	.2		
170.	*	2.1	1.1	.1	1.0	1.6	1.7	.8	.5	.1	.1
1.0	1.0	1.1	.9	.5	.3	.0	.0	.4	.2		
180.	*	2.2	2.1	.7	.8	1.3	1.0	1.7	1.5	.6	.5
.8	.8	.9	.9	1.1	.5	.2	.1	.2	.2		
190.	*	1.8	2.1	1.1	.2	.9	.6	1.7	1.8	.9	.8
.2	.2	.7	.7	1.2	.6	.3	.3	.0	.0		
200.	*	1.6	1.6	1.3	.1	.6	.3	1.6	1.7	.9	.7
.1	.1	.7	.7	1.4	.7	.3	.2	.0	.0		
210.	*	1.3	1.3	1.3	.0	.4	.3	1.4	1.7	1.0	.6
.0	.0	.7	.7	1.5	.7	.4	.2	.0	.0		
220.	*	.9	1.4	1.5	.0	.4	.3	1.9	1.4	1.1	.6
.0	.0	.7	.7	1.6	.7	.5	.2	.0	.0		
230.	*	.8	1.6	1.7	.0	.4	.2	1.8	1.2	1.1	.6
.0	.0	.8	.8	1.6	.8	.5	.3	.0	.0		
240.	*	.9	1.8	1.5	.0	.3	.2	1.5	1.0	.9	.4
.0	.0	.9	.8	1.5	1.2	.6	.3	.0	.0		
250.	*	1.1	1.7	1.6	.0	.4	.3	1.4	1.1	1.0	.5
.0	.0	1.1	1.0	1.6	1.4	.6	.5	.0	.0		
260.	*	1.2	1.9	1.5	.2	.5	.3	1.3	1.1	.9	.4
.0	.0	1.2	1.2	1.6	1.6	1.0	.6	.2	.1		
270.	*	1.0	1.9	2.1	.9	.3	.1	1.1	1.0	1.1	.6
.2	.1	1.0	1.0	1.2	1.1	1.4	1.3	.9	.8		
280.	*	.3	1.3	2.0	1.3	.0	.0	.8	.8	1.5	.7
.4	.2	.3	.3	.7	.5	1.3	1.2	1.2	1.2		
290.	*	.1	1.2	1.6	1.4	.0	.0	.8	.8	1.8	.9
.5	.2	.1	.1	.5	.3	1.1	.9	1.2	1.2		
300.	*	.0	1.1	1.3	1.3	.0	.0	.8	.8	1.9	1.1
.4	.3	.0	.0	.4	.3	.7	1.1	1.0	1.0		
310.	*	.0	1.1	1.0	1.3	.0	.0	.9	.9	2.1	1.3
.4	.3	.0	.0	.4	.3	1.1	1.0	.8	.8		
320.	*	.0	1.1	1.1	1.7	.0	.0	1.0	1.0	1.9	1.7

```
.3    .3    .0    .0    .4    .3   1.2    .8    .8    .8
 330.  *    .0   1.1   1.4   1.9    .0    .0   1.1   1.1   1.7   1.8
.4    .3    .0    .0    .5    .4   1.1    .8    .8    .8
 340.  *    .0   1.3   1.4   1.9    .0    .0   1.3   1.3   1.5   2.0
.6    .5    .0    .0    .5    .4   1.2    .8    .8    .8
 350.  *    .1   1.7   1.7   1.8    .1    .1   1.7   1.5   1.4   1.7
.9    .7    .0    .0    .5    .3   1.1    .7    .8    .8
 360.  *    .6   1.2   1.4   2.5    .6    .6   1.2   1.2   1.1   1.1
1.7   1.5    .2    .2    .3    .1    .8    .5   1.0   1.0
 ------*-----------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.2   2.1   2.1   2.5   1.7   1.7   1.9   1.8   2.1   2.0
1.7   1.7   1.8   1.6   1.6   1.6   1.4   1.3   2.0   1.5
 DEGR. *  180   180   270     0   120   170   220   190   310   340
0    10   130   100   220   260   270   270    60    70
```

THE HIGHEST CONCENTRATION OF   2.50 PPM OCCURRED AT RECEPTOR REC4 .

#14 of 36
Exit 151 Briargate/Voyager Intersection
2025 No-Action AM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2025 No Build AM
RUN: I-25 Analysis

DATE :  2/23/12
TIME : 10: 7: 7

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S        VD =    .0 CM/S        Z0 =  11. CM
        U =  1.0 M/S          CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0         .0 *
3280.   360. AG   1725.   7.0    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0     3280.0 *
3280.   360. AG   1970.   7.0    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0      -24.0 *
3280.    90. AG   1520.   7.0    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0      -24.0 *
3280.    90. AG    875.   7.0    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0       30.0 *
3280.   270. AG   1325.   7.0    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0       30.0 *
3280.   270. AG   1735.   7.0    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0         .0 *
3280.   180. AG   1370.   7.0    .0 44.0
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       8. Voyager SB Dptr     *    -24.0         .0      -24.0   -3280.0 *
3280.   180. AG   1360.   7.0    .0 44.0
       9. Briargate EB Left Q *    -48.0        6.0     -117.6       6.0 *
70.    270. AG    239. 100.0    .0 24.0  .85   3.5
      10. Briargate EB Thru Q *    -48.0      -24.0     -125.0     -24.0 *
77.    270. AG    333. 100.0    .0 36.0  .69   3.9
      11. Briargate EB Right Q*    -48.0      -48.0    -3297.3     -48.0 *
3249.   270. AG     98. 100.0    .0 12.0 1.76 165.1
      12. Briargate WB Left Q *     48.0       12.0       76.2      12.0 *
28.     90. AG    119. 100.0    .0 12.0  .42   1.4
      13. Briargate WB Thru Q *     48.0       30.0      211.6      30.0 *
164.    90. AG    197. 100.0    .0 24.0  .90   8.3
      14. Briargate WB Right Q*     48.0       48.0       91.5      48.0 *
43.     90. AG     21. 100.0    .0 12.0  .41   2.2
      15. Voyager NB Left Q   *       .0      -54.0         .0    -168.0 *
114.   180. AG    216. 100.0    .0 24.0  .86   5.8
      16. Voyager NB Thru Q   *     24.0      -54.0       24.0    -288.7 *
235.   180. AG    161. 100.0    .0 24.0  .95  11.9
      17. Voyager NB Right Q  *     42.0      -54.0       42.0     -73.0 *
19.    180. AG     80. 100.0    .0 12.0  .10   1.0
      18. Voyager SB Left Q   *     -6.0       54.0       -6.0     758.3 *
704.   360. AG    118. 100.0    .0 12.0 1.34  35.8
      19. Voyager SB Thru Q   *    -24.0       54.0      -24.0     164.9 *
111.   360. AG    180. 100.0    .0 24.0  .61   5.6
      20. Voyager SB Right Q  *    -42.0       54.0      -42.0      97.5 *
43.    360. AG     21. 100.0    .0 12.0  .41   2.2
```

PAGE 2
JOB: Exit 151 Briargate 2025 No Build AM
RUN: I-25 Analysis

DATE : 2/23/12
TIME : 10: 7: 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
9. Briargate EB Left Q	100	86	3.0	245	1600	51.70	2	3
10. Briargate EB Thru Q	100	80	3.0	530	1700	51.70	2	3
11. Briargate EB Right Q	100	71	3.0	675	1600	51.70	2	3
12. Briargate WB Left Q	100	86	3.0	60	1600	51.70	2	3
13. Briargate WB Thru Q	100	71	3.0	735	1700	51.70	2	3
14. Briargate WB Right Q	100	15	3.0	530	1600	51.70	2	3
15. Voyager NB Left Q	100	78	3.0	470	1600	51.70	2	3
16. Voyager NB Thru Q	100	58	3.0	1195	1700	51.70	2	3
17. Voyager NB Right Q	100	58	3.0	60	1600	51.70	2	3
18. Voyager SB Left Q	100	85	3.0	215	1600	51.70	2	3
19. Voyager SB Thru Q	100	65	3.0	625	1700	51.70	2	3
20. Voyager SB Right Q	100	15	3.0	530	1600	51.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	X (FT)	Y (FT)	Z (FT)
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

PAGE 3
JOB: Exit 151 Briargate 2025 No Build AM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	.7	1.3	1.5	2.5	.7	.7	1.3	1.3	1.2	1.3	1.6	1.6	.2	.2	.3	.1	1.0	.6	1.4	1.0
10.	1.3	.3	.9	2.3	1.1	1.1	.3	.3	.5	.4	1.8	1.7	.5	.3	.0	.0	.7	.4	2.0	1.1
20.	1.4	.1	.8	1.6	.9	.9	.1	.1	.4	.3	1.5	1.5	.5	.4	.0	.0	.7	.4	2.4	1.2
30.	1.5	.1	.7	1.3	.9	.9	.1	.1	.4	.3	1.5	1.8	.5	.3	.0	.0	.6	.4	2.6	1.1
40.	1.4	.0	.7	1.1	.9	.8	.0	.0	.3	.2	1.7	1.5	.5	.3	.0	.0	.6	.4	2.5	1.2
50.	1.2	.0	.7	1.3	1.0	.7	.0	.0	.2	.2	1.5	1.2	.5	.3	.0	.0	.5	.4	2.1	1.5
60.	1.2	.0	.7	1.2	1.1	.7	.0	.0	.2	.2	1.4	1.0	.6	.4	.0	.0	.5	.5	2.1	1.8
70.	1.2	.0	.6	1.3	1.1	.7	.0	.0	.2	.2	1.3	.9	.6	.5	.0	.0	.5	.5	1.8	1.9
80.	1.3	.1	.6	1.3	1.1	.7	.0	.0	.2	.2	1.3	.9	.9	.7	.1	.1	.6	.6	1.3	1.7
90.	2.0	.6	.6	1.4	1.3	.8	.1	.1	.2	.0	1.3	.7	1.3	1.3	.5	.5	.6	.6	1.0	1.1
100.	2.0	1.1	.1	1.2	1.4	.9	.3	.2	.0	.0	1.1	.7	1.5	1.8	.8	.7	.1	.1	.6	.4

```
 110.  *   1.6   1.1    .0   1.1   1.5    .9    .3    .2    .0    .0
1.0    .7   1.5   1.7    .8    .5    .0    .0    .5    .4
 120.  *   1.2   1.2    .0   1.2   1.6   1.0    .4    .2    .0    .0
 .9    .7   1.6   1.7   1.0    .5    .0    .0    .6    .4
 130.  *   1.2   1.0    .0   1.3   1.5   1.0    .4    .2    .0    .0
1.0    .7   2.0   1.4    .9    .4    .0    .0    .5    .3
 140.  *   1.3   1.0    .0   1.5   1.5   1.2    .4    .3    .0    .0
1.0    .8   2.3   1.2    .9    .4    .0    .0    .5    .2
 150.  *   1.6   1.1    .0   1.5   1.4   1.4    .5    .4    .0    .0
1.0    .8   2.1    .9    .9    .4    .0    .0    .5    .2
 160.  *   2.0    .9    .0   1.3   1.4   1.7    .5    .4    .0    .0
1.0    .9   1.7    .9    .8    .3    .0    .0    .4    .2
 170.  *   2.2   1.1    .1   1.4   1.7   1.7    .8    .6    .1    .1
1.2   1.2   1.3    .9    .7    .4    .0    .0    .4    .2
 180.  *   2.1   2.2    .9    .9   1.4   1.2   1.7   1.5    .8    .7
 .9    .9   1.0    .9   1.2    .8    .2    .1    .2    .2
 190.  *   1.8   2.2   1.3    .2   1.0    .6   1.8   1.7   1.2   1.0
 .2    .2    .7    .7   1.3   1.0    .5    .3    .0    .0
 200.  *   1.8   1.6   1.4    .1    .8    .5   1.6   1.9   1.2   1.0
 .1    .1    .7    .7   1.3   1.1    .4    .3    .0    .0
 210.  *   1.7   1.4   1.6    .0    .6    .3   1.6   1.8   1.2   1.0
 .0    .0    .7    .7   1.6   1.2    .5    .2    .0    .0
 220.  *   1.5   1.3   1.6    .0    .4    .3   1.9   1.7   1.0   1.0
 .0    .0    .8    .8   1.6   1.3    .5    .3    .0    .0
 230.  *   1.2   1.7   1.6    .0    .4    .3   1.8   1.3   1.1   1.0
 .0    .0    .8    .8   1.4   1.3    .6    .3    .0    .0
 240.  *   1.2   2.0   1.6    .0    .5    .3   1.6   1.2   1.2   1.0
 .0    .0   1.0   1.0   1.6   1.6    .7    .4    .0    .0
 250.  *   1.1   1.8   1.4    .0    .5    .4   1.6   1.2   1.2    .9
 .0    .0   1.1   1.1   1.7   2.0    .7    .4    .0    .0
 260.  *   1.5   2.0   1.7    .2    .6    .4   1.7   1.2   1.3    .9
 .0    .0   1.5   1.5   1.7   1.8    .9    .7    .2    .2
 270.  *   1.2   1.8   2.3   1.0    .4    .2   1.5   1.0   1.6   1.2
 .3    .2   1.2   1.2   1.3   1.1   1.8   1.4   1.0   1.0
 280.  *    .3   1.2   2.1   1.5    .0    .0   1.0    .8   1.9   1.3
 .6    .3    .3    .3    .7    .5   1.5   1.2   1.4   1.4
 290.  *    .1   1.1   1.7   1.6    .0    .0    .9    .8   2.0   1.2
 .5    .3    .1    .1    .6    .4   1.1    .9   1.2   1.2
 300.  *    .0   1.2   1.4   1.7    .0    .0    .9    .9   2.1   1.4
 .5    .3    .0    .0    .5    .3    .8   1.1   1.0   1.0
 310.  *    .0   1.2   1.0   1.8    .0    .0    .9    .9   2.2   1.6
 .4    .3    .0    .0    .4    .3   1.1   1.1    .9    .9
 320.  *    .0   1.2   1.1   2.0    .0    .0   1.0   1.0   1.7   1.9
```

```
.5    .3    .0    .0    .4    .4   1.1   1.0    .8    .8
 330.  *    .0   1.2   1.4   1.9    .0    .0   1.1   1.1   1.5   2.0
.7    .4    .0    .0    .4    .4   1.1   1.1    .8    .8
 340.  *    .0   1.4   1.6   1.7    .0    .0   1.3   1.3   1.4   2.0
1.0    .7    .0    .0    .6    .4   1.2   1.0    .8    .8
 350.  *    .1   1.6   1.9   1.9    .1    .1   1.6   1.6   1.7   1.5
1.0    .8    .0    .0    .6    .3   1.3    .9    .9    .8
 360.  *    .7   1.3   1.5   2.5    .7    .7   1.3   1.3   1.2   1.3
1.6   1.6    .2    .2    .3    .1   1.0    .6   1.4   1.0
 ------*------------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.2   2.2   2.3   2.5   1.7   1.7   1.9   1.9   2.2   2.0
1.8   1.8   2.3   1.8   1.7   2.0   1.8   1.4   2.6   1.9
 DEGR. *  170   190   270     0   170   160   220   200   310   340
10    30   140   100   260   250   270   270    30    70
```

THE HIGHEST CONCENTRATION OF   2.60 PPM OCCURRED AT RECEPTOR REC19.

#15 of 36
Exit 151 Briargate/Voyager Intersection
2035 No-Action AM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2035 No Build AM                  RUN: I-25
Analysis

DATE :  2/23/12
TIME :  8:23:53

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 =  11. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0         .0 *
3280.   360. AG   2125.   6.7    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0    3280.0 *
3280.   360. AG   2410.   6.7    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0     -24.0 *
3280.    90. AG   1875.   6.7    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0     -24.0 *
3280.    90. AG   1065.   6.7    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0      30.0 *
3280.   270. AG   1560.   6.7    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0      30.0 *
3280.   270. AG   2130.   6.7    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0         .0 *
3280.   180. AG   1745.   6.7    .0 44.0
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       8. Voyager SB Dptr     *    -24.0         .0      -24.0   -3280.0 *
3280.   180. AG   1700.   6.7    .0 44.0
       9. Briargate EB Left Q *    -48.0        6.0     -265.3       6.0 *
217.   270. AG    232. 100.0    .0 24.0 1.05  11.0
      10. Briargate EB Thru Q *    -48.0      -24.0     -709.0     -24.0 *
661.   270. AG    342. 100.0    .0 36.0 1.25  33.6
      11. Briargate EB Right Q*    -48.0      -48.0   -3625.4     -48.0 *
3577.   270. AG     85. 100.0    .0 12.0 1.59 181.7
      12. Briargate WB Left Q *     48.0       12.0      260.5      12.0 *
212.    90. AG    124. 100.0    .0 12.0 1.23  10.8
      13. Briargate WB Thru Q *     48.0       30.0      307.0      30.0 *
259.    90. AG    184. 100.0    .0 24.0  .94  13.2
      14. Briargate WB Right Q*     48.0       48.0      119.8      48.0 *
72.    90. AG     20. 100.0    .0 12.0  .48   3.6
      15. Voyager NB Left Q   *       .0      -54.0         .0    -256.1 *
202.   180. AG    205. 100.0    .0 24.0  .94  10.3
      16. Voyager NB Thru Q   *     24.0      -54.0       24.0    -657.6 *
604.   180. AG    144. 100.0    .0 24.0 1.03  30.7
      17. Voyager NB Right Q  *     42.0      -54.0       42.0     -83.1 *
29.   180. AG     72. 100.0    .0 12.0  .10   1.5
      18. Voyager SB Left Q   *     -6.0       54.0       -6.0    1810.6 *
1757.   360. AG    119. 100.0    .0 12.0 2.32  89.2
      19. Voyager SB Thru Q   *    -24.0       54.0      -24.0     255.9 *
202.   360. AG    177. 100.0    .0 24.0  .78  10.3
      20. Voyager SB Right Q  *    -42.0       54.0      -42.0     132.7 *
79.   360. AG     20. 100.0    .0 12.0  .53   4.0
```

PAGE 2
JOB: Exit 151 Briargate 2035 No Build AM
RUN: I-25 Analysis

DATE : 2/23/12
TIME : 8:23:53

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
9. Briargate EB Left Q	140	122	3.0	310	1600	49.60	2	3
10. Briargate EB Thru Q	140	120	3.0	685	1700	49.60	2	3
11. Briargate EB Right Q	140	89	3.0	835	1600	49.60	2	3
12. Briargate WB Left Q	140	130	3.0	70	1600	49.60	2	3
13. Briargate WB Thru Q	140	97	3.0	865	1700	49.60	2	3
14. Briargate WB Right Q	140	21	3.0	625	1600	49.60	2	3
15. Voyager NB Left Q	140	108	3.0	580	1600	49.60	2	3
16. Voyager NB Thru Q	140	76	3.0	1475	1700	49.60	2	3
17. Voyager NB Right Q	140	76	3.0	70	1600	49.60	2	3
18. Voyager SB Left Q	140	125	3.0	265	1600	49.60	2	3
19. Voyager SB Thru Q	140	93	3.0	795	1700	49.60	2	3
20. Voyager SB Right Q	140	21	3.0	685	1600	49.60	2	3

RECEPTOR LOCATIONS

RECEPTOR	X (FT)	Y (FT)	Z (FT)
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

PAGE 3
JOB: Exit 151 Briargate 2035 No Build AM
RUN: I-25 Analysis

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	1.5	1.7	2.7	1.0	1.0	1.5	1.5	1.4	1.3	2.1	1.8	.3	.2	.4	.2	1.3	1.1	2.2	2.0
10.	1.7	.4	.9	2.7	1.5	1.3	.4	.4	.5	.5	2.1	2.0	.6	.5	.0	.0	.9	.9	2.7	2.4
20.	1.8	.1	.8	1.8	1.6	1.2	.1	.1	.5	.4	1.6	1.7	.5	.5	.0	.0	.8	.7	2.7	2.3
30.	1.6	.1	.9	1.4	1.5	1.1	.1	.1	.5	.4	1.5	1.9	.6	.4	.0	.0	.9	.8	2.6	2.6
40.	1.5	.1	1.0	1.5	1.4	1.1	.1	.1	.5	.3	1.9	1.9	.7	.4	.0	.0	1.0	.7	2.6	2.6
50.	1.4	.0	1.0	1.5	1.3	1.3	.0	.0	.4	.2	1.8	1.6	.7	.4	.0	.0	1.0	.6	2.4	2.7
60.	1.4	.0	1.0	1.6	1.2	1.2	.0	.0	.3	.2	1.7	1.5	.8	.5	.0	.0	.8	.5	2.1	2.7
70.	1.3	.0	.9	1.8	1.2	1.2	.0	.0	.3	.2	1.5	1.5	.8	.5	.0	.0	.7	.6	2.0	2.7
80.	1.4	.1	1.0	1.8	1.2	1.2	.0	.0	.4	.2	1.7	1.5	1.1	.8	.1	.1	.8	.8	1.6	1.9
90.	2.2	.7	.7	1.7	1.4	1.3	.2	.1	.2	.0	1.5	1.3	1.8	1.6	.6	.5	.7	.7	1.2	1.2
100.	2.3	1.4	.2	1.4	1.6	1.5	.3	.2	.0	.0	1.3	1.3	1.7	2.1	1.2	.9	.2	.2	.8	.5

110. * 1.8 1.6 .0 1.3 1.8 1.4 .4 .2 .0 .0
1.3 1.2 1.7 2.1 1.3 1.0 .0 .0 .6 .5
120. * 1.5 1.5 .0 1.3 1.9 1.5 .6 .2 .0 .0
1.3 1.1 1.8 2.6 1.3 1.1 .0 .0 .7 .5
130. * 1.4 1.3 .0 1.3 2.0 1.8 .6 .3 .0 .0
1.3 1.0 2.3 2.5 1.2 1.1 .0 .0 .7 .4
140. * 1.6 1.2 .0 1.6 2.0 1.8 .7 .6 .0 .0
1.5 1.1 2.5 2.3 1.0 .9 .0 .0 .8 .3
150. * 1.8 1.2 .0 1.6 1.8 1.9 .6 .6 .0 .0
1.5 1.1 2.8 2.3 1.1 1.1 .0 .0 .7 .3
160. * 2.2 1.1 .0 1.8 2.0 2.0 .6 .5 .0 .0
1.6 1.4 2.5 2.2 1.0 1.0 .0 .0 .5 .5
170. * 2.6 1.2 .2 1.8 2.0 2.2 1.0 .9 .2 .1
1.6 1.5 2.2 2.2 1.0 1.0 .0 .0 .6 .4
180. * 2.4 2.4 1.1 1.3 1.6 1.4 1.9 1.9 1.1 1.0
1.2 1.2 2.0 2.0 1.4 1.2 .3 .2 .3 .2
190. * 1.7 2.6 1.7 .3 1.0 .7 2.1 2.1 1.6 1.6
.3 .3 1.8 1.7 1.7 1.4 .6 .3 .0 .0
200. * 1.8 2.1 1.9 .1 1.0 .7 1.8 2.2 1.7 1.4
.1 .1 1.8 1.8 1.8 1.4 .7 .4 .0 .0
210. * 2.0 1.5 1.8 .0 1.0 .7 1.8 2.0 1.5 1.2
.0 .0 2.0 1.9 2.0 1.6 .7 .4 .0 .0
220. * 1.9 1.6 1.7 .0 1.1 .6 2.3 2.1 1.5 1.1
.0 .0 1.9 1.7 1.6 1.5 .7 .4 .0 .0
230. * 2.2 2.0 1.5 .0 1.1 .8 2.4 2.1 1.4 1.1
.0 .0 2.2 1.9 2.0 1.6 .7 .4 .0 .0
240. * 2.4 2.5 1.4 .0 1.1 .7 2.3 2.0 1.3 1.2
.0 .0 2.3 1.8 2.0 1.8 .7 .4 .0 .0
250. * 2.6 2.8 1.4 .0 1.0 .7 2.3 1.8 1.2 1.2
.0 .0 2.4 2.0 2.3 2.2 .6 .5 .0 .0
260. * 2.5 2.9 1.7 .3 .8 .4 2.0 1.7 1.2 1.2
.0 .0 2.3 2.1 2.4 2.3 1.1 .9 .3 .3
270. * 1.6 2.3 3.1 1.8 .3 .2 1.6 1.5 1.7 1.5
.4 .3 1.5 1.5 1.7 1.6 2.4 2.1 1.7 1.7
280. * .4 1.3 3.3 2.8 .0 .0 1.2 1.1 2.3 1.8
.9 .6 .4 .4 .7 .6 2.4 1.9 2.7 2.7
290. * .1 1.2 2.4 2.8 .0 .0 1.2 1.1 2.5 2.0
1.0 .8 .1 .1 .6 .4 1.4 1.4 2.6 2.5
300. * .1 1.2 1.6 2.6 .0 .0 1.2 1.0 2.5 2.2
1.1 .8 .1 .1 .6 .5 1.2 1.3 2.5 2.2
310. * .0 1.3 1.3 2.4 .0 .0 1.3 1.0 2.2 2.2
1.2 .6 .0 .0 .7 .5 1.2 1.5 2.4 2.1
320. * .0 1.4 1.4 2.1 .0 .0 1.3 1.1 2.2 2.3

```
1.0    .7    .0    .0    .6    .4   1.5   1.5   2.1   1.9
 330.  *    .0   1.6   1.5   2.1    .0    .0   1.4   1.3   1.5   2.0
1.1    .8    .0    .0    .6    .4   1.6   1.3   2.1   2.0
 340.  *    .0   1.8   1.8   1.9    .0    .0   1.6   1.6   1.8   2.1
1.1    .9    .0    .0    .6    .4   1.3   1.2   1.8   1.8
 350.  *    .1   2.1   2.2   2.1    .1    .1   2.0   2.0   1.8   2.0
1.4    .9    .0    .0    .7    .4   1.5   1.3   1.9   1.8
 360.  *   1.1   1.5   1.7   2.7   1.0   1.0   1.5   1.5   1.4   1.3
2.1   1.8    .3    .2    .4    .2   1.3   1.1   2.2   2.0
 ------*------------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.6   2.9   3.3   2.8   2.0   2.2   2.4   2.2   2.5   2.3
2.1   2.0   2.8   2.6   2.4   2.3   2.4   2.1   2.7   2.7
 DEGR. *  170   260   280   280   130   170   230   200   300   320
0    10   150   120   260   260   280   270    10    70
```

THE HIGHEST CONCENTRATION OF   3.30 PPM OCCURRED AT RECEPTOR REC3 .

#16 of 36
Exit 151 Briargate/Voyager Intersection
2015 No-Action Action PM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2015 No Build PM
RUN: I-25 Analysis

DATE :  2/28/12
TIME : 11: 7:46

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 =  11. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0        .0 *
3280.   360. AG   1130.   8.7    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0    3280.0 *
3280.   360. AG   1105.   8.7    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0     -24.0 *
3280.    90. AG   1000.   8.7    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0     -24.0 *
3280.    90. AG    895.   8.7    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0      30.0 *
3280.   270. AG    880.   8.7    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0      30.0 *
3280.   270. AG   1005.   8.7    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0        .0 *
3280.   180. AG   1630.   8.7    .0 44.0
```

```
       8. Voyager SB Dptr     *    -24.0        .0     -24.0   -3280.0 *
3280.   180. AG   1635.   8.7    .0 44.0
       9. Briargate EB Left Q *    -48.0       6.0     -72.6       6.0 *
25.    270. AG    302. 100.0    .0 24.0  .63   1.2
      10. Briargate EB Thru Q *    -48.0     -24.0     -66.4     -24.0 *
18.    270. AG    396. 100.0    .0 36.0  .17    .9
      11. Briargate EB Right Q*    -48.0     -48.0   -1297.8     -48.0 *
1250.   270. AG    128. 100.0    .0 12.0 1.34  63.5
      12. Briargate WB Left Q *     48.0      12.0      77.9      12.0 *
30.     90. AG    147. 100.0    .0 12.0  .56   1.5
      13. Briargate WB Thru Q *     48.0      30.0     131.7      30.0 *
84.     90. AG    249. 100.0    .0 24.0  .65   4.3
      14. Briargate WB Right Q*     48.0      48.0      74.4      48.0 *
26.     90. AG     26. 100.0    .0 12.0  .27   1.3
      15. Voyager NB Left Q   *       .0     -54.0        .0    -144.7 *
91.    180. AG    272. 100.0    .0 24.0  .85   4.6
      16. Voyager NB Thru Q   *     24.0     -54.0      24.0    -162.4 *
108.    180. AG    230. 100.0    .0 24.0  .72   5.5
      17. Voyager NB Right Q  *     42.0     -54.0      42.0     -82.4 *
28.    180. AG    115. 100.0    .0 12.0  .20   1.4
      18. Voyager SB Left Q   *     -6.0      54.0      -6.0     172.9 *
119.    360. AG    119. 100.0    .0 12.0  .83   6.0
      19. Voyager SB Thru Q   *    -24.0      54.0     -24.0     255.1 *
201.    360. AG    196. 100.0    .0 24.0  .93  10.2
      20. Voyager SB Right Q  *    -42.0      54.0     -42.0      65.1 *
11.    360. AG     26. 100.0    .0 12.0  .11    .6
```

PAGE 2
JOB: Exit 151 Briargate 2015 No Build PM
RUN: I-25 Analysis

ATE : 2/28/12
TIME : 11: 7:46

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
9. Briargate EB Left Q	90	80	3.0	110	1600	63.30	2	3
10. Briargate EB Thru Q	90	70	3.0	145	1700	63.30	2	3
11. Briargate EB Right Q	90	68	3.0	405	1600	63.30	2	3
12. Briargate WB Left Q	90	78	3.0	70	1600	63.30	2	3
13. Briargate WB Thru Q	90	66	3.0	465	1700	63.30	2	3
14. Briargate WB Right Q	90	14	3.0	345	1600	63.30	2	3
15. Voyager NB Left Q	90	72	3.0	395	1600	63.30	2	3
16. Voyager NB Thru Q	90	61	3.0	650	1700	63.30	2	3
17. Voyager NB Right Q	90	61	3.0	85	1600	63.30	2	3
18. Voyager SB Left Q	90	63	3.0	325	1600	63.30	2	3
19. Voyager SB Thru Q	90	52	3.0	1160	1700	63.30	2	3
20. Voyager SB Right Q	90	14	3.0	145	1600	63.30	2	3

RECEPTOR LOCATIONS

RECEPTOR	X (FT)	Y (FT)	Z (FT)
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

PAGE 3
JOB: Exit 151 Briargate 2015 No Build PM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	.9	1.0	1.4	2.5	.9	.8	1.0	1.0	1.1	1.0	1.9	1.8	.3	.1	.2	.2	.7	.6	.9	.7
10.	1.4	.2	.8	2.4	1.2	1.0	.2	.2	.5	.4	2.0	2.0	.5	.3	.0	.0	.3	.3	1.2	.9
20.	1.5	.1	.7	1.6	1.3	.8	.1	.1	.4	.3	1.7	2.1	.4	.3	.0	.0	.3	.3	1.4	1.0
30.	1.5	.0	.6	1.3	1.2	.8	.0	.0	.3	.2	1.8	1.8	.4	.3	.0	.0	.3	.3	1.5	1.1
40.	1.4	.0	.6	1.3	1.2	1.0	.0	.0	.2	.2	1.9	1.4	.5	.4	.0	.0	.4	.4	1.6	1.3
50.	1.3	.0	.5	1.4	1.2	1.0	.0	.0	.2	.2	2.0	1.0	.6	.3	.0	.0	.4	.4	1.6	1.2
60.	1.4	.0	.5	1.4	1.2	1.1	.0	.0	.2	.2	1.7	.9	.6	.4	.0	.0	.5	.5	1.7	1.3
70.	1.3	.0	.6	1.4	1.3	1.1	.0	.0	.3	.2	1.7	.8	.6	.6	.0	.0	.6	.6	1.6	1.7
80.	1.3	.1	.8	1.6	1.2	1.0	.0	.0	.3	.2	1.6	.8	.8	.6	.1	.1	.8	.8	1.7	1.5
90.	1.9	.4	.6	2.0	1.4	1.1	.2	.0	.2	.1	1.4	.7	1.3	1.1	.4	.4	.6	.6	1.1	1.0
100.	1.9	.7	.2	1.6	1.5	1.2	.3	.2	.0	.0	.9	.6	1.2	1.1	.6	.6	.2	.2	.9	.7

110.	*	1.5	.9	.0	1.4	1.7	1.3	.2	.2	.0	.0	.7	.6	1.3	1.3	.5	.5	.0	.0	.8	.4
120.	*	1.2	1.2	.0	1.6	1.7	1.3	.2	.2	.0	.0	.7	.7	1.4	1.2	.5	.5	.0	.0	.6	.2
130.	*	.9	1.2	.0	1.6	1.7	1.5	.2	.2	.0	.0	.7	.7	1.6	1.1	.5	.5	.0	.0	.5	.2
140.	*	1.4	1.0	.0	1.6	1.7	1.7	.3	.2	.0	.0	.8	.8	1.3	.9	.3	.3	.0	.0	.3	.3
150.	*	1.6	1.1	.0	1.4	1.7	1.8	.4	.2	.0	.0	.9	.9	1.1	.9	.3	.3	.0	.0	.4	.3
160.	*	2.1	1.1	.0	1.3	1.7	1.8	.6	.4	.0	.0	1.2	1.2	1.0	.9	.4	.3	.0	.0	.5	.3
170.	*	2.4	1.4	.1	1.4	1.9	1.6	.8	.8	.1	.1	1.4	1.4	1.1	.9	.5	.3	.0	.0	.5	.3
180.	*	2.2	1.9	.6	1.2	1.4	1.4	1.5	1.5	.6	.6	1.2	1.2	.9	.7	.9	.5	.2	.2	.3	.1
190.	*	1.3	2.1	1.1	.4	.6	.4	1.7	1.5	.9	.9	.4	.4	.6	.6	1.2	.6	.4	.3	.0	.0
200.	*	.9	1.7	1.4	.1	.3	.3	1.3	1.4	.7	.7	.1	.1	.6	.6	1.4	.6	.4	.3	.0	.0
210.	*	.7	1.3	1.8	.1	.3	.3	1.4	1.6	.7	.7	.1	.1	.6	.6	1.6	.5	.4	.2	.0	.0
220.	*	.6	1.2	1.9	.0	.3	.3	1.6	1.4	.8	.6	.0	.0	.6	.6	1.8	.7	.4	.2	.0	.0
230.	*	.7	1.5	1.9	.0	.3	.3	1.5	1.4	.8	.5	.0	.0	.7	.7	1.6	.8	.6	.2	.0	.0
240.	*	.8	1.4	1.9	.0	.4	.3	1.4	1.2	1.0	.5	.0	.0	.8	.8	1.7	1.0	.7	.3	.0	.0
250.	*	.9	1.5	1.7	.0	.4	.3	1.5	1.2	1.1	.5	.0	.0	.9	.9	1.7	1.2	.6	.5	.0	.0
260.	*	1.2	1.6	1.9	.2	.4	.2	1.5	1.1	1.2	.5	.0	.0	1.2	1.2	1.3	1.3	1.0	.8	.2	.2
270.	*	.9	1.4	2.2	.9	.2	.1	1.3	1.0	1.7	.6	.3	.1	.9	.9	1.0	.9	1.5	1.4	.9	.9
280.	*	.2	1.2	1.8	1.4	.0	.0	1.1	.9	1.9	.8	.5	.3	.2	.2	.7	.5	1.3	1.1	1.4	1.4
290.	*	.1	1.1	1.4	1.2	.0	.0	1.0	.8	2.0	.8	.5	.3	.1	.1	.5	.4	1.1	.9	1.2	1.2
300.	*	.0	1.1	1.3	1.0	.0	.0	1.0	.7	2.0	.8	.4	.3	.0	.0	.6	.3	1.0	.9	1.0	1.0
310.	*	.0	1.2	1.2	1.0	.0	.0	1.0	.7	2.0	.9	.3	.3	.0	.0	.5	.3	1.2	1.0	.9	.9
320.	*	.0	1.2	1.2	1.0	.0	.0	1.0	.7	2.0	1.3										

```
.3    .3    .0    .0    .5    .2   1.4    .8    .8    .8
 330.  *    .0   1.2   1.3   1.2    .0    .0   1.0    .8   1.8   1.8
.4    .4    .0    .0    .4    .2   1.1    .5    .7    .7
 340.  *    .0   1.3   1.4   1.5    .0    .0   1.0   1.0   1.5   1.9
.5    .4    .0    .0    .4    .3   1.0    .6    .7    .7
 350.  *    .1   1.3   1.6   1.8    .1    .1   1.2   1.2   1.7   1.6
1.0    .7    .0    .0    .4    .3    .9    .6    .6    .6
 360.  *    .9   1.0   1.4   2.5    .9    .8   1.0   1.0   1.1   1.0
1.9   1.8    .3    .1    .2    .2    .7    .6    .9    .7
 ------*------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.4   2.1   2.2   2.5   1.9   1.8   1.7   1.6   2.0   1.9
2.0   2.1   1.6   1.3   1.8   1.3   1.5   1.4   1.7   1.7
 DEGR. *  170   190   270     0   170   150   190   210   290   340
10    20   130   110   220   260   270   270    60    70
```

THE HIGHEST CONCENTRATION OF 2.50 PPM OCCURRED AT RECEPTOR REC4 .

#17 of 36
Exit 151 Briargate/Voyager Intersection
2025 No-Action PM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2025 No Build PM
RUN: I-25 Analysis

DATE :  2/23/12
TIME : 11: 5:14

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 =  11. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0         .0 *
3280.   360. AG   1385.   7.0    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0     3280.0 *
3280.   360. AG   1370.   7.0    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0      -24.0 *
3280.    90. AG   1330.   7.0    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0      -24.0 *
3280.    90. AG   1045.   7.0    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0       30.0 *
3280.   270. AG   1060.   7.0    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0       30.0 *
3280.   270. AG   1350.   7.0    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0         .0 *
3280.   180. AG   1985.   7.0    .0 44.0
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       8. Voyager SB Dptr      *     -24.0         .0      -24.0   -3280.0 *
3280.   180. AG   1995.   7.0    .0 44.0
       9. Briargate EB Left Q *     -48.0        6.0     -128.3       6.0 *
80.   270. AG    245. 100.0    .0 24.0  .90   4.1
      10. Briargate EB Thru Q *     -48.0      -24.0      -97.8     -24.0 *
50.   270. AG    347. 100.0    .0 36.0  .43   2.5
      11. Briargate EB Right Q*     -48.0      -48.0    -2491.4     -48.0 *
2443.   270. AG    105. 100.0    .0 12.0 1.66 124.1
      12. Briargate WB Left Q *      48.0       12.0      191.2      12.0 *
143.    90. AG    124. 100.0    .0 12.0 1.04   7.3
      13. Briargate WB Thru Q *      48.0       30.0      201.3      30.0 *
153.    90. AG    213. 100.0    .0 24.0  .87   7.8
      14. Briargate WB Right Q*      48.0       48.0       85.9      48.0 *
38.    90. AG     21. 100.0    .0 12.0  .30   1.9
      15. Voyager NB Left Q   *        .0      -54.0         .0    -404.9 *
351.   180. AG    224. 100.0    .0 24.0 1.07  17.8
      16. Voyager NB Thru Q   *      24.0      -54.0       24.0    -195.0 *
141.   180. AG    155. 100.0    .0 24.0  .57   7.2
      17. Voyager NB Right Q  *      42.0      -54.0       42.0     -92.5 *
38.   180. AG     77. 100.0    .0 12.0  .16   2.0
      18. Voyager SB Left Q   *      -6.0       54.0       -6.0    1190.6 *
1137.   360. AG    110. 100.0    .0 12.0 1.33  57.7
      19. Voyager SB Thru Q   *     -24.0       54.0      -24.0     342.7 *
289.   360. AG    150. 100.0    .0 24.0  .96  14.7
      20. Voyager SB Right Q  *     -42.0       54.0      -42.0      81.1 *
27.   360. AG     21. 100.0    .0 12.0  .21   1.4
```

PAGE 2
JOB: Exit 151 Briargate 2025 No Build PM
RUN: I-25 Analysis

DATE : 2/23/12
TIME : 11: 5:14

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
9. Briargate EB Left Q	120	106	3.0	215	1600	51.70	2	3
10. Briargate EB Thru Q	120	100	3.0	275	1700	51.70	2	3
11. Briargate EB Right Q	120	91	3.0	530	1600	51.70	2	3
12. Briargate WB Left Q	120	107	3.0	110	1600	51.70	2	3
13. Briargate WB Thru Q	120	92	3.0	565	1700	51.70	2	3
14. Briargate WB Right Q	120	18	3.0	385	1600	51.70	2	3
15. Voyager NB Left Q	120	97	3.0	510	1600	51.70	2	3
16. Voyager NB Thru Q	120	67	3.0	770	1700	51.70	2	3
17. Voyager NB Right Q	120	67	3.0	105	1600	51.70	2	3
18. Voyager SB Left Q	120	95	3.0	355	1600	51.70	2	3
19. Voyager SB Thru Q	120	65	3.0	1355	1700	51.70	2	3
20. Voyager SB Right Q	120	18	3.0	275	1600	51.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	X (FT)	Y (FT)	Z (FT)
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

PAGE 3
JOB: Exit 151 Briargate 2025 No Build PM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	1.0	1.1	1.3	2.7	.9	.8	1.1	1.1	1.1	1.2	2.1	1.8	.3	.1	.2	.2	1.0	.5	1.2	.8
10.	1.7	.2	.8	2.4	1.6	1.4	.2	.2	.6	.5	2.1	1.9	.6	.4	.0	.0	.8	.3	1.6	1.0
20.	1.5	.1	.8	1.6	1.5	1.4	.1	.1	.5	.4	1.5	2.0	.6	.4	.0	.0	.8	.3	1.9	1.0
30.	1.4	.0	.8	1.3	1.3	1.3	.0	.0	.5	.3	1.8	2.0	.6	.4	.0	.0	.6	.3	2.0	1.2
40.	1.4	.0	.9	1.3	1.3	1.3	.0	.0	.4	.2	2.0	2.0	.6	.4	.0	.0	.6	.4	2.0	1.4
50.	1.3	.0	.9	1.4	1.2	1.2	.0	.0	.2	.2	1.7	1.6	.6	.4	.0	.0	.4	.4	1.8	1.4
60.	1.3	.0	.8	1.5	1.2	1.2	.0	.0	.2	.2	1.6	1.5	.6	.4	.0	.0	.5	.5	2.0	1.5
70.	1.0	.0	.8	1.6	1.1	1.1	.0	.0	.3	.2	1.4	1.3	.7	.5	.0	.0	.6	.6	2.0	2.0
80.	1.2	.1	.7	1.6	1.1	1.1	.0	.0	.3	.2	1.5	1.2	.8	.6	.1	.1	.7	.7	1.6	1.7
90.	1.9	.5	.6	1.8	1.3	1.2	.2	.0	.2	.0	1.5	1.1	1.4	1.1	.4	.4	.6	.6	1.0	1.1
100.	2.1	1.0	.2	1.4	1.4	1.3	.3	.2	.0	.0	1.2	1.0	1.5	1.6	.7	.6	.2	.2	.7	.6

110.	*	1.5	1.2	.0	1.2	1.5	1.3	.2	.2	.0	.0
1.2	1.0	1.4	1.4	.8	.5	.0	.0	.6	.5		
120.	*	1.3	1.4	.0	1.3	1.7	1.5	.3	.2	.0	.0
1.3	1.1	1.6	1.5	1.0	.5	.0	.0	.6	.5		
130.	*	1.0	1.3	.0	1.5	1.7	1.5	.4	.2	.0	.0
1.3	1.2	1.9	1.4	1.0	.4	.0	.0	.6	.4		
140.	*	1.4	1.1	.0	1.5	1.6	1.8	.5	.3	.0	.0
1.3	1.3	2.2	1.1	1.0	.3	.0	.0	.6	.5		
150.	*	1.6	1.1	.0	1.7	1.5	1.6	.5	.4	.0	.0
1.5	1.4	2.0	1.0	1.0	.3	.0	.0	.6	.4		
160.	*	2.2	1.0	.0	1.8	1.6	1.6	.6	.6	.0	.0
1.7	1.6	1.6	1.0	1.0	.3	.0	.0	.7	.3		
170.	*	2.6	1.0	.1	1.9	1.9	1.8	.7	.7	.1	.1
1.8	1.6	1.4	.9	1.0	.3	.0	.0	.5	.3		
180.	*	2.3	2.0	.8	1.4	1.6	1.5	1.5	1.6	.7	.6
1.3	1.2	.9	.7	1.2	.5	.2	.2	.3	.1		
190.	*	1.7	2.3	1.5	.3	.8	.6	1.8	1.6	1.2	1.0
.3	.3	.6	.6	1.5	.8	.4	.3	.0	.0		
200.	*	1.6	1.7	1.8	.1	.6	.4	1.4	1.5	1.3	1.0
.1	.1	.6	.6	1.7	1.1	.5	.3	.0	.0		
210.	*	1.4	1.3	1.8	.1	.4	.3	1.3	1.7	1.5	1.1
.1	.1	.6	.6	1.9	1.2	.6	.3	.0	.0		
220.	*	1.3	1.2	1.6	.0	.3	.3	1.7	1.6	1.3	1.0
.0	.0	.7	.7	1.6	1.5	.7	.4	.0	.0		
230.	*	1.1	1.6	1.5	.0	.4	.3	1.6	1.5	1.3	.9
.0	.0	.7	.7	1.5	1.7	.7	.4	.0	.0		
240.	*	1.1	1.5	1.5	.0	.4	.3	1.4	1.3	1.3	.9
.0	.0	.8	.8	1.6	1.6	.7	.5	.0	.0		
250.	*	1.2	1.7	1.4	.0	.4	.3	1.3	1.2	1.3	.9
.0	.0	1.1	1.1	1.4	1.7	.6	.5	.0	.0		
260.	*	1.2	1.8	1.6	.2	.5	.3	1.5	1.3	1.2	.9
.0	.0	1.2	1.2	1.4	1.7	.9	.7	.2	.2		
270.	*	1.0	1.6	2.2	.9	.2	.1	1.2	1.1	1.6	1.1
.3	.1	1.0	1.0	1.1	1.1	1.5	1.5	.9	.9		
280.	*	.2	1.0	2.1	1.3	.0	.0	1.0	1.0	1.8	1.2
.5	.3	.2	.2	.6	.5	1.5	1.3	1.3	1.3		
290.	*	.1	.9	1.6	1.2	.0	.0	.9	.9	1.8	1.3
.5	.3	.1	.1	.4	.4	1.1	1.1	1.1	1.1		
300.	*	.0	1.0	1.4	1.4	.0	.0	1.0	1.0	1.9	1.4
.4	.3	.0	.0	.5	.4	.9	1.2	.9	.9		
310.	*	.0	1.2	1.2	1.6	.0	.0	1.2	1.1	2.1	1.5
.3	.3	.0	.0	.6	.4	1.1	1.3	.8	.8		
320.	*	.0	1.2	.9	2.0	.0	.0	1.2	1.1	1.7	1.9

```
.3     .3     .0     .0     .6     .4    1.4    1.3     .8     .8
 330.  *     .0    1.3    1.3    2.1     .0     .0    1.3    1.1    1.7    1.9
.6     .4     .0     .0     .6     .3    1.4    1.1     .7     .7
 340.  *     .0    1.4    1.4    1.7     .0     .0    1.4    1.2    1.4    2.0
.9     .6     .0     .0     .5     .4    1.3     .9     .6     .6
 350.  *     .1    1.6    1.7    1.8     .1     .1    1.6    1.4    1.7    1.5
1.3     .9     .0     .0     .5     .4    1.3     .8     .7     .6
 360.  *    1.0    1.1    1.3    2.7     .9     .8    1.1    1.1    1.1    1.2
2.1    1.8     .3     .1     .2     .2    1.0     .5    1.2     .8
 ------*------------------------------------------------------------------
--------------------------------------------------------
 MAX    *    2.6    2.3    2.2    2.7    1.9    1.8    1.8    1.7    2.1    2.0
2.1    2.0    2.2    1.6    1.9    1.7    1.5    1.5    2.0    2.0
 DEGR. *  170    190    270      0    170    170    190    210    310    340
0     20    140    100    210    230    280    270     30     70
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THE HIGHEST CONCENTRATION OF   2.70 PPM OCCURRED AT RECEPTOR REC4 .

#18 of 36
Exit 151 Briargate/Voyager Intersection
2035 No-Action PM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2035 No Build PM
RUN: I-25 Analysis

DATE :  2/23/12
TIME :  8:31: 1

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 =  11. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0         .0 *
3280.   360. AG   1630.   6.7    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0     3280.0 *
3280.   360. AG   1630.   6.7    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0      -24.0 *
3280.    90. AG   1655.   6.7    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0      -24.0 *
3280.    90. AG   1190.   6.7    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0       30.0 *
3280.   270. AG   1230.   6.7    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0       30.0 *
3280.   270. AG   1680.   6.7    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0         .0 *
3280.   180. AG   2325.   6.7    .0 44.0
```

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       8. Voyager SB Dptr     *    -24.0         .0      -24.0   -3280.0 *
3280.   180. AG   2340.   6.7    .0 44.0
       9. Briargate EB Left Q *    -48.0        6.0    -205.5       6.0 *
158.   270. AG    231. 100.0    .0 24.0 1.00   8.0
      10. Briargate EB Thru Q *    -48.0      -24.0    -145.2     -24.0 *
97.   270. AG    347. 100.0    .0 36.0  .79   4.9
      11. Briargate EB Right Q*    -48.0      -48.0   -3388.4     -48.0 *
3340.   270. AG     99. 100.0    .0 12.0 1.80 169.7
      12. Briargate WB Left Q *     48.0       12.0     477.4      12.0 *
429.    90. AG    119. 100.0    .0 12.0 1.24  21.8
      13. Briargate WB Thru Q *     48.0       30.0     300.1      30.0 *
252.    90. AG    204. 100.0    .0 24.0  .97  12.8
      14. Briargate WB Right Q*     48.0       48.0     101.5      48.0 *
53.    90. AG     20. 100.0    .0 12.0  .33   2.7
      15. Voyager NB Left Q   *       .0      -54.0        .0    -855.2 *
801.   180. AG    215. 100.0    .0 24.0 1.21  40.7
      16. Voyager NB Thru Q   *     24.0      -54.0      24.0    -259.4 *
205.   180. AG    151. 100.0    .0 24.0  .65  10.4
      17. Voyager NB Right Q  *     42.0      -54.0      42.0    -112.1 *
58.   180. AG     76. 100.0    .0 12.0  .20   3.0
      18. Voyager SB Left Q   *     -6.0       54.0      -6.0    1502.8 *
1449.   360. AG    107. 100.0    .0 12.0 1.43  73.6
      19. Voyager SB Thru Q   *    -24.0       54.0     -24.0    1300.2 *
1246.   360. AG    149. 100.0    .0 24.0 1.12  63.3
      20. Voyager SB Right Q  *    -42.0       54.0     -42.0     104.3 *
50.   360. AG     20. 100.0    .0 12.0  .31   2.6
```

PAGE 2
JOB: Exit 151 Briargate 2035 No Build PM
RUN: I-25 Analysis

DATE : 2/23/12
TIME : 8:31: 1

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
9. Briargate EB Left Q	150	130	3.0	320	1600	49.70	2	3
10. Briargate EB Thru Q	150	130	3.0	400	1700	49.70	2	3
11. Briargate EB Right Q	150	111	3.0	650	1600	49.70	2	3
12. Briargate WB Left Q	150	134	3.0	145	1600	49.70	2	3
13. Briargate WB Thru Q	150	115	3.0	660	1700	49.70	2	3
14. Briargate WB Right Q	150	23	3.0	425	1600	49.70	2	3
15. Voyager NB Left Q	150	121	3.0	620	1600	49.70	2	3
16. Voyager NB Thru Q	150	85	3.0	885	1700	49.70	2	3
17. Voyager NB Right Q	150	85	3.0	125	1600	49.70	2	3
18. Voyager SB Left Q	150	120	3.0	380	1600	49.70	2	3
19. Voyager SB Thru Q	150	84	3.0	1545	1700	49.70	2	3
20. Voyager SB Right Q	150	23	3.0	400	1600	49.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

PAGE 3
JOB: Exit 151 Briargate 2035 No Build PM
RUN: I-25 Analysis

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)*	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0. *	1.4	1.5	1.7	3.0	1.4	1.4	1.5	1.5	1.6	1.4	2.3	2.1	.4	.1	.2	.2	1.0	1.0	2.4	1.1
10. *	2.0	.4	.8	2.8	2.0	2.0	.4	.4	.6	.5	2.2	2.3	.8	.5	.0	.0	.7	.7	2.8	1.6
20. *	1.8	.1	.7	1.9	1.7	1.7	.1	.1	.5	.4	1.8	2.1	.8	.6	.0	.0	.7	.7	2.8	1.7
30. *	1.6	.0	.9	1.5	1.5	1.5	.0	.0	.5	.4	1.8	2.0	.7	.5	.0	.0	.9	.9	2.8	1.8
40. *	1.4	.0	.9	1.5	1.3	1.3	.0	.0	.5	.4	2.1	2.1	.6	.5	.0	.0	.9	.8	2.5	1.8
50. *	1.4	.0	1.0	1.5	1.3	1.3	.0	.0	.5	.3	2.0	1.9	.6	.4	.0	.0	1.0	.8	2.4	2.0
60. *	1.4	.0	1.1	1.7	1.3	1.3	.0	.0	.4	.3	1.8	1.6	.6	.5	.0	.0	1.0	.8	2.1	2.1
70. *	1.0	.0	1.0	1.9	1.1	1.1	.0	.0	.4	.2	1.7	1.5	.7	.5	.0	.0	.9	.8	1.9	2.6
80. *	1.2	.1	1.0	1.8	1.0	1.0	.0	.0	.3	.2	1.6	1.5	.8	.8	.1	.1	.9	.9	1.7	2.1
90. *	2.1	.7	.6	1.8	1.2	1.1	.2	.1	.2	.1	1.5	1.4	1.6	1.5	.6	.4	.6	.6	1.3	1.2
100. *	2.1	1.3	.2	1.5	1.5	1.2	.3	.2	.0	.0	1.3	1.3	1.7	1.9	1.2	.8	.2	.2	.7	.6

```
 110.  *   1.8   1.6    .0   1.4   1.7   1.3    .5    .2    .0    .0
1.3   1.3   1.7   1.9   1.4   1.2    .0    .0    .6    .5
 120.  *   1.4   1.4    .0   1.3   1.9   1.7    .5    .3    .0    .0
1.3   1.2   1.8   2.3   1.3   1.2    .0    .0    .6    .6
 130.  *   1.2   1.4    .0   1.5   1.8   1.8    .6    .4    .0    .0
1.5   1.2   2.1   2.3   1.3   1.2    .0    .0    .6    .6
 140.  *   1.6   1.2    .0   1.7   1.6   1.8    .5    .5    .0    .0
1.6   1.4   2.3   1.9   1.1   1.1    .0    .0    .8    .5
 150.  *   1.8   1.1    .0   1.9   1.6   1.7    .5    .5    .0    .0
1.7   1.6   2.6   1.6   1.0   1.0    .0    .0    .8    .5
 160.  *   2.3   1.0    .0   2.0   1.6   1.6    .6    .6    .0    .0
1.8   1.8   2.6   1.4   1.0   1.0    .0    .0    .8    .5
 170.  *   2.9   1.3    .1   2.2   2.2   2.1    .9    .9    .1    .1
2.1   2.1   2.3   1.2   1.0   1.0    .0    .0    .8    .4
 180.  *   2.6   2.3   1.1   1.6   1.8   1.6   1.8   1.8    .9    .9
1.6   1.6   1.9    .8   1.3   1.2    .2    .2    .4    .2
 190.  *   1.8   2.6   1.9    .5   1.0    .7   2.0   1.9   1.7   1.5
.5    .4   1.3    .7   1.8   1.5    .6    .4    .0    .0
 200.  *   1.8   1.8   2.1    .1    .9    .6   1.6   1.8   1.8   1.4
.1    .1   1.2    .7   1.9   1.5    .7    .5    .0    .0
 210.  *   1.8   1.3   2.0    .1    .8    .4   1.6   1.7   1.6   1.3
.1    .1   1.2    .7   1.9   1.6    .8    .5    .0    .0
 220.  *   1.7   1.3   1.7    .1    .6    .4   2.1   1.9   1.5   1.3
.1    .1   1.1    .7   1.8   1.7    .8    .4    .0    .0
 230.  *   1.6   1.7   1.6    .0    .5    .3   1.9   1.6   1.4   1.3
.0    .0   1.2    .8   1.6   1.7    .8    .5    .0    .0
 240.  *   1.5   2.0   1.6    .0    .5    .3   1.8   1.4   1.4   1.4
.0    .0   1.1    .9   1.8   1.8    .7    .5    .0    .0
 250.  *   1.5   2.1   1.4    .0    .5    .4   1.4   1.2   1.4   1.4
.0    .0   1.2   1.1   2.0   2.0    .8    .5    .0    .0
 260.  *   1.6   2.1   1.8    .2    .6    .4   1.4   1.3   1.3   1.3
.0    .0   1.4   1.4   1.9   2.1   1.1    .7    .2    .2
 270.  *   1.1   1.8   2.6   1.0    .4    .2   1.3   1.2   1.6   1.6
.3    .2   1.1   1.1   1.5   1.2   1.9   1.7   1.0   1.0
 280.  *    .3   1.0   2.5   1.6    .0    .0    .9    .9   2.0   1.7
.6    .4    .3    .3    .7    .5   1.7   1.7   1.4   1.4
 290.  *    .1    .9   1.9   1.9    .0    .0    .9    .9   2.2   1.8
.5    .3    .1    .1    .6    .4   1.3   1.2   1.1   1.1
 300.  *    .0   1.1   1.5   2.2    .0    .0   1.1   1.1   2.3   1.7
.4    .3    .0    .0    .6    .4   1.0   1.3   1.1   1.0
 310.  *    .0   1.2   1.3   2.2    .0    .0   1.2   1.2   2.3   1.9
.6    .3    .0    .0    .7    .4   1.1   1.4   1.1    .9
 320.  *    .0   1.3   1.3   2.2    .0    .0   1.3   1.3   2.2   2.2
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.9    .4    .0    .0    .7    .4   1.6   1.3   1.2    .8
 330.  *    .0   1.4   1.4   2.2    .0    .0   1.4   1.4   2.0   2.1
1.0    .6    .0    .0    .7    .5   1.6   1.4   1.4    .8
 340.  *    .0   1.6   1.7   1.9    .0    .0   1.6   1.6   1.7   2.1
1.1    .8    .0    .0    .7    .5   1.4   1.2   1.6    .8
 350.  *    .3   2.0   1.9   2.0    .3    .3   2.0   2.0   2.0   2.0
1.4   1.0    .0    .0    .8    .6   1.4   1.2   1.8    .8
 360.  *   1.4   1.5   1.7   3.0   1.4   1.4   1.5   1.5   1.6   1.4
2.3   2.1    .4    .1    .2    .2   1.0   1.0   2.4   1.1
 ------*-------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.9   2.6   2.6   3.0   2.2   2.1   2.1   2.0   2.3   2.2
2.3   2.3   2.6   2.3   2.0   2.1   1.9   1.7   2.8   2.6
 DEGR. *  170   190   270     0   170   170   220   350   300   320
0    10   160   130   250   260   270   270    10    70
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THE HIGHEST CONCENTRATION OF 3.00 PPM OCCURRED AT RECEPTOR REC4 .

#19 of 36
Exit 151 Briargate/Voyager Intersection
2015 Proposed Action AM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2015 Build AM
RUN: I-25 Analysis

DATE :  2/28/12
TIME : 10:42:12

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 =  11. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0         .0 *
3280.   360. AG   1190.   8.7    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0    3280.0 *
3280.   360. AG   1415.   8.7    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0     -24.0 *
3280.    90. AG   1445.   8.7    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0     -24.0 *
3280.    90. AG    855.   8.7    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0      30.0 *
3280.   270. AG   1345.   8.7    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0      30.0 *
3280.   270. AG   1665.   8.7    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0         .0 *
3280.   180. AG    900.   8.7    .0 44.0
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       8. Voyager SB Dptr     *    -24.0        .0     -24.0   -3280.0 *
3280.   180. AG    945.   8.7    .0 44.0
       9. Briargate EB Left Q *    -48.0       6.0     -95.9       6.0 *
48.   270. AG    288. 100.0    .0 24.0  .79   2.4
      10. Briargate EB Thru Q *    -48.0     -24.0    -108.1     -24.0 *
60.   270. AG    318. 100.0    .0 36.0  .41   3.1
      11. Briargate EB Right Q*    -48.0     -48.0    -935.5     -48.0 *
888.   270. AG    106. 100.0    .0 12.0 1.13  45.1
      12. Briargate WB Left Q *     48.0      12.0      65.2      12.0 *
17.    90. AG    148. 100.0    .0 12.0  .45    .9
      13. Briargate WB Thru Q *     48.0      30.0     184.0      30.0 *
136.    90. AG    220. 100.0    .0 24.0  .87   6.9
      14. Briargate WB Right Q*     48.0      48.0      77.5      48.0 *
30.    90. AG     25. 100.0    .0 12.0  .36   1.5
      15. Voyager NB Left Q   *       .0     -54.0        .0    -133.8 *
80.   180. AG    267. 100.0    .0 24.0  .83   4.1
      16. Voyager NB Thru Q   *     24.0     -54.0      24.0    -157.7 *
104.   180. AG    216. 100.0    .0 24.0  .73   5.3
      17. Voyager NB Right Q  *     42.0     -54.0      42.0     -66.5 *
13.   180. AG    108. 100.0    .0 12.0  .09    .6
      18. Voyager SB Left Q   *     -6.0      54.0      -6.0     458.6 *
405.   360. AG    146. 100.0    .0 12.0 1.25  20.6
      19. Voyager SB Thru Q   *    -24.0      54.0     -24.0     106.1 *
52.   360. AG    242. 100.0    .0 24.0  .44   2.6
      20. Voyager SB Right Q  *    -42.0      54.0     -42.0      81.2 *
27.   360. AG     25. 100.0    .0 12.0  .33   1.4
```

PAGE 2
JOB: Exit 151 Briargate 2015 Build AM
RUN: I-25 Analysis

DATE : 2/28/12
TIME : 10:42:12

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
9. Briargate EB Left Q	80	68	3.0	220	1600	63.20	2	3
10. Briargate EB Thru Q	80	50	3.0	660	1700	63.20	2	3
11. Briargate EB Right Q	80	50	3.0	565	1600	63.20	2	3
12. Briargate WB Left Q	80	70	3.0	45	1600	63.20	2	3
13. Briargate WB Thru Q	80	52	3.0	850	1700	63.20	2	3
14. Briargate WB Right Q	80	12	3.0	450	1600	63.20	2	3
15. Voyager NB Left Q	80	63	3.0	400	1600	63.20	2	3
16. Voyager NB Thru Q	80	51	3.0	745	1700	63.20	2	3
17. Voyager NB Right Q	80	51	3.0	45	1600	63.20	2	3
18. Voyager SB Left Q	80	69	3.0	150	1600	63.20	2	3
19. Voyager SB Thru Q	80	57	3.0	335	1700	63.20	2	3
20. Voyager SB Right Q	80	12	3.0	415	1600	63.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

(COORDINATES (FT))

PAGE 3
JOB: Exit 151 Briargate 2015 Build AM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.6	1.2	1.4	2.2	.6	.5	1.2	1.1	1.0	1.0	1.6	1.5	.2	.1	.3	.1	.9	.5	1.0	1.0
10.	.9	.3	.9	2.3	.9	.8	.3	.3	.5	.4	1.5	1.7	.4	.2	.0	.0	.7	.4	1.4	1.0
20.	1.1	.1	.7	1.6	1.0	1.0	.1	.1	.4	.3	1.3	1.6	.4	.2	.0	.0	.6	.4	1.6	1.1
30.	1.3	.0	.7	1.2	.9	.9	.0	.0	.4	.3	1.5	1.4	.4	.3	.0	.0	.5	.4	2.2	1.2
40.	1.3	.0	.8	1.3	.7	.7	.0	.0	.3	.2	1.7	1.1	.4	.3	.0	.0	.5	.5	2.5	1.2
50.	1.3	.0	.8	1.2	.6	.6	.0	.0	.2	.2	1.6	.8	.3	.3	.0	.0	.5	.5	2.2	1.4
60.	1.4	.0	.6	1.4	.6	.6	.0	.0	.3	.2	1.5	.7	.5	.4	.0	.0	.5	.5	2.1	1.9
70.	1.3	.0	.7	1.5	.6	.6	.0	.0	.4	.2	1.5	.7	.6	.5	.0	.0	.7	.7	1.9	1.9
80.	1.4	.1	.8	1.6	.6	.6	.0	.0	.4	.2	1.4	.7	.9	.7	.1	.1	.8	.8	1.6	1.9
90.	2.0	.7	.7	1.7	.9	.7	.2	.1	.2	.1	1.0	.5	1.6	1.4	.6	.6	.7	.7	1.1	1.2
100.	2.1	1.1	.2	1.4	1.0	.9	.3	.3	.0	.0	.7	.5	1.6	1.9	.8	.8	.2	.2	.8	.6

Concentration (PPM)

110.	*	1.6	1.3	.0	1.3	1.0	.9	.3	.3	.0	.0
.6	.5	1.7	1.9	.8	.7	.0	.0	.6	.4		
120.	*	1.2	1.4	.0	1.3	1.2	.8	.3	.2	.0	.0
.5	.5	1.9	1.8	1.0	.7	.0	.0	.4	.2		
130.	*	1.2	1.2	.0	1.3	1.4	.9	.4	.2	.0	.0
.5	.5	2.0	1.5	1.0	.5	.0	.0	.2	.2		
140.	*	1.4	1.1	.0	1.2	1.6	1.1	.5	.3	.0	.0
.5	.5	1.9	1.0	1.0	.5	.0	.0	.2	.2		
150.	*	1.7	1.0	.0	1.0	1.5	1.1	.6	.3	.0	.0
.6	.6	1.7	1.1	.9	.4	.0	.0	.2	.2		
160.	*	2.0	1.2	.0	.9	1.4	1.3	.6	.5	.0	.0
.8	.8	1.4	1.0	.9	.4	.0	.0	.4	.2		
170.	*	2.0	1.3	.1	1.0	1.6	1.3	.8	.6	.1	.1
1.0	1.0	1.3	1.0	.9	.4	.0	.0	.4	.2		
180.	*	2.2	2.0	.5	.8	1.3	1.1	1.6	1.5	.5	.5
.8	.8	1.0	.9	1.1	.5	.2	.1	.2	.1		
190.	*	1.9	2.1	.9	.2	.9	.6	1.6	1.6	.7	.7
.2	.2	.8	.8	1.2	.6	.3	.2	.0	.0		
200.	*	1.9	1.8	1.1	.1	.6	.3	1.6	1.6	.7	.7
.1	.1	.8	.8	1.3	.6	.3	.2	.0	.0		
210.	*	1.8	1.4	1.4	.0	.4	.3	1.5	1.6	.6	.6
.0	.0	.9	.9	1.5	.7	.3	.2	.0	.0		
220.	*	1.3	1.4	1.7	.0	.5	.3	1.9	1.3	.7	.6
.0	.0	.8	.8	1.7	1.2	.4	.2	.0	.0		
230.	*	1.1	1.7	1.6	.0	.5	.4	1.8	1.2	.6	.4
.0	.0	1.0	1.0	1.7	1.4	.5	.2	.0	.0		
240.	*	1.1	1.8	1.5	.0	.6	.4	1.4	1.1	.8	.4
.0	.0	1.1	1.1	1.8	1.6	.5	.3	.0	.0		
250.	*	1.3	1.8	1.5	.0	.6	.5	1.4	1.1	.9	.4
.0	.0	1.3	1.3	1.9	1.9	.6	.4	.0	.0		
260.	*	1.6	2.0	1.8	.2	.6	.3	1.3	1.0	1.0	.4
.0	.0	1.6	1.6	1.8	1.8	.9	.7	.2	.2		
270.	*	1.2	1.8	2.4	1.1	.3	.2	1.0	.9	1.5	.6
.2	.2	1.2	1.2	1.3	1.2	1.7	1.6	1.1	1.1		
280.	*	.4	1.1	2.4	1.6	.0	.0	.7	.7	2.0	.9
.6	.5	.4	.4	.6	.5	1.7	1.4	1.6	1.6		
290.	*	.1	1.0	1.7	1.6	.0	.0	.7	.7	2.0	.9
.6	.5	.1	.1	.5	.3	1.1	1.1	1.4	1.4		
300.	*	.1	.9	1.5	1.7	.0	.0	.7	.7	2.0	.8
.5	.4	.1	.1	.4	.3	.9	1.2	1.2	1.2		
310.	*	.0	.9	1.0	1.7	.0	.0	.8	.8	2.2	.7
.5	.3	.0	.0	.4	.3	1.2	1.1	1.0	1.0		
320.	*	.0	.9	1.1	1.9	.0	.0	.9	.9	2.0	1.4

```
.5     .3     .0     .0     .4     .3    1.3    1.1     .9     .9
 330.  *     .0    1.1    1.3    2.0     .0     .0    1.1    1.1    1.8    1.5
.7     .3     .0     .0     .4     .3    1.1     .9     .9     .9
 340.  *     .0    1.2    1.4    1.8     .0     .0    1.2    1.1    1.6    1.9
.8     .4     .0     .0     .5     .3    1.1     .8     .8     .8
 350.  *     .1    1.4    1.6    1.7     .1     .1    1.4    1.3    1.3    1.6
1.1     .8     .0     .0     .4     .3    1.1     .7     .8     .8
 360.  *     .6    1.2    1.4    2.2     .6     .5    1.2    1.1    1.0    1.0
1.6    1.5     .2     .1     .3     .1     .9     .5    1.0    1.0
 ------*------------------------------------------------------------------
--------------------------------------------------------
 MAX   *    2.2    2.1    2.4    2.3    1.6    1.3    1.9    1.6    2.2    1.9
1.7    1.7    2.0    1.9    1.9    1.9    1.7    1.6    2.5    1.9
 DEGR. *  180    190    270     10    170    160    220    210    310    340
40     10    130    110    250    250    270    270     40     60
```

THE HIGHEST CONCENTRATION OF   2.50 PPM OCCURRED AT RECEPTOR REC19.

#20 of 36
Exit 151 Briargate/Voyager Intersection
2025 Proposed Action AM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2025 Build AM
RUN: I-25 Analysis

DATE :  2/23/12
TIME : 10:33:36

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 =  11. CM
        U =  1.0 M/S         CLAS =   4  (D)     ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0        .0 *
3280.   360. AG   1410.   7.0    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0    3280.0 *
3280.   360. AG   1645.   7.0    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0     -24.0 *
3280.    90. AG   1830.   7.0    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0     -24.0 *
3280.    90. AG   1030.   7.0    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0      30.0 *
3280.   270. AG   1535.   7.0    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0      30.0 *
3280.   270. AG   2090.   7.0    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0        .0 *
3280.   180. AG   1125.   7.0    .0 44.0
```

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       8. Voyager SB Dptr     *    -24.0         .0     -24.0   -3280.0 *
3280.   180. AG   1135.   7.0    .0 44.0
       9. Briargate EB Left Q *    -48.0        6.0    -149.9       6.0 *
102.   270. AG    234. 100.0    .0 24.0  .97   5.2
      10. Briargate EB Thru Q *    -48.0      -24.0    -121.1     -24.0 *
73.   270. AG    324. 100.0    .0 36.0  .67   3.7
      11. Briargate EB Right Q*    -48.0      -48.0   -1759.5     -48.0 *
1711.   270. AG     82. 100.0    .0 12.0 1.25  86.9
      12. Briargate WB Left Q *     48.0       12.0      67.4      12.0 *
19.    90. AG    122. 100.0    .0 12.0  .42   1.0
      13. Briargate WB Thru Q *     48.0       30.0     231.0      30.0 *
183.    90. AG    173. 100.0    .0 24.0  .92   9.3
      14. Briargate WB Right Q*     48.0       48.0      85.1      48.0 *
37.    90. AG     22. 100.0    .0 12.0  .38   1.9
      15. Voyager NB Left Q   *       .0      -54.0        .0    -192.9 *
139.   180. AG    216. 100.0    .0 24.0  .96   7.1
      16. Voyager NB Thru Q   *     24.0      -54.0      24.0    -216.1 *
162.   180. AG    185. 100.0    .0 24.0  .90   8.2
      17. Voyager NB Right Q  *     42.0      -54.0      42.0     -70.4 *
16.   180. AG     92. 100.0    .0 12.0  .11    .8
      18. Voyager SB Left Q   *     -6.0       54.0      -6.0     637.3 *
583.   360. AG    120. 100.0    .0 12.0 1.37  29.6
      19. Voyager SB Thru Q   *    -24.0       54.0     -24.0     124.6 *
71.   360. AG    210. 100.0    .0 24.0  .59   3.6
      20. Voyager SB Right Q  *    -42.0       54.0     -42.0      98.0 *
44.   360. AG     22. 100.0    .0 12.0  .46   2.2
```

PAGE 2
JOB: Exit 151 Briargate 2025 Build AM
RUN: I-25 Analysis

DATE : 2/23/12
TIME : 10:33:36

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
9. Briargate EB Left Q	90	76	3.0	310	1600	51.70	2	3
10. Briargate EB Thru Q	90	70	3.0	575	1700	51.70	2	3
11. Briargate EB Right Q	90	53	3.0	710	1600	51.70	2	3
12. Briargate WB Left Q	90	79	3.0	45	1600	51.70	2	3
13. Briargate WB Thru Q	90	56	3.0	1005	1700	51.70	2	3
14. Briargate WB Right Q	90	14	3.0	485	1600	51.70	2	3
15. Voyager NB Left Q	90	70	3.0	510	1600	51.70	2	3
16. Voyager NB Thru Q	90	60	3.0	850	1700	51.70	2	3
17. Voyager NB Right Q	90	60	3.0	50	1600	51.70	2	3
18. Voyager SB Left Q	90	78	3.0	170	1600	51.70	2	3
19. Voyager SB Thru Q	90	68	3.0	380	1700	51.70	2	3
20. Voyager SB Right Q	90	14	3.0	575	1600	51.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

PAGE 3
JOB: Exit 151 Briargate 2025 Build AM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	.6	1.1	1.3	2.2	.6	.6	1.1	1.1	1.0	1.0	1.6	1.3	.2	.1	.3	.1	.8	.7	1.3	.9
10.	1.0	.3	.8	2.1	.9	.9	.3	.3	.4	.4	1.6	1.6	.5	.2	.0	.0	.6	.5	2.0	.9
20.	1.3	.1	.6	1.5	.9	.9	.1	.1	.4	.3	1.3	1.6	.4	.3	.0	.0	.6	.4	2.2	1.0
30.	1.2	.0	.6	1.1	.7	.7	.0	.0	.4	.3	1.5	1.7	.4	.3	.0	.0	.6	.4	2.4	1.2
40.	1.3	.0	.8	1.3	.7	.7	.0	.0	.3	.2	1.5	1.5	.3	.3	.0	.0	.7	.5	2.3	1.4
50.	1.3	.0	.8	1.2	.6	.6	.0	.0	.3	.2	1.5	1.3	.5	.4	.0	.0	.6	.5	2.2	1.7
60.	1.3	.0	.7	1.3	.6	.6	.0	.0	.2	.2	1.5	1.1	.5	.4	.0	.0	.5	.5	2.0	1.9
70.	1.2	.0	.8	1.3	.6	.6	.0	.0	.3	.2	1.4	.8	.6	.5	.0	.0	.7	.7	1.8	2.0
80.	1.2	.1	.8	1.4	.6	.6	.0	.0	.4	.2	1.5	.7	.9	.7	.1	.1	.8	.8	1.4	1.7
90.	1.9	.6	.7	1.6	.8	.7	.2	.1	.2	.0	1.4	.5	1.5	1.4	.5	.5	.7	.7	1.1	1.1
100.	1.9	1.1	.2	1.2	1.1	.9	.3	.2	.0	.0	1.1	.4	1.6	2.0	.9	.8	.2	.2	.7	.5

```
 110.  *   1.5   1.2    .0   1.1   1.3    .8    .3    .2    .0    .0
1.1    .4   1.5   1.8   1.0    .7    .0    .0    .6    .5
 120.  *   1.3   1.2    .0   1.2   1.5    .9    .4    .2    .0    .0
1.2    .5   1.9   2.1   1.1    .6    .0    .0    .6    .4
 130.  *   1.2   1.1    .0   1.2   1.6    .9    .5    .2    .0    .0
1.0    .5   2.0   1.7   1.0    .5    .0    .0    .5    .2
 140.  *   1.4    .9    .0   1.3   1.5   1.0    .5    .3    .0    .0
 .8    .5   2.5   1.3    .8    .5    .0    .0    .4    .2
 150.  *   1.7    .9    .0   1.4   1.5   1.1    .4    .3    .0    .0
 .7    .6   2.3   1.1    .8    .6    .0    .0    .2    .2
 160.  *   2.0   1.0    .0   1.2   1.5   1.2    .5    .4    .0    .0
 .8    .8   2.0   1.0    .8    .7    .0    .0    .4    .2
 170.  *   2.2   1.2    .1   1.0   1.7   1.3    .7    .6    .1    .1
 .9    .9   1.8   1.0    .8    .8    .0    .0    .4    .2
 180.  *   2.1   2.0    .6    .8   1.4   1.1   1.6   1.5    .5    .5
 .8    .8   1.4    .9   1.0    .9    .2    .1    .2    .1
 190.  *   1.8   2.1   1.1    .2   1.0    .7   1.7   1.7    .8    .7
 .2    .2   1.1    .8   1.1   1.0    .3    .2    .0    .0
 200.  *   1.8   1.7   1.4    .1    .8    .4   1.4   1.6   1.0    .7
 .1    .1    .9    .8   1.3   1.0    .3    .2    .0    .0
 210.  *   1.9   1.4   1.6    .0    .7    .2   1.5   1.5   1.0    .6
 .0    .0    .9    .9   1.5   1.1    .4    .2    .0    .0
 220.  *   1.6   1.3   1.5    .0    .6    .2   2.0   1.4   1.2    .5
 .0    .0    .8    .8   1.4   1.2    .6    .2    .0    .0
 230.  *   1.6   1.7   1.4    .0    .5    .4   1.8   1.1   1.1    .4
 .0    .0   1.0   1.0   1.4   1.4    .6    .3    .0    .0
 240.  *   1.5   1.9   1.4    .0    .6    .4   1.6   1.1   1.2    .4
 .0    .0   1.1   1.1   1.7   1.5    .6    .4    .0    .0
 250.  *   1.5   1.9   1.3    .0    .6    .5   1.5   1.2   1.2    .4
 .0    .0   1.3   1.3   1.8   1.7    .6    .4    .0    .0
 260.  *   1.7   1.9   1.5    .2    .6    .4   1.4   1.0   1.2    .5
 .0    .0   1.7   1.7   1.8   1.6    .9    .7    .2    .2
 270.  *   1.4   1.7   2.4   1.0    .3    .2   1.0    .9   1.6    .8
 .4    .2   1.3   1.3   1.5   1.3   1.9   1.7   1.0   1.0
 280.  *    .4   1.1   2.4   1.6    .0    .0    .7    .7   1.8   1.3
 .6    .5    .4    .4    .7    .5   1.8   1.4   1.5   1.5
 290.  *    .1   1.1   1.9   1.6    .0    .0    .8    .8   1.9   1.4
 .5    .5    .1    .1    .5    .3   1.0   1.2   1.3   1.3
 300.  *    .1   1.0   1.5   1.9    .0    .0    .7    .7   2.1   1.6
 .5    .4    .1    .1    .4    .3    .9   1.1   1.1   1.1
 310.  *    .1    .9   1.0   2.1    .0    .0    .7    .7   2.1   1.7
 .5    .3    .1    .1    .4    .3   1.2   1.1   1.0   1.0
 320.  *    .0   1.0   1.1   2.1    .0    .0    .9    .9   1.8   1.9
```

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.7    .3    .0    .0    .4    .3   1.2   1.1    .8    .8
 330.  *    .0   1.0   1.3   2.0    .0    .0   1.0   1.0   1.5   1.8
.9    .3    .0    .0    .4    .3   1.0    .9    .8    .8
 340.  *    .0   1.2   1.4   1.7    .0    .0   1.1   1.1   1.4   1.9
.9    .5    .0    .0    .4    .3   1.0   1.0    .8    .7
 350.  *    .1   1.3   1.6   1.6    .1    .1   1.3   1.3   1.4   1.6
1.1    .7    .0    .0    .5    .3   1.0    .9   1.0    .7
 360.  *    .6   1.1   1.3   2.2    .6    .6   1.1   1.1   1.0   1.0
1.6   1.3    .2    .1    .3    .1    .8    .7   1.3    .9
 ------*----------------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.2   2.1   2.4   2.2   1.7   1.3   2.0   1.7   2.1   1.9
1.6   1.7   2.5   2.1   1.8   1.7   1.9   1.7   2.4   2.0
 DEGR. *  170   190   270     0   170   170   220   190   300   340
0    30   140   120   250   250   270   270    30    70
```

THE HIGHEST CONCENTRATION OF   2.50 PPM OCCURRED AT RECEPTOR REC13.

#21 of 36
Exit 151 Briargate/Voyager Intersection
2035 Proposed Action AM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2035 Build AM
RUN: I-25 Analysis

DATE :  2/23/12
TIME :  8:10:42

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =     .0 CM/S        VD =     .0 CM/S        Z0 =  11. CM
        U =  1.0 M/S           CLAS =    4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0         .0 *
3280.   360. AG   1620.   6.7    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0     3280.0 *
3280.   360. AG   1865.   6.7    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0      -24.0 *
3280.    90. AG   2205.   6.7    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0      -24.0 *
3280.    90. AG   1195.   6.7    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0       30.0 *
3280.   270. AG   1720.   6.7    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0       30.0 *
3280.   270. AG   2505.   6.7    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0         .0 *
3280.   180. AG   1335.   6.7    .0 44.0
```

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       8. Voyager SB Dptr     *    -24.0         .0      -24.0   -3280.0 *
3280.   180. AG   1315.   6.7    .0 44.0
       9. Briargate EB Left Q *    -48.0        6.0     -201.9       6.0 *
154.   270. AG    222. 100.0    .0 24.0  .99   7.8
      10. Briargate EB Thru Q *    -48.0      -24.0     -545.1     -24.0 *
497.   270. AG    333. 100.0    .0 36.0 1.15  25.3
      11. Briargate EB Right Q*    -48.0      -48.0    -1864.2     -48.0 *
1816.   270. AG     69. 100.0    .0 12.0 1.20  92.3
      12. Briargate WB Left Q *     48.0       12.0       76.9      12.0 *
29.    90. AG    122. 100.0    .0 12.0  .68   1.5
      13. Briargate WB Thru Q *     48.0       30.0      319.8      30.0 *
272.    90. AG    160. 100.0    .0 24.0  .95  13.8
      14. Briargate WB Right Q*     48.0       48.0       98.7      48.0 *
51.    90. AG     20. 100.0    .0 12.0  .40   2.6
      15. Voyager NB Left Q   *       .0      -54.0         .0    -248.8 *
195.   180. AG    202. 100.0    .0 24.0  .96   9.9
      16. Voyager NB Thru Q   *     24.0      -54.0       24.0    -311.0 *
257.   180. AG    177. 100.0    .0 24.0  .96  13.1
      17. Voyager NB Right Q  *     42.0      -54.0       42.0     -75.9 *
22.   180. AG     89. 100.0    .0 12.0  .11   1.1
      18. Voyager SB Left Q   *     -6.0       54.0       -6.0    1140.2 *
1086.   360. AG    120. 100.0    .0 12.0 1.99  55.2
      19. Voyager SB Thru Q   *    -24.0       54.0      -24.0     171.2 *
117.   360. AG    215. 100.0    .0 24.0  .82   6.0
      20. Voyager SB Right Q  *    -42.0       54.0      -42.0     125.9 *
72.   360. AG     20. 100.0    .0 12.0  .56   3.6
```

PAGE 2
JOB: Exit 151 Briargate 2035 Build AM
RUN: I-25 Analysis

DATE : 2/23/12
TIME : 8:10:42

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
9. Briargate EB Left Q	120	100	3.0	395	1600	49.60	2	3
10. Briargate EB Thru Q	120	100	3.0	730	1700	49.60	2	3
11. Briargate EB Right Q	120	62	3.0	850	1600	49.60	2	3
12. Briargate WB Left Q	120	110	3.0	45	1600	49.60	2	3
13. Briargate WB Thru Q	120	72	3.0	1160	1700	49.60	2	3
14. Briargate WB Right Q	120	18	3.0	515	1600	49.60	2	3
15. Voyager NB Left Q	120	91	3.0	615	1600	49.60	2	3
16. Voyager NB Thru Q	120	80	3.0	955	1700	49.60	2	3
17. Voyager NB Right Q	120	80	3.0	50	1600	49.60	2	3
18. Voyager SB Left Q	120	108	3.0	185	1600	49.60	2	3
19. Voyager SB Thru Q	120	97	3.0	420	1700	49.60	2	3
20. Voyager SB Right Q	120	18	3.0	730	1600	49.60	2	3

RECEPTOR LOCATIONS

RECEPTOR	X (FT)	Y (FT)	Z (FT)
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

PAGE 3
JOB: Exit 151 Briargate 2035 Build AM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.9	1.3	1.6	2.5	.8	.7	1.3	1.2	1.1	1.1	1.9	1.6	.2	.2	.3	.1	1.0	.8	2.3	2.0
10.	1.3	.3	.8	2.4	1.1	1.1	.3	.3	.4	.4	1.8	1.7	.5	.3	.0	.0	.6	.6	2.5	2.2
20.	1.6	.1	.7	1.6	1.0	1.0	.1	.1	.3	.3	1.4	1.7	.5	.3	.0	.0	.6	.6	2.7	2.3
30.	1.5	.0	.7	1.4	.9	.8	.0	.0	.3	.3	1.4	1.7	.4	.3	.0	.0	.7	.7	2.8	2.4
40.	1.4	.0	.7	1.4	1.0	.7	.0	.0	.4	.3	1.5	1.7	.5	.3	.0	.0	.7	.7	2.6	2.6
50.	1.4	.0	.8	1.3	1.1	.7	.0	.0	.3	.2	1.5	1.5	.6	.4	.0	.0	.7	.6	2.3	2.7
60.	1.4	.0	.9	1.3	1.2	.7	.0	.0	.4	.2	1.5	1.4	.6	.5	.0	.0	.8	.6	2.2	2.7
70.	1.2	.0	.9	1.5	1.1	.6	.0	.0	.4	.2	1.6	1.4	.6	.6	.0	.0	.8	.7	1.8	2.6
80.	1.3	.1	1.0	1.6	1.1	.6	.0	.0	.4	.2	1.6	1.4	.9	.8	.1	.1	.9	.9	1.6	2.0
90.	2.1	.8	.7	1.5	1.4	.7	.2	.1	.2	.2	1.4	1.3	1.7	1.6	.7	.6	.7	.7	1.1	1.2
100.	2.1	1.2	.2	1.3	1.6	.9	.3	.3	.0	.0	1.2	1.2	1.7	2.1	1.1	1.0	.2	.2	.7	.5

Concentrations in PPM.

```
 110.  *   1.7   1.3    .0   1.2   1.6    .9    .4    .3    .0    .0
1.2   1.1   1.9   2.2   1.2   1.0    .0    .0    .6    .5
 120.  *   1.4   1.2    .0   1.2   1.7   1.0    .5    .2    .0    .0
1.2    .9   1.9   2.5   1.1   1.0    .0    .0    .6    .4
 130.  *   1.4   1.1    .0   1.2   1.6   1.1    .5    .3    .0    .0
1.2    .8   2.3   2.6   1.0   1.0    .0    .0    .6    .4
 140.  *   1.5   1.0    .0   1.4   1.7   1.2    .5    .3    .0    .0
1.3    .8   2.4   2.4    .9    .9    .0    .0    .6    .2
 150.  *   1.8   1.0    .0   1.5   1.6   1.4    .5    .3    .0    .0
1.4    .8   2.5   2.0    .8    .8    .0    .0    .6    .2
 160.  *   2.3   1.0    .0   1.5   1.7   1.6    .5    .4    .0    .0
1.1    .8   2.5   1.8    .8    .8    .0    .0    .4    .2
 170.  *   2.2   1.2    .1   1.3   1.8   1.9    .8    .6    .1    .1
1.1   1.0   2.2   1.7    .8    .8    .0    .0    .4    .2
 180.  *   2.3   2.0    .8    .8   1.5   1.4   1.7   1.5    .7    .5
 .8    .8   2.1   1.6   1.0    .9    .2    .1    .2    .2
 190.  *   1.9   2.2   1.4    .2   1.0    .8   1.8   2.0   1.1    .9
 .2    .2   1.8   1.4   1.2   1.1    .3    .2    .0    .0
 200.  *   1.8   1.9   1.7    .1    .9    .8   1.6   1.8   1.3   1.0
 .1    .1   1.8   1.4   1.4   1.0    .4    .2    .0    .0
 210.  *   1.9   1.4   1.6    .0   1.0    .7   1.7   1.9   1.4   1.1
 .0    .0   1.9   1.5   1.5   1.2    .6    .2    .0    .0
 220.  *   2.1   1.4   1.7    .0   1.2    .6   2.0   1.9   1.5   1.1
 .0    .0   2.0   1.6   1.6   1.4    .7    .3    .0    .0
 230.  *   2.2   2.0   1.5    .0   1.1    .6   2.4   1.8   1.3   1.0
 .0    .0   2.0   1.7   1.5   1.4    .7    .4    .0    .0
 240.  *   2.4   2.5   1.3    .0   1.0    .6   2.2   1.6   1.1   1.0
 .0    .0   2.1   1.9   2.0   1.6    .6    .4    .0    .0
 250.  *   2.6   2.9   1.4    .0    .9    .6   2.0   1.4   1.2   1.2
 .0    .0   2.2   2.1   2.2   2.1    .6    .4    .0    .0
 260.  *   2.5   2.8   1.7    .3    .9    .4   1.8   1.2   1.1   1.1
 .0    .0   2.2   2.1   2.5   2.3   1.2    .8    .3    .3
 270.  *   1.8   2.2   3.0   1.8    .3    .2   1.4   1.0   1.6   1.3
 .4    .2   1.7   1.7   1.9   1.7   2.3   2.0   1.6   1.4
 280.  *    .4   1.3   3.1   2.7    .0    .0   1.1    .8   2.1   1.7
 .9    .5    .4    .4    .7    .5   2.3   1.8   2.7   2.6
 290.  *    .1   1.1   2.2   2.8    .0    .0   1.0    .8   2.4   2.0
1.0    .7    .1    .1    .6    .4   1.5   1.4   2.6   2.5
 300.  *    .1   1.1   1.5   2.5    .0    .0    .9    .8   2.4   2.0
1.1    .8    .1    .1    .6    .3    .9   1.3   2.2   2.2
 310.  *    .1   1.3   1.2   2.3    .0    .0    .9    .9   2.1   2.1
1.1    .8    .1    .1    .5    .3   1.4   1.1   2.1   2.0
 320.  *    .0   1.2   1.3   2.2    .0    .0    .9    .9   1.9   2.2
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```
1.1    .7    .0    .0    .4    .3   1.2   1.0   2.1   1.8
 330.  *    .0   1.2   1.3   2.0    .0    .0   1.0   1.0   1.7   2.0
1.1    .7    .0    .0    .4    .4   1.2   1.0   2.1   1.8
 340.  *    .0   1.3   1.5   1.9    .0    .0   1.3   1.2   1.8   2.0
1.1    .8    .0    .0    .5    .4   1.0   1.0   2.0   1.7
 350.  *    .1   1.6   1.7   2.0    .1    .1   1.6   1.6   1.5   1.7
1.2    .7    .0    .0    .6    .4   1.1   1.0   2.0   1.7
 360.  *    .9   1.3   1.6   2.5    .8    .7   1.3   1.2   1.1   1.1
1.9   1.6    .2    .2    .3    .1   1.0    .8   2.3   2.0
 ------*-----------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.6   2.9   3.1   2.8   1.8   1.9   2.4   2.0   2.4   2.2
1.9   1.7   2.5   2.6   2.5   2.3   2.3   2.0   2.8   2.7
 DEGR. *  250   250   280   290   170   170   230   190   290   320
0    10   150   130   260   260   280   270    30    50
```

THE HIGHEST CONCENTRATION OF   3.10 PPM OCCURRED AT RECEPTOR REC3 .

#22 of 36
Exit 151 Briargate/Voyager Intersection
2015 Proposed Action PM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2015 Build PM                          RUN: I-25
Analysis

DATE :  2/28/12
TIME : 11: 0:28

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 =  11. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0        .0 *
3280.   360. AG   1035.   8.7    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0    3280.0 *
3280.   360. AG   1010.   8.7    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0     -24.0 *
3280.    90. AG   1250.   8.7    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0     -24.0 *
3280.    90. AG   1120.   8.7    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0      30.0 *
3280.   270. AG   1100.   8.7    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0      30.0 *
3280.   270. AG   1255.   8.7    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0        .0 *
3280.   180. AG   1495.   8.7    .0 44.0
```

```
       8. Voyager SB Dptr     *    -24.0         .0      -24.0   -3280.0 *
3280.   180. AG   1495.   8.7    .0 44.0
       9. Briargate EB Left Q *    -48.0        6.0      -74.8       6.0 *
27.    270. AG    298. 100.0    .0 24.0  .58   1.4
      10. Briargate EB Thru Q *    -48.0      -24.0      -69.1     -24.0 *
21.    270. AG    396. 100.0    .0 36.0  .19   1.1
      11. Briargate EB Right Q*    -48.0      -48.0    -1178.1     -48.0 *
1130.   270. AG    123. 100.0    .0 12.0 1.25  57.4
      12. Briargate WB Left Q *     48.0       12.0       80.0      12.0 *
32.     90. AG    147. 100.0    .0 12.0  .60   1.6
      13. Briargate WB Thru Q *     48.0       30.0      172.2      30.0 *
124.    90. AG    241. 100.0    .0 24.0  .84   6.3
      14. Briargate WB Right Q*     48.0       48.0       75.6      48.0 *
28.     90. AG     26. 100.0    .0 12.0  .29   1.4
      15. Voyager NB Left Q   *       .0      -54.0         .0    -149.6 *
96.    180. AG    268. 100.0    .0 24.0  .85   4.9
      16. Voyager NB Thru Q   *     24.0      -54.0       24.0    -145.7 *
92.    180. AG    241. 100.0    .0 24.0  .66   4.7
      17. Voyager NB Right Q  *     42.0      -54.0       42.0     -83.7 *
30.    180. AG    121. 100.0    .0 12.0  .23   1.5
      18. Voyager SB Left Q   *     -6.0       54.0       -6.0     201.7 *
148.    360. AG    119. 100.0    .0 12.0  .91   7.5
      19. Voyager SB Thru Q   *    -24.0       54.0      -24.0     221.7 *
168.    360. AG    211. 100.0    .0 24.0  .89   8.5
      20. Voyager SB Right Q  *    -42.0       54.0      -42.0      66.6 *
13.    360. AG     26. 100.0    .0 12.0  .13    .6
```

PAGE 2
JOB: Exit 151 Briargate 2015 Build PM
RUN: I-25 Analysis

DATE : 2/28/12
TIME : 11: 0:28

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
9. Briargate EB Left Q	90	79	3.0	125	1600	63.30	2	3
10. Briargate EB Thru Q	90	70	3.0	165	1700	63.30	2	3
11. Briargate EB Right Q	90	65	3.0	445	1600	63.30	2	3
12. Briargate WB Left Q	90	78	3.0	75	1600	63.30	2	3
13. Briargate WB Thru Q	90	64	3.0	665	1700	63.30	2	3
14. Briargate WB Right Q	90	14	3.0	360	1600	63.30	2	3
15. Voyager NB Left Q	90	71	3.0	425	1600	63.30	2	3
16. Voyager NB Thru Q	90	64	3.0	525	1700	63.30	2	3
17. Voyager NB Right Q	90	64	3.0	85	1600	63.30	2	3
18. Voyager SB Left Q	90	63	3.0	355	1600	63.30	2	3
19. Voyager SB Thru Q	90	56	3.0	975	1700	63.30	2	3
20. Voyager SB Right Q	90	14	3.0	165	1600	63.30	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

COORDINATES (FT)

PAGE 3
JOB: Exit 151 Briargate 2015 Build PM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	.8	.9	1.3	2.7	.7	.6	.9	.9	1.1	.9	2.1	1.8	.3	.1	.2	.2	1.0	.7	1.1	.9
10.	1.3	.2	1.0	2.4	1.0	.9	.2	.2	.5	.4	2.0	1.9	.4	.3	.0	.0	.8	.5	1.2	1.1
20.	1.5	.1	.9	1.6	1.1	.8	.1	.1	.4	.3	1.7	1.9	.3	.3	.0	.0	.7	.5	1.4	1.1
30.	1.5	.0	.8	1.3	1.2	.7	.0	.0	.4	.2	1.6	1.7	.4	.3	.0	.0	.6	.5	1.6	1.3
40.	1.4	.0	.8	1.2	1.3	.6	.0	.0	.3	.2	2.0	1.3	.5	.2	.0	.0	.5	.5	1.8	1.4
50.	1.3	.0	.9	1.5	1.3	.6	.0	.0	.3	.2	2.1	1.0	.6	.3	.0	.0	.6	.6	1.8	1.4
60.	1.3	.0	.7	1.6	1.2	.5	.0	.0	.3	.2	1.8	.8	.6	.5	.0	.0	.6	.6	1.8	1.4
70.	1.3	.0	.7	1.4	1.2	.6	.0	.0	.3	.2	1.7	.8	.7	.6	.0	.0	.7	.7	1.8	1.7
80.	1.2	.1	1.0	1.8	1.1	.6	.0	.0	.4	.2	1.7	.8	.9	.7	.1	.1	1.0	1.0	1.7	1.5
90.	2.0	.7	.8	2.0	1.4	1.0	.2	.1	.2	.1	1.3	.7	1.5	1.4	.6	.6	.8	.8	1.2	1.1
100.	2.1	1.1	.2	1.7	1.5	1.2	.4	.2	.0	.0	.9	.6	1.7	1.5	.8	.8	.2	.2	.9	.6

```
 110.  *   1.7   1.2    .1   1.5   1.6   1.3    .3    .2    .0    .0
.6    .6   1.6   1.5    .7    .6    .1    .1    .8    .4
 120.  *   1.3   1.4    .0   1.5   1.7   1.4    .3    .2    .0    .0
.6    .6   1.6   1.3    .8    .6    .0    .0    .6    .2
 130.  *   1.1   1.2    .0   1.5   1.7   1.5    .3    .2    .0    .0
.7    .7   1.8   1.2    .9    .5    .0    .0    .4    .2
 140.  *   1.4   1.3    .0   1.4   1.5   1.8    .4    .2    .0    .0
.7    .7   1.6    .9   1.0    .5    .0    .0    .3    .2
 150.  *   1.8   1.3    .0   1.3   1.7   1.8    .5    .3    .0    .0
.8    .8   1.2   1.0   1.1    .5    .0    .0    .3    .3
 160.  *   2.0   1.3    .0   1.2   1.5   1.9    .4    .5    .0    .0
1.0   1.0    .9    .9   1.1    .5    .0    .0    .4    .3
 170.  *   2.1   1.4    .1   1.3   1.8   1.8    .7    .6    .1    .1
1.3   1.3   1.0    .9   1.0    .5    .0    .0    .5    .3
 180.  *   2.3   2.1    .6   1.1   1.4   1.4   1.4   1.5    .6    .6
1.1   1.1   1.0    .8   1.3    .7    .2    .2    .3    .1
 190.  *   1.5   2.3   1.1    .3    .7    .4   1.7   1.5    .8    .8
.3    .3    .6    .6   1.4    .8    .4    .2    .0    .0
 200.  *   1.0   1.6   1.4    .1    .4    .3   1.3   1.5    .7    .7
.1    .1    .6    .6   1.6    .8    .4    .2    .0    .0
 210.  *    .8   1.4   1.8    .0    .4    .3   1.4   1.5    .6    .6
.0    .0    .7    .7   1.9    .7    .4    .2    .0    .0
 220.  *    .7   1.5   1.9    .0    .4    .3   1.7   1.6    .6    .6
.0    .0    .7    .7   1.9   1.1    .3    .2    .0    .0
 230.  *    .8   1.5   1.9    .0    .4    .3   1.4   1.4    .5    .5
.0    .0    .8    .8   1.6   1.3    .4    .2    .0    .0
 240.  *   1.0   1.5   1.8    .0    .5    .3   1.4   1.2    .6    .5
.0    .0   1.0   1.0   1.7   1.7    .6    .3    .0    .0
 250.  *   1.2   1.6   1.6    .0    .5    .3   1.5   1.1    .8    .4
.0    .0   1.2   1.2   1.6   1.8    .6    .4    .0    .0
 260.  *   1.4   1.7   1.9    .2    .5    .3   1.5    .9   1.1    .4
.0    .0   1.4   1.4   1.5   1.6   1.0    .9    .2    .2
 270.  *   1.1   1.5   2.3   1.1    .2    .2   1.2    .7   1.6    .5
.3    .1   1.1   1.1   1.2   1.1   1.7   1.4   1.1   1.1
 280.  *    .3   1.1   2.0   1.5    .0    .0   1.0    .5   2.0    .8
.6    .3    .3    .3    .6    .5   1.5   1.3   1.5   1.5
 290.  *    .1   1.0   1.5   1.2    .0    .0   1.0    .5   2.1    .8
.6    .3    .1    .1    .5    .4   1.1   1.2   1.2   1.2
 300.  *    .0   1.0   1.4   1.1    .0    .0   1.0    .5   2.0    .8
.5    .3    .0    .0    .6    .3   1.0   1.3   1.1   1.1
 310.  *    .0   1.1   1.3   1.1    .0    .0    .9    .5   2.2    .9
.4    .3    .0    .0    .6    .2   1.4   1.4   1.0   1.0
 320.  *    .0   1.3   1.1   1.1    .0    .0   1.0    .7   2.0   1.2
```

```
.4    .3    .0    .0    .4    .2   1.5   1.1    .9    .9
 330.  *    .0   1.2   1.6   1.4    .0    .0    .7    .7   1.8   1.5
.3    .3    .0    .0    .4    .2   1.3    .9    .9    .9
 340.  *    .0   1.1   1.6   1.9    .0    .0    .8    .8   1.6   1.7
.5    .4    .0    .0    .4    .3   1.2    .7    .8    .8
 350.  *    .1   1.1   1.7   2.1    .1    .1   1.1   1.1   1.5   1.5
1.2    .7    .0    .0    .4    .3   1.2    .7    .8    .8
 360.  *    .8    .9   1.3   2.7    .7    .6    .9    .9   1.1    .9
2.1   1.8    .3    .1    .2    .2   1.0    .7   1.1    .9
 ------*------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.3   2.3   2.3   2.7   1.8   1.9   1.7   1.6   2.2   1.7
2.1   1.9   1.8   1.5   1.9   1.8   1.7   1.4   1.8   1.7
 DEGR. *  180   190   270     0   170   160   220   220   310   340
0    10   130   100   210   250   270   270    60    70
```

THE HIGHEST CONCENTRATION OF   2.70 PPM OCCURRED AT RECEPTOR REC4 .

#23 of 36
Exit 151 Briargate/Voyager Intersection
2025 Proposed Action PM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2025 Build PM
RUN: I-25 Analysis

DATE :  2/23/12
TIME : 10:53:11

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =     .0 CM/S       VD =     .0 CM/S       Z0 =  11. CM
        U =  1.0 M/S          CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0         .0 *
3280.   360. AG   1250.   7.0    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0     3280.0 *
3280.   360. AG   1240.   7.0    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0      -24.0 *
3280.    90. AG   1600.   7.0    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0      -24.0 *
3280.    90. AG   1320.   7.0    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0       30.0 *
3280.   270. AG   1340.   7.0    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0       30.0 *
3280.   270. AG   1620.   7.0    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0         .0 *
3280.   180. AG   1740.   7.0    .0 44.0
```

```
       8. Voyager SB Dptr     *    -24.0         .0      -24.0   -3280.0 *
3280.   180. AG   1750.   7.0    .0 44.0
       9. Briargate EB Left Q *    -48.0        6.0    -128.7       6.0 *
81.    270. AG    247. 100.0    .0 24.0  .96   4.1
      10. Briargate EB Thru Q *    -48.0      -24.0     -87.4     -24.0 *
39.    270. AG    340. 100.0    .0 36.0  .35   2.0
      11. Briargate EB Right Q*    -48.0      -48.0   -1796.4     -48.0 *
1748.   270. AG     96. 100.0    .0 12.0 1.34  88.8
      12. Briargate WB Left Q *     48.0       12.0     111.6      12.0 *
64.     90. AG    125. 100.0    .0 12.0  .92   3.2
      13. Briargate WB Thru Q *     48.0       30.0     272.4      30.0 *
224.    90. AG    194. 100.0    .0 24.0  .97  11.4
      14. Briargate WB Right Q*     48.0       48.0      87.5      48.0 *
40.     90. AG     21. 100.0    .0 12.0  .33   2.0
      15. Voyager NB Left Q   *       .0      -54.0        .0    -351.7 *
298.    180. AG    219. 100.0    .0 24.0 1.04  15.1
      16. Voyager NB Thru Q   *     24.0      -54.0      24.0    -174.4 *
120.    180. AG    179. 100.0    .0 24.0  .59   6.1
      17. Voyager NB Right Q  *     42.0      -54.0      42.0     -87.0 *
33.    180. AG     90. 100.0    .0 12.0  .17   1.7
      18. Voyager SB Left Q   *     -6.0       54.0      -6.0    1201.3 *
1147.   360. AG    106. 100.0    .0 12.0 1.30  58.3
      19. Voyager SB Thru Q   *    -24.0       54.0     -24.0     313.7 *
260.    360. AG    171. 100.0    .0 24.0  .97  13.2
      20. Voyager SB Right Q  *    -42.0       54.0     -42.0      76.3 *
22.    360. AG     21. 100.0    .0 12.0  .19   1.1
```

PAGE 2
JOB: Exit 151 Briargate 2025 Build PM
RUN: I-25 Analysis

DATE : 2/23/12
TIME : 10:53:11

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
9. Briargate EB Left Q	110	98	3.0	195	1600	51.70	2	3
10. Briargate EB Thru Q	110	90	3.0	240	1700	51.70	2	3
11. Briargate EB Right Q	110	76	3.0	565	1600	51.70	2	3
12. Briargate WB Left Q	110	99	3.0	80	1600	51.70	2	3
13. Briargate WB Thru Q	110	77	3.0	835	1700	51.70	2	3
14. Briargate WB Right Q	110	17	3.0	425	1600	51.70	2	3
15. Voyager NB Left Q	110	87	3.0	545	1600	51.70	2	3
16. Voyager NB Thru Q	110	71	3.0	620	1700	51.70	2	3
17. Voyager NB Right Q	110	71	3.0	85	1600	51.70	2	3
18. Voyager SB Left Q	110	84	3.0	395	1600	51.70	2	3
19. Voyager SB Thru Q	110	68	3.0	1105	1700	51.70	2	3
20. Voyager SB Right Q	110	17	3.0	240	1600	51.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	X (FT)	Y (FT)	Z (FT)
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

PAGE 3
JOB: Exit 151 Briargate 2025 Build PM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.9	.9	1.4	2.7	.8	.7	.9	.9	1.1	1.1	2.0	1.6	.2	.1	.2	.2	1.0	1.0	1.3	.9
10.	1.4	.2	1.0	2.5	1.3	1.1	.2	.2	.6	.4	1.8	1.7	.5	.4	.0	.0	.8	.8	1.7	1.2
20.	1.6	.1	1.0	1.6	1.5	1.3	.1	.1	.4	.3	1.6	1.8	.5	.4	.0	.0	.8	.7	1.8	1.2
30.	1.4	.0	.9	1.3	1.4	1.3	.0	.0	.4	.3	1.6	1.9	.6	.3	.0	.0	.8	.7	1.9	1.2
40.	1.3	.0	.9	1.3	1.3	1.3	.0	.0	.4	.3	1.9	1.8	.6	.4	.0	.0	.8	.6	1.9	1.4
50.	1.2	.0	.9	1.4	1.1	1.1	.0	.0	.4	.2	1.8	1.7	.6	.4	.0	.0	.9	.6	1.8	1.5
60.	1.2	.0	.9	1.6	1.1	1.1	.0	.0	.3	.2	1.7	1.3	.6	.4	.0	.0	.7	.6	1.9	1.7
70.	.9	.0	.9	1.5	.9	.9	.0	.0	.3	.2	1.6	1.2	.7	.5	.0	.0	.7	.7	1.8	1.8
80.	1.2	.1	1.0	1.6	.9	.9	.0	.0	.3	.2	1.6	1.2	.9	.7	.1	.1	1.0	1.0	1.5	1.5
90.	1.9	.8	.8	1.7	1.1	1.0	.2	.1	.2	.1	1.5	1.1	1.5	1.5	.7	.6	.8	.8	1.2	1.2
100.	2.0	1.3	.2	1.5	1.4	1.1	.3	.2	.0	.0	1.2	1.0	1.7	1.6	1.0	.7	.2	.2	.8	.6

CONCENTRATION (PPM)

110.	*	1.5	1.2	.1	1.3	1.4	1.1	.4	.2	.0	.0
		1.2	1.0	1.6	1.5	1.1	.8	.1	.1	.7	.5
120.	*	1.2	1.3	.0	1.3	1.6	1.4	.5	.2	.0	.0
		1.1	1.0	1.7	1.6	1.2	.9	.0	.0	.6	.4
130.	*	1.0	1.2	.0	1.5	1.6	1.5	.4	.3	.0	.0
		1.2	1.1	2.0	1.5	1.0	.9	.0	.0	.6	.4
140.	*	1.4	1.3	.0	1.4	1.3	1.6	.4	.3	.0	.0
		1.2	1.2	2.1	1.1	1.0	1.0	.0	.0	.6	.3
150.	*	1.6	1.3	.0	1.4	1.5	1.7	.4	.4	.0	.0
		1.3	1.3	1.8	1.0	1.0	1.0	.0	.0	.5	.2
160.	*	2.2	1.0	.0	1.5	1.5	1.8	.5	.5	.0	.0
		1.4	1.2	1.5	1.0	.9	.9	.0	.0	.4	.3
170.	*	2.5	1.0	.1	1.7	1.9	1.7	.7	.5	.1	.1
		1.6	1.4	1.3	1.0	.8	.8	.0	.0	.4	.3
180.	*	2.3	2.0	.6	1.2	1.5	1.3	1.4	1.4	.5	.5
		1.2	1.1	.9	.8	1.1	1.1	.2	.2	.3	.1
190.	*	1.8	2.1	1.3	.3	.9	.5	1.5	1.6	1.0	.8
		.3	.3	.7	.7	1.3	1.0	.4	.2	.0	.0
200.	*	1.5	1.6	1.7	.1	.7	.4	1.3	1.6	1.1	.9
		.1	.1	.7	.7	1.7	1.1	.5	.2	.0	.0
210.	*	1.3	1.3	1.8	.0	.5	.3	1.3	1.6	1.2	1.0
		.0	.0	.7	.7	2.1	1.3	.5	.2	.0	.0
220.	*	1.2	1.2	1.7	.0	.4	.3	1.7	1.6	1.2	.9
		.0	.0	.7	.7	1.8	1.5	.5	.3	.0	.0
230.	*	1.2	1.5	1.5	.0	.4	.3	1.5	1.3	1.3	.9
		.0	.0	.8	.8	1.5	1.4	.6	.4	.0	.0
240.	*	1.2	1.6	1.5	.0	.5	.3	1.6	1.3	1.3	.9
		.0	.0	.9	.9	1.6	1.8	.6	.5	.0	.0
250.	*	1.2	1.8	1.3	.0	.5	.4	1.4	1.1	1.2	.8
		.0	.0	1.1	1.1	1.5	1.9	.6	.5	.0	.0
260.	*	1.3	1.8	1.5	.2	.6	.4	1.4	1.3	1.2	.8
		.0	.0	1.3	1.3	1.4	1.7	1.0	.7	.2	.2
270.	*	1.1	1.5	2.2	1.0	.3	.2	1.1	1.1	1.6	1.0
		.3	.1	1.1	1.1	1.2	1.1	1.6	1.5	1.0	1.0
280.	*	.3	.9	2.1	1.4	.0	.0	.9	.9	1.9	1.2
		.6	.4	.3	.3	.5	.5	1.5	1.5	1.4	1.4
290.	*	.1	.8	1.8	1.2	.0	.0	.8	.9	1.8	1.2
		.5	.4	.1	.1	.5	.4	1.2	1.3	1.1	1.1
300.	*	.0	1.0	1.4	1.3	.0	.0	1.0	1.0	1.9	1.2
		.4	.3	.0	.0	.5	.4	1.0	1.2	1.0	1.0
310.	*	.0	1.0	1.2	1.5	.0	.0	1.0	1.0	2.1	1.3
		.4	.3	.0	.0	.5	.4	1.2	1.3	.9	.9
320.	*	.0	1.2	1.1	1.9	.0	.0	1.2	1.1	1.7	1.6

```
.4    .3    .0    .0    .6    .3   1.3   1.2    .8    .8
 330.  *    .0   1.2   1.5   2.0    .0    .0   1.2   1.0   1.5   1.7
.6    .3    .0    .0    .6    .3   1.4   1.1    .8    .8
 340.  *    .0   1.3   1.6   1.9    .0    .0   1.1   1.0   1.5   1.9
.9    .5    .0    .0    .5    .3   1.5   1.1    .8    .8
 350.  *    .1   1.4   1.7   2.0    .1    .1   1.3   1.3   1.6   1.5
1.3    .8    .0    .0    .5    .3   1.3   1.1    .9    .8
 360.  *    .9    .9   1.4   2.7    .8    .7    .9    .9   1.1   1.1
2.0   1.6    .2    .1    .2    .2   1.0   1.0   1.3    .9
 ------*-----------------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.5   2.1   2.2   2.7   1.9   1.8   1.7   1.6   2.1   1.9
2.0   1.9   2.1   1.6   2.1   1.9   1.6   1.5   1.9   1.8
 DEGR. *  170   190   270     0   170   160   220   190   310   340
0    30   140   100   210   250   270   270    30    70
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THE HIGHEST CONCENTRATION OF 2.70 PPM OCCURRED AT RECEPTOR REC4 .

#24 of 36
Exit 151 Briargate/Voyager Intersection
2035 Proposed Action PM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 151 Briargate 2035 Build PM
RUN: I-25 Analysis

DATE :  2/23/12
TIME :  8:16:30

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 =  11. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. Voyager NB Appr     *     24.0   -3280.0      24.0        .0 *
3280.   360. AG   1455.   6.7    .0 44.0
       2. Voyager NB Dptr     *     24.0        .0      24.0    3280.0 *
3280.   360. AG   1455.   6.7    .0 44.0
       3. Briargate EB Appr   *  -3280.0     -24.0        .0     -24.0 *
3280.    90. AG   1945.   6.7    .0 56.0
       4. Briargate EB Dptr   *       .0     -24.0    3280.0     -24.0 *
3280.    90. AG   1520.   6.7    .0 56.0
       5. Briargate WB Appr   *   3280.0      30.0        .0      30.0 *
3280.   270. AG   1565.   6.7    .0 44.0
       6. Briargate WB Dptr   *       .0      30.0   -3280.0      30.0 *
3280.   270. AG   1975.   6.7    .0 44.0
       7. Voyager SB Appr     *    -24.0    3280.0     -24.0        .0 *
3280.   180. AG   1985.   6.7    .0 44.0
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       8. Voyager SB Dptr     *    -24.0          .0      -24.0   -3280.0 *
3280.   180. AG   2000.   6.7    .0 44.0
       9. Briargate EB Left Q *    -48.0         6.0     -313.8       6.0 *
266.   270. AG    238. 100.0    .0 24.0 1.11  13.5
      10. Briargate EB Thru Q *    -48.0       -24.0     -122.6     -24.0 *
75.   270. AG    347. 100.0    .0 36.0  .62   3.8
      11. Briargate EB Right Q*    -48.0       -48.0    -2541.0     -48.0 *
2493.   270. AG     89. 100.0    .0 12.0 1.43 126.6
      12. Briargate WB Left Q *     48.0        12.0      201.5      12.0 *
153.    90. AG    123. 100.0    .0 12.0 1.08   7.8
      13. Briargate WB Thru Q *     48.0        30.0      760.9      30.0 *
713.    90. AG    185. 100.0    .0 24.0 1.08  36.2
      14. Briargate WB Right Q*     48.0        48.0      109.0      48.0 *
61.    90. AG     20. 100.0    .0 12.0  .37   3.1
      15. Voyager NB Left Q   *       .0       -54.0         .0    -744.6 *
691.   180. AG    210. 100.0    .0 24.0 1.15  35.1
      16. Voyager NB Thru Q   *     24.0       -54.0       24.0    -240.4 *
186.   180. AG    171. 100.0    .0 24.0  .64   9.5
      17. Voyager NB Right Q  *     42.0       -54.0       42.0     -98.6 *
45.   180. AG     85. 100.0    .0 12.0  .16   2.3
      18. Voyager SB Left Q   *     -6.0        54.0       -6.0    1651.4 *
1597.   360. AG    103. 100.0    .0 12.0 1.41  81.2
      19. Voyager SB Thru Q   *    -24.0        54.0      -24.0     846.8 *
793.   360. AG    167. 100.0    .0 24.0 1.07  40.3
      20. Voyager SB Right Q  *    -42.0        54.0      -42.0      93.6 *
40.   360. AG     20. 100.0    .0 12.0  .24   2.0
```

PAGE 2
JOB: Exit 151 Briargate 2035 Build PM
RUN: I-25 Analysis

DATE : 2/23/12
TIME : 8:16:30

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
9. Briargate EB Left Q	150	134	3.0	260	1600	49.70	2	3
10. Briargate EB Thru Q	150	130	3.0	315	1700	49.70	2	3
11. Briargate EB Right Q	150	100	3.0	685	1600	49.70	2	3
12. Briargate WB Left Q	150	138	3.0	80	1600	49.70	2	3
13. Briargate WB Thru Q	150	104	3.0	1000	1700	49.70	2	3
14. Briargate WB Right Q	150	23	3.0	485	1600	49.70	2	3
15. Voyager NB Left Q	150	118	3.0	660	1600	49.70	2	3
16. Voyager NB Thru Q	150	96	3.0	710	1700	49.70	2	3
17. Voyager NB Right Q	150	96	3.0	85	1600	49.70	2	3
18. Voyager SB Left Q	150	116	3.0	435	1600	49.70	2	3
19. Voyager SB Thru Q	150	94	3.0	1235	1700	49.70	2	3
20. Voyager SB Right Q	150	23	3.0	315	1600	49.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. REC 1	-58.0	52.0	5.9
2. REC 2	46.0	64.0	5.9
3. REC 3	58.0	-52.0	5.9
4. REC 4	-46.0	-64.0	5.9
5. REC 5	-58.0	134.1	5.9
6. REC 6	-58.0	216.1	5.9
7. REC 7	46.0	146.1	5.9
8. REC 8	46.0	228.1	5.9
9. REC 9	58.0	-134.1	5.9
10. REC 10	58.0	-216.1	5.9
11. REC 11	-46.0	-146.1	5.9
12. REC 12	-46.0	-228.1	5.9
13. REC 13	-140.1	52.0	5.9
14. REC 14	-222.1	52.0	5.9
15. REC 15	128.1	64.0	5.9
16. REC 16	210.1	64.0	5.9
17. REC 17	140.1	-52.0	5.9
18. REC 18	222.1	-52.0	5.9
19. REC 19	-128.1	-64.0	5.9
20. REC 20	-210.1	-64.0	5.9

COORDINATES (FT) apply to X, Y, Z columns.

PAGE 3
JOB: Exit 151 Briargate 2035 Build PM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	1.3	1.3	1.6	2.9	1.3	1.2	1.3	1.3	1.3	1.2	2.3	1.9	.5	.1	.3	.2	1.2	1.0	1.9	1.3
10.	1.9	.2	.9	2.6	1.9	1.9	.2	.2	.5	.5	2.3	2.0	.8	.5	.0	.0	1.0	.8	2.4	1.6
20.	1.6	.1	.9	1.8	1.6	1.6	.1	.1	.6	.4	1.8	2.0	.8	.5	.0	.0	.9	.8	2.7	1.7
30.	1.5	.0	1.0	1.3	1.4	1.4	.0	.0	.5	.3	1.6	2.0	.6	.6	.0	.0	.9	.8	2.7	1.9
40.	1.5	.0	1.1	1.4	1.4	1.4	.0	.0	.6	.3	1.9	2.0	.6	.5	.0	.0	1.0	.9	2.6	1.8
50.	1.3	.0	1.1	1.6	1.2	1.2	.0	.0	.5	.3	2.1	1.7	.6	.4	.0	.0	.9	.9	2.4	1.8
60.	1.3	.0	1.1	1.6	1.2	1.2	.0	.0	.5	.3	1.8	1.6	.6	.5	.0	.0	1.0	1.0	2.1	2.1
70.	1.2	.0	1.3	1.8	1.1	1.1	.0	.0	.6	.3	1.8	1.5	.7	.5	.0	.0	1.2	1.1	2.2	2.4
80.	1.4	.2	1.3	2.0	1.1	1.1	.0	.0	.5	.2	1.8	1.5	.9	.8	.2	.2	1.3	1.2	2.0	2.1
90.	2.4	1.0	.9	2.1	1.4	1.3	.2	.1	.2	.1	1.6	1.4	2.0	1.7	1.0	1.0	.9	.9	1.3	1.4
100.	2.5	1.7	.2	1.4	1.7	1.5	.6	.3	.0	.0	1.3	1.1	2.0	2.1	1.6	1.5	.2	.2	.7	.5

CONCENTRATION (PPM)

110.	*	1.8	1.5	.1	1.3	1.8	1.5	.7	.3	.0	.0
1.3	1.0	1.7	2.0	1.3	1.3	.1	.1	.7	.5		
120.	*	1.4	1.5	.0	1.3	1.9	1.6	.6	.4	.0	.0
1.3	1.0	1.9	2.4	1.3	1.2	.0	.0	.7	.5		
130.	*	1.3	1.4	.0	1.4	1.7	1.7	.6	.4	.0	.0
1.4	1.1	2.2	2.2	1.2	1.1	.0	.0	.6	.4		
140.	*	1.5	1.2	.0	1.6	1.5	1.8	.6	.4	.0	.0
1.5	1.3	2.6	2.0	1.2	1.0	.0	.0	.7	.4		
150.	*	1.8	1.2	.0	1.6	1.6	1.7	.5	.5	.0	.0
1.4	1.3	2.5	1.8	1.2	1.0	.0	.0	.6	.5		
160.	*	2.2	1.1	.0	1.9	1.9	1.9	.6	.5	.0	.0
1.7	1.7	2.3	1.7	1.1	.9	.0	.0	.8	.4		
170.	*	2.7	1.4	.1	2.0	2.1	1.9	.8	.8	.1	.1
2.0	1.9	2.1	1.6	1.1	.9	.0	.0	.7	.3		
180.	*	2.5	2.4	.9	1.4	1.6	1.6	1.7	1.6	.8	.8
1.4	1.3	1.7	1.4	1.4	1.1	.2	.2	.3	.1		
190.	*	1.8	2.5	1.8	.3	1.1	.7	2.0	1.9	1.6	1.3
.3	.3	1.2	1.2	1.7	1.4	.5	.2	.0	.0		
200.	*	1.9	1.9	1.9	.1	.9	.5	1.4	1.6	1.6	1.2
.1	.1	1.3	1.3	2.0	1.5	.7	.4	.0	.0		
210.	*	1.8	1.4	2.0	.1	.9	.5	1.5	1.7	1.7	1.2
.1	.1	1.3	1.3	2.1	1.7	.8	.4	.0	.0		
220.	*	1.7	1.4	1.8	.0	.8	.5	1.9	1.8	1.5	1.1
.0	.0	1.4	1.4	1.8	1.7	.7	.4	.0	.0		
230.	*	1.6	1.8	1.5	.0	.8	.4	2.0	1.6	1.3	1.1
.0	.0	1.5	1.5	1.6	1.7	.6	.5	.0	.0		
240.	*	1.6	2.0	1.5	.0	.7	.4	1.9	1.6	1.3	1.2
.0	.0	1.6	1.4	2.0	1.8	.6	.5	.0	.0		
250.	*	1.9	2.2	1.4	.0	.7	.5	1.5	1.4	1.2	1.2
.0	.0	1.8	1.5	2.0	1.9	.7	.6	.0	.0		
260.	*	1.9	2.3	1.7	.2	.6	.5	1.5	1.3	1.3	1.3
.0	.0	1.7	1.5	1.8	1.9	1.0	.7	.2	.2		
270.	*	1.4	1.7	2.5	1.1	.3	.2	1.2	1.1	1.7	1.5
.4	.2	1.3	1.3	1.3	1.3	1.9	1.8	1.1	1.1		
280.	*	.3	.9	2.7	1.8	.0	.0	.9	.9	2.0	1.7
.6	.4	.3	.3	.5	.5	2.0	1.7	1.6	1.5		
290.	*	.1	.9	2.2	2.1	.0	.0	.9	.9	2.2	1.6
.6	.4	.1	.1	.5	.4	1.5	1.4	1.5	1.3		
300.	*	.1	1.1	1.6	2.2	.0	.0	1.1	1.1	2.2	1.8
.6	.4	.1	.1	.6	.4	1.0	1.3	1.5	1.3		
310.	*	.0	1.1	1.3	2.2	.0	.0	1.1	1.1	2.3	2.0
.7	.4	.0	.0	.7	.4	1.2	1.5	1.3	1.2		
320.	*	.0	1.2	1.2	2.2	.0	.0	1.2	1.2	2.0	2.2

```
.7    .5    .0    .0    .7    .4   1.6   1.5   1.3   1.3
 330.  *    .0   1.3   1.5   2.1    .0    .0   1.3   1.3   1.8   2.0
1.0    .6    .0    .0    .7    .4   1.7   1.3   1.3   1.3
 340.  *    .0   1.6   1.7   1.9    .0    .0   1.6   1.6   1.7   2.2
1.1    .8    .0    .0    .7    .5   1.5   1.3   1.0   1.0
 350.  *    .2   1.8   2.1   1.9    .2    .2   1.8   1.8   1.8   1.7
1.4   1.0    .0    .0    .6    .4   1.6   1.1   1.1   1.1
 360.  *   1.3   1.3   1.6   2.9   1.3   1.2   1.3   1.3   1.3   1.2
2.3   1.9    .5    .1    .3    .2   1.2   1.0   1.9   1.3
 ------*-------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.7   2.5   2.7   2.9   2.1   1.9   2.0   1.9   2.3   2.2
2.3   2.0   2.6   2.4   2.1   1.9   2.0   1.8   2.7   2.4
 DEGR. *  170   190   280     0   170   160   190   190   310   320
0    10   140   120   210   250   280   270    20    70
```

THE HIGHEST CONCENTRATION OF   2.90 PPM OCCURRED AT RECEPTOR REC4 .

#25 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2015 No-Action AM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 161 Monument St 2015 NoBuild AM                 RUN: I-25
Analysis

DATE :  2/28/12
TIME :  9:32:14

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)     ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *      6.0   -3280.0       6.0        .0 *
3280.   360. AG   1150.   8.4    .0 56.0
       2. Monument EB Appr    *  -3280.0     -18.0        .0     -18.0 *
3280.    90. AG    835.   8.0    .0 44.0
       3. Monument EB Dptr    *       .0     -18.0    3280.0     -18.0 *
3280.    90. AG   1040.   8.0    .0 44.0
       4. Monument WB Appr    *   3280.0      18.0        .0      18.0 *
3280.   270. AG   1270.   8.0    .0 44.0
       5. Monument WB Dptr    *       .0      18.0   -3280.0      18.0 *
3280.   270. AG   1455.   8.0    .0 44.0
       6. I-25 Ramp SB Dptr   *    -18.0        .0     -18.0   -3280.0 *
3280.   180. AG    760.   8.4    .0 32.0
       7. Monument EB Thru-R Q*    -24.0     -18.0   -1593.4     -18.0 *
1569.   270. AG    264. 100.0    .0 24.0 1.47  79.7
```

```
       8. Monument WB Left Q  *      24.0         .0      132.4         .0 *
108.    90. AG    115. 100.0    .0 12.0  .76   5.5
       9. Monument WB Thru Q  *      24.0       18.0      114.3       18.0 *
90.    90. AG    132. 100.0    .0 24.0  .50   4.6
      10. I-25 Ramp NB Left Q *        .0      -30.0         .0     -106.7 *
77.   180. AG    207. 100.0    .0 24.0  .48   3.9
      11. I-25 Ramp NB Right Q*      18.0      -30.0       18.0    -1376.1 *
1346.   180. AG    104. 100.0    .0 12.0 1.20  68.4
```

```
PAGE  2
JOB: Exit 161 Monument St 2015 NoBuild AM
RUN: I-25 Analysis

      DATE :  2/28/12
      TIME :  9:32:14

       ADDITIONAL QUEUE LINK PARAMETERS
       --------------------------------
         LINK DESCRIPTION      *    CYCLE    RED     CLEARANCE  APPROACH
SATURATION   IDLE   SIGNAL   ARRIVAL
                               *    LENGTH   TIME    LOST TIME    VOL
FLOW RATE   EM FAC   TYPE     RATE
                               *     (SEC)   (SEC)    (SEC)       (VPH)
(VPH)    (gm/hr)
      ------------------------*-------------------------------------------
---------------------------------------
       7. Monument EB Thru-R Q*      90       70        3.0         835
1700      63.20      2         3
       8. Monument WB Left Q   *      90       61        3.0         325
1600      63.20      2         3
       9. Monument WB Thru Q   *      90       35        3.0         945
1700      63.20      2         3
      10. I-25 Ramp NB Left Q *      90       55        3.0         510
1600      63.20      2         3
      11. I-25 Ramp NB Right Q*      90       55        3.0         640
1600      63.20      2         3

       RECEPTOR LOCATIONS
       ------------------
                               *          COORDINATES (FT)          *
         RECEPTOR              *      X          Y          Z       *
     -------------------------*-------------------------------------*
      1. REC 1                 *      -34.0       40.0        5.9    *
      2. REC 2                 *       34.0       40.0        5.9    *
      3. REC 3                 *       34.0      -40.0        5.9    *
      4. REC 4                 *      -34.0      -40.0        5.9    *
      5. REC 5                 *      -34.0      122.1        5.9    *
      6. REC 6                 *      -34.0      204.1        5.9    *
      7. REC 7                 *       34.0      122.1        5.9    *
      8. REC 8                 *       34.0      240.1        5.9    *
      9. REC 9                 *       34.0     -122.1        5.9    *
```

10. REC 10	*	34.0	-240.1	5.9	*
11. REC 11	*	-34.0	-122.1	5.9	*
12. REC 12	*	-34.0	-204.1	5.9	*
13. REC 13	*	-116.1	40.0	5.9	*
14. REC 14	*	-198.1	40.0	5.9	*
15. REC 15	*	116.1	40.0	5.9	*
16. REC 16	*	198.1	40.0	5.9	*
17. REC 17	*	116.1	-40.0	5.9	*
18. REC 18	*	198.1	-40.0	5.9	*
19. REC 19	*	-116.1	-40.0	5.9	*
20. REC 20	*	-198.1	-40.0	5.9	*

PAGE 3
JOB: Exit 161 Monument St 2015 NoBuild AM
RUN: I-25 Analysis

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	.0	.9	1.2	.0	.0	.0	.0	.8	.8	.8	.7	.0	.0	.0	.0	.8	.5	1.2	1.2
10. *	.0	.0	1.0	1.2	.0	.0	.0	.0	.6	.5	1.0	1.1	.0	.0	.0	.0	.6	.5	1.1	1.1
20. *	.0	.0	.9	1.2	.0	.0	.0	.0	.5	.3	1.2	1.2	.0	.0	.0	.0	.6	.5	1.2	1.2
30. *	.0	.0	.9	1.0	.0	.0	.0	.0	.4	.2	1.5	1.1	.0	.0	.0	.0	.6	.5	1.2	1.2
40. *	.0	.0	.9	1.1	.0	.0	.0	.0	.2	.2	1.6	1.0	.0	.0	.0	.0	.5	.5	1.2	1.2
50. *	.0	.0	.9	1.2	.0	.0	.0	.0	.2	.2	1.4	.9	.0	.0	.0	.0	.5	.5	1.4	1.5
60. *	.0	.1	1.0	1.5	.0	.0	.0	.0	.2	.2	1.1	.8	.1	.1	.1	.1	.7	.7	1.6	1.6
70. *	.1	.1	.9	1.5	.0	.0	.0	.0	.4	.2	1.1	.7	.1	.1	.1	.1	.8	.8	1.8	1.7
80. *	.5	.4	1.0	1.9	.0	.0	.0	.0	.4	.2	1.0	.7	.5	.4	.4	.4	.9	.9	1.9	1.5
90. *	1.0	.9	.7	1.7	.2	.1	.2	.1	.2	.0	.8	.8	1.0	.9	.8	.8	.7	.7	1.2	1.4
100. *	1.2	1.2	.4	1.4	.3	.2	.3	.2	.0	.0	.6	.6	1.2	1.3	.9	.9	.4	.4	.9	.8

```
 110.  *   1.1   1.3    .1   1.2    .3    .2    .3    .2    .0    .0
.5    .5   1.3   1.4    .8    .8    .1    .1    .6    .5
 120.  *   1.0   1.3    .0   1.1    .4    .2    .3    .2    .0    .0
.6    .6   1.2   1.4    .7    .7    .0    .0    .4    .3
 130.  *    .9   1.2    .0   1.2    .5    .2    .3    .2    .0    .0
.7    .7   1.4   1.6    .6    .6    .0    .0    .4    .3
 140.  *   1.0   1.2    .0   1.2    .4    .2    .3    .2    .0    .0
.8    .8   1.3   1.3    .6    .6    .0    .0    .3    .3
 150.  *   1.2   1.1    .0   1.2    .5    .3    .4    .2    .0    .0
.9    .9   1.4   1.2    .6    .5    .0    .0    .4    .3
 160.  *   1.5   1.2    .1   1.2    .8    .5    .4    .2    .1    .1
1.0   1.0   1.3   1.2    .6    .5    .0    .0    .4    .3
 170.  *   1.8   1.5    .6   1.2    .9    .6    .7    .5    .6    .6
1.1   1.1   1.3   1.2    .7    .5    .0    .0    .4    .3
 180.  *   1.6   1.8   1.0    .8   1.1    .7   1.1    .5   1.0   1.0
.8    .8   1.1   1.0   1.1    .6    .3    .1    .2    .1
 190.  *   1.3   2.0   1.4    .3    .7    .6   1.0    .7   1.2   1.2
.3    .3    .9    .9   1.3    .8    .4    .3    .0    .0
 200.  *    .9   1.5   1.3    .1    .5    .4    .7    .3   1.1   1.1
.1    .1    .9    .9   1.4    .8    .4    .3    .0    .0
 210.  *    .9   1.4   1.4    .0    .6    .4    .5    .3   1.0   1.0
.0    .0    .9    .9   1.6    .8    .4    .3    .0    .0
 220.  *   1.0   1.2   1.2    .0    .6    .4    .5    .4    .8    .8
.0    .0   1.0   1.0   1.7    .9    .4    .3    .0    .0
 230.  *   1.2   1.2   1.2    .0    .6    .4    .6    .4    .7    .7
.0    .0   1.2   1.2   1.7   1.1    .4    .3    .0    .0
 240.  *   1.2   1.3   1.2    .0    .6    .4    .6    .4    .7    .7
.0    .0   1.2   1.2   1.8   1.3    .4    .3    .0    .0
 250.  *   1.5   1.4   1.3    .2    .6    .4    .6    .4    .7    .7
.0    .0   1.5   1.5   1.7   1.4    .7    .5    .2    .2
 260.  *   1.6   1.6   1.9    .7    .6    .4    .6    .3    .8    .7
.1    .0   1.6   1.6   1.7   1.6   1.1    .9    .7    .7
 270.  *   1.2   1.1   2.6   1.7    .3    .2    .4    .2   1.1    .9
.4    .2   1.2   1.2   1.2   1.2   1.7   1.2   1.7   1.6
 280.  *    .6    .6   2.6   1.9    .0    .0    .0    .0   1.5   1.1
.7    .4    .6    .6    .6    .5   1.5   1.4   1.9   1.9
 290.  *    .1    .1   2.1   1.9    .0    .0    .0    .0   1.6   1.1
.7    .5    .1    .1    .1    .1   1.3   1.0   1.9   1.9
 300.  *    .1    .0   1.7   1.6    .0    .0    .0    .0   1.7   1.1
.7    .5    .1    .1    .0    .0   1.1    .8   1.6   1.6
 310.  *    .0    .0   1.1   1.5    .0    .0    .0    .0   1.6   1.1
.5    .4    .0    .0    .0    .0    .9    .7   1.5   1.5
 320.  *    .0    .0   1.0   1.2    .0    .0    .0    .0   1.7   1.2
```

```
.5     .4     .0     .0     .0     .0     .9     .5    1.2    1.2
 330.   *     .0     .0     .7    1.2     .0     .0     .0     .0    1.6    1.3
.5     .4     .0     .0     .0     .0     .9     .5    1.2    1.2
 340.   *     .0     .0    1.0    1.2     .0     .0     .0     .0    1.4    1.2
.6     .5     .0     .0     .0     .0     .9     .5    1.2    1.2
 350.   *     .0     .0     .9    1.2     .0     .0     .0     .0    1.0    1.0
.6     .6     .0     .0     .0     .0     .9     .5    1.1    1.1
 360.   *     .0     .0     .9    1.2     .0     .0     .0     .0     .8     .8
.8     .7     .0     .0     .0     .0     .8     .5    1.2    1.2
 ------*------------------------------------------------------------------------
--------------------------------------------------------
 MAX    *    1.8    2.0    2.6    1.9    1.1     .7    1.1     .7    1.7    1.3
1.6    1.2    1.6    1.6    1.8    1.6    1.7    1.4    1.9    1.9
 DEGR. *  170    190    270     80    180    180    180    190    300    330
40     20    260    130    240    260    270    280     80    280
```

THE HIGHEST CONCENTRATION OF   2.60 PPM OCCURRED AT RECEPTOR REC3 .

#26 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2025 No-Action AM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 161 Monument St 2025 NoBuild AM
RUN: I-25 Analysis

DATE :  2/27/12
TIME : 13:34:35

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S        VD =    .0 CM/S        Z0 = 108. CM
        U =  1.0 M/S          CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *      6.0   -3280.0       6.0        .0 *
3280.   360. AG   1260.   6.7    .0 56.0
       2. Monument EB Appr    *  -3280.0     -18.0        .0     -18.0 *
3280.    90. AG   1125.   6.4    .0 44.0
       3. Monument EB Dptr    *       .0     -18.0    3280.0     -18.0 *
3280.    90. AG   1290.   6.4    .0 44.0
       4. Monument WB Appr    *   3280.0      18.0        .0      18.0 *
3280.   270. AG   1600.   6.4    .0 44.0
       5. Monument WB Dptr    *       .0      18.0   -3280.0      18.0 *
3280.   270. AG   1750.   6.4    .0 44.0
       6. I-25 Ramp SB Dptr   *    -18.0        .0     -18.0   -3280.0 *
3280.   180. AG    945.   6.7    .0 32.0
       7. Monument EB Thru-R Q*    -24.0     -18.0   -3107.6     -18.0 *
3084.   270. AG    216. 100.0    .0 24.0 1.99 156.6
```

```
       8. Monument WB Left Q  *     24.0        .0     182.3        .0 *
158.    90. AG     94. 100.0    .0 12.0  .92   8.0
       9. Monument WB Thru Q  *     24.0      18.0     139.8      18.0 *
116.    90. AG    108. 100.0    .0 24.0  .64   5.9
      10. I-25 Ramp NB Left Q *       .0     -30.0        .0    -111.2 *
81.   180. AG    169. 100.0    .0 24.0  .51   4.1
      11. I-25 Ramp NB Right Q*     18.0     -30.0      18.0   -2200.1 *
2170.   180. AG     85. 100.0    .0 12.0 1.35 110.2
```

```
PAGE  2
JOB: Exit 161 Monument St 2025 NoBuild AM
RUN: I-25 Analysis

DATE :  2/27/12
TIME : 13:34:35

       ADDITIONAL QUEUE LINK PARAMETERS
       --------------------------------
         LINK DESCRIPTION      *    CYCLE    RED     CLEARANCE  APPROACH
SATURATION   IDLE   SIGNAL   ARRIVAL
                               *    LENGTH   TIME    LOST TIME    VOL
FLOW RATE   EM FAC   TYPE     RATE
                               *     (SEC)   (SEC)     (SEC)      (VPH)
(VPH)    (gm/hr)
      ------------------------*------------------------------------------
---------------------------------------
       7. Monument EB Thru-R Q*      90       70        3.0       1125
1700      51.70      2        3
       8. Monument WB Left Q   *      90       61        3.0        390
1600      51.70      2        3
       9. Monument WB Thru Q   *      90       35        3.0       1210
1700      51.70      2        3
      10. I-25 Ramp NB Left Q *      90       55        3.0        540
1600      51.70      2        3
      11. I-25 Ramp NB Right Q*      90       55        3.0        720
1600      51.70      2        3

       RECEPTOR LOCATIONS
       ------------------
                              *          COORDINATES (FT)           *
         RECEPTOR             *      X           Y           Z       *
     -------------------------*-------------------------------------*
      1. REC 1                *     -34.0        40.0         5.9    *
      2. REC 2                *      34.0        40.0         5.9    *
      3. REC 3                *      34.0       -40.0         5.9    *
      4. REC 4                *     -34.0       -40.0         5.9    *
      5. REC 5                *     -34.0       122.1         5.9    *
      6. REC 6                *     -34.0       204.1         5.9    *
      7. REC 7                *      34.0       122.1         5.9    *
      8. REC 8                *      34.0       240.1         5.9    *
      9. REC 9                *      34.0      -122.1         5.9    *
```

10. REC 10	*	34.0	-240.1	5.9	*
11. REC 11	*	-34.0	-122.1	5.9	*
12. REC 12	*	-34.0	-204.1	5.9	*
13. REC 13	*	-116.1	40.0	5.9	*
14. REC 14	*	-198.1	40.0	5.9	*
15. REC 15	*	116.1	40.0	5.9	*
16. REC 16	*	198.1	40.0	5.9	*
17. REC 17	*	116.1	-40.0	5.9	*
18. REC 18	*	198.1	-40.0	5.9	*
19. REC 19	*	-116.1	-40.0	5.9	*
20. REC 20	*	-198.1	-40.0	5.9	*

PAGE 3
JOB: Exit 161 Monument St 2025 NoBuild AM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.0	.0	.8	1.1	.0	.0	.0	.0	.7	.8	.8	.8	.0	.0	.0	.0	.8	.5	1.0	1.0
10.	.0	.0	.9	1.1	.0	.0	.0	.0	.5	.5	.9	.9	.0	.0	.0	.0	.7	.5	1.0	1.0
20.	.0	.0	.8	1.2	.0	.0	.0	.0	.5	.3	1.0	1.1	.0	.0	.0	.0	.7	.5	1.0	1.0
30.	.0	.0	.9	.9	.0	.0	.0	.0	.4	.2	1.4	1.1	.0	.0	.0	.0	.8	.5	1.0	1.0
40.	.0	.0	.9	1.1	.0	.0	.0	.0	.3	.2	1.5	.9	.0	.0	.0	.0	.6	.5	1.2	1.2
50.	.0	.0	.9	1.2	.0	.0	.0	.0	.2	.2	1.2	.7	.0	.0	.0	.0	.6	.5	1.2	1.4
60.	.0	.1	1.0	1.3	.0	.0	.0	.0	.2	.2	1.0	.7	.1	.1	.1	.1	.8	.7	1.3	1.3
70.	.1	.1	1.0	1.6	.0	.0	.0	.0	.4	.2	1.1	.7	.1	.1	.1	.1	.8	.8	1.7	1.6
80.	.5	.4	1.0	1.8	.0	.0	.0	.0	.4	.2	1.0	.7	.5	.4	.4	.4	.8	.8	1.8	1.5
90.	1.1	.9	.7	1.6	.2	.1	.2	.1	.2	.0	.8	.7	.9	.8	.8	.8	.7	.7	1.1	1.3
100.	1.2	1.3	.4	1.3	.3	.2	.3	.2	.0	.0	.5	.5	1.1	1.1	.9	.9	.4	.4	.8	.8

CONCENTRATION (PPM)

110.	*	1.1	1.3	.1	1.0	.3	.2	.3	.2	.0	.0
.5	.5	1.3	1.4	.9	.8	.1	.1	.5	.4		
120.	*	1.0	1.3	.0	.9	.4	.2	.3	.2	.0	.0
.5	.5	1.2	1.4	.9	.7	.0	.0	.4	.3		
130.	*	.8	1.2	.0	1.0	.5	.2	.4	.2	.0	.0
.6	.6	1.3	1.5	.9	.6	.0	.0	.4	.3		
140.	*	.8	1.1	.0	1.1	.4	.3	.5	.2	.0	.0
.7	.7	1.2	1.3	.9	.6	.0	.0	.3	.3		
150.	*	1.2	1.0	.0	1.0	.4	.3	.4	.2	.0	.0
.7	.7	1.4	1.3	1.0	.5	.0	.0	.3	.3		
160.	*	1.5	.9	.1	1.2	.7	.3	.4	.2	.1	.1
1.0	1.0	1.0	1.0	.9	.5	.0	.0	.3	.3		
170.	*	1.7	1.3	.5	1.2	.7	.6	.7	.5	.5	.5
1.1	1.1	1.3	1.2	.9	.5	.0	.0	.4	.3		
180.	*	1.6	1.7	.9	.8	.9	.6	.9	.5	.9	.9
.8	.8	1.2	1.0	1.2	.6	.3	.1	.3	.1		
190.	*	1.1	1.8	1.2	.3	.7	.5	.8	.4	1.1	1.1
.3	.3	.9	.9	1.3	.8	.4	.3	.0	.0		
200.	*	.8	1.5	1.1	.1	.4	.3	.7	.3	.9	.9
.1	.1	.7	.7	1.3	.9	.4	.3	.0	.0		
210.	*	1.0	1.2	1.2	.0	.5	.4	.3	.3	.9	.9
.0	.0	1.0	1.0	1.4	.9	.3	.3	.0	.0		
220.	*	1.0	1.1	1.1	.0	.5	.4	.5	.3	.7	.7
.0	.0	1.0	1.0	1.5	1.0	.3	.3	.0	.0		
230.	*	1.1	1.1	1.0	.0	.5	.4	.5	.4	.6	.6
.0	.0	1.1	1.1	1.6	1.2	.4	.3	.0	.0		
240.	*	1.1	1.2	1.0	.0	.6	.4	.6	.4	.6	.6
.0	.0	1.1	1.1	1.5	1.3	.4	.3	.0	.0		
250.	*	1.3	1.3	1.1	.2	.6	.4	.6	.4	.5	.5
.0	.0	1.3	1.3	1.5	1.6	.6	.4	.2	.2		
260.	*	1.4	1.4	1.8	.7	.6	.4	.6	.4	.7	.6
.1	.0	1.4	1.4	1.5	1.5	1.0	.8	.7	.7		
270.	*	1.3	1.2	2.2	1.4	.4	.2	.4	.2	1.1	.7
.4	.2	1.3	1.3	1.3	1.1	1.6	1.3	1.4	1.4		
280.	*	.6	.6	2.5	1.8	.0	.0	.0	.0	1.4	1.0
.7	.4	.6	.6	.6	.6	1.4	1.3	1.8	1.8		
290.	*	.1	.1	2.1	1.7	.0	.0	.0	.0	1.3	.9
.6	.4	.1	.1	.1	.1	1.2	1.1	1.7	1.7		
300.	*	.1	.0	1.4	1.4	.0	.0	.0	.0	1.5	1.0
.6	.4	.1	.1	.0	.0	1.0	.9	1.4	1.4		
310.	*	.0	.0	1.0	1.4	.0	.0	.0	.0	1.4	1.0
.5	.4	.0	.0	.0	.0	.8	.8	1.4	1.4		
320.	*	.0	.0	.9	1.2	.0	.0	.0	.0	1.5	1.1

```
.5     .4     .0     .0     .0     .0     .9     .7    1.2    1.2
 330.   *     .0     .0     .7    1.1     .0     .0     .0     .0    1.4    1.1
.5     .4     .0     .0     .0     .0     .9     .6    1.0    1.0
 340.   *     .0     .0     .9    1.0     .0     .0     .0     .0    1.4    1.1
.5     .5     .0     .0     .0     .0     .8     .6    1.0    1.0
 350.   *     .0     .0     .8    1.1     .0     .0     .0     .0     .8    1.0
.5     .5     .0     .0     .0     .0     .8     .5    1.0    1.0
 360.   *     .0     .0     .8    1.1     .0     .0     .0     .0     .7     .8
.8     .8     .0     .0     .0     .0     .8     .5    1.0    1.0
 ------*-----------------------------------------------------------------
--------------------------------------------------------
 MAX    *    1.7    1.8    2.5    1.8     .9     .6     .9     .5    1.5    1.1
1.5    1.1    1.4    1.5    1.6    1.6    1.6    1.3    1.8    1.8
 DEGR. *   170    190    280     80    180    170    180    170    300    330
40     20    150    130    230    250    270    270     80    280
```

THE HIGHEST CONCENTRATION OF 2.50 PPM OCCURRED AT RECEPTOR REC3 .

#27 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2035 No-Action AM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Drive 2035 NoBuild AM
RUN: I-25 Analysis

DATE :  2/27/12
TIME : 10: 8:40

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =     .0 CM/S       VD =     .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S          CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *     -6.0   -3280.0      -6.0        .0 *
3280.   360. AG   1575.   6.2    .0 44.0
       2. I-25 Ramp NB Dptr   *     -6.0        .0      -6.0    3280.0 *
3280.   360. AG    750.   7.2    .0 44.0
       3. Woodmen EB Appr     *  -3280.0     -48.0        .0     -48.0 *
3280.    90. AG   2210.   6.2    .0 56.0
       4. Woodmen EB Dptr     *       .0     -48.0    3280.0     -48.0 *
3280.    90. AG   2710.   6.2    .0 56.0
       5. Woodmen WB Appr     *   3280.0      24.0        .0      24.0 *
3280.   270. AG   3705.   6.2    .0 80.0
       6. Woodmen WB Dptr     *       .0      24.0   -3280.0      24.0 *
3280.   270. AG   4030.   6.2    .0 80.0
       7. Woodmen EB Left Q   *    -30.0     -18.0    -406.6     -18.0 *
377.   270. AG    216. 100.0    .0 24.0 1.06   19.1
```

```
       8. Woodmen EB Thru Q   *    -30.0     -48.0   -4457.2     -48.0 *
4427.   270. AG    346. 100.0    .0 36.0 3.33 224.9
       9. Woodmen WB Thru Q   *     30.0      24.0     303.6      24.0 *
274.    90. AG    319. 100.0    .0 60.0  .84  13.9
      10. Woodmen WB Right Q  *     30.0      60.0     120.6      60.0 *
91.    90. AG     64. 100.0    .0 12.0  .30   4.6
      11. I-25 Ramp NB Left Q *    -18.0     -66.0     -18.0    -226.6 *
161.   180. AG    188. 100.0    .0 24.0  .67   8.2
      12. I-25 Ramp NB Right Q*     12.0     -66.0      12.0    -263.1 *
197.   180. AG    282. 100.0    .0 36.0  .82  10.0
```

PAGE 2
JOB: Exit 149 Woodmen Drive 2035 NoBuild AM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 10: 8:40

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
7. Woodmen EB Left Q	150	122	3.0	520	1600	49.60	2	3
8. Woodmen EB Thru Q	150	130	3.0	1690	1700	49.60	2	3
9. Woodmen WB Thru Q	150	72	3.0	3475	1700	49.60	2	3
10. Woodmen WB Right Q	150	72	3.0	230	1600	49.60	2	3
11. I-25 Ramp NB Left Q	150	106	3.0	555	1600	49.60	2	3
12. I-25 Ramp NB Right Q	150	106	3.0	1020	1600	49.60	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-28.0	64.0	5.9
2. REC 2	16.0	76.0	5.9
3. REC 3	40.0	-76.0	5.9
4. REC 4	-40.0	-76.0	5.9
5. REC 5	-28.0	146.1	5.9
6. REC 6	-28.0	228.1	5.9
7. REC 7	16.0	158.1	5.9

8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Drive 2035 NoBuild AM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.3	.3	1.3	2.2	.3	.3	.3	.3	1.0	1.0	1.2	1.4	.1	.0	.1	.0	1.5	1.4	2.3	2.2
10.	.4	.2	1.4	2.0	.4	.4	.2	.2	.8	.8	1.7	1.9	.1	.1	.0	.0	1.4	1.4	2.3	2.3
20.	.3	.1	1.4	1.8	.3	.3	.1	.1	.7	.6	1.9	2.0	.1	.1	.0	.0	1.4	1.4	2.2	2.2
30.	.3	.0	1.4	1.8	.3	.3	.0	.0	.8	.6	2.0	2.2	.2	.2	.0	.0	1.4	1.4	2.3	2.3
40.	.2	.0	1.5	1.8	.2	.2	.0	.0	.9	.6	2.2	2.0	.2	.2	.0	.0	1.5	1.4	2.6	2.5
50.	.2	.0	1.5	1.9	.2	.2	.0	.0	.9	.5	2.4	1.9	.2	.2	.0	.0	1.5	1.2	2.6	2.7
60.	.2	.0	1.7	2.4	.2	.2	.0	.0	.7	.4	2.3	1.7	.2	.2	.0	.0	1.5	1.3	2.8	3.0
70.	.4	.1	1.7	2.6	.2	.2	.0	.0	.6	.4	2.1	1.5	.3	.2	.1	.1	1.6	1.4	2.8	3.1
80.	1.2	.5	1.6	2.7	.3	.2	.1	.0	.6	.4	2.0	1.4	.9	.8	.5	.3	1.6	1.5	2.8	3.0
90.	2.1	1.3	1.3	2.6	.6	.5	.4	.2	.4	.2	1.8	1.0	1.8	1.6	1.1	1.0	1.2	1.2	2.1	2.1
100.	2.7	2.2	.6	1.9	.9	.6	.7	.4	.1	.0	1.5	.8	2.2	1.9	1.8	1.6	.6	.6	1.2	1.1

CONCENTRATION (PPM)

```
 110.  *   2.4   2.3    .2   1.6   1.1    .8    .8    .5    .0    .0
1.4    .6   1.8   1.8   2.0   1.7    .2    .2    .8    .6
 120.  *   2.0   2.2    .1   1.5   1.2    .9    .9    .5    .0    .0
1.5    .5   1.5   1.9   2.1   1.8    .1    .1    .7    .5
 130.  *   1.6   1.9    .1   1.5   1.2    .9   1.0    .6    .0    .0
1.5    .4   1.6   2.1   2.0   1.8    .1    .1    .6    .3
 140.  *   1.4   1.6    .0   1.6   1.1    .8    .9    .6    .0    .0
1.5    .3   1.7   2.1   1.8   1.6    .0    .0    .5    .2
 150.  *   1.5   1.4    .0   1.7   1.0    .8   1.0    .6    .0    .0
1.4    .4   2.1   1.9   1.8   1.6    .0    .0    .4    .1
 160.  *   1.9   1.3    .0   1.6   1.0   1.0    .7    .6    .0    .0
1.2    .4   2.0   1.6   1.6   1.4    .0    .0    .2    .1
 170.  *   2.3   1.6    .3   1.2   1.4   1.1   1.0    .8    .2    .1
.8    .4   2.0   1.7   1.7   1.5    .0    .0    .2    .1
 180.  *   2.2   1.9    .8    .7   1.5   1.2   1.2   1.1    .6    .3
.4    .3   1.7   1.7   2.0   1.7    .1    .1    .1    .1
 190.  *   1.9   1.9   1.3    .2   1.1    .9   1.4   1.2    .9    .3
.1    .1   1.6   1.6   2.1   1.6    .2    .1    .0    .0
 200.  *   1.6   1.6   1.6    .0   1.0    .7   1.4   1.0   1.2    .4
.0    .0   1.6   1.6   2.2   1.6    .3    .1    .0    .0
 210.  *   1.6   1.8   1.7    .0   1.0    .7   1.1    .8   1.4    .5
.0    .0   1.6   1.6   2.3   2.0    .3    .1    .0    .0
 220.  *   1.8   1.6   1.6    .0   1.0    .8   1.1    .9   1.4    .6
.0    .0   1.8   1.8   2.2   2.0    .5    .2    .0    .0
 230.  *   1.9   1.8   1.4    .0   1.0    .8   1.2   1.0   1.4    .7
.0    .0   1.9   1.9   2.4   2.2    .7    .4    .0    .0
 240.  *   2.0   2.0   1.3    .1   1.2    .8   1.3   1.0   1.3    .8
.0    .0   2.0   2.0   2.3   2.4    .8    .5    .1    .1
 250.  *   2.3   2.2   1.6    .2   1.2    .7   1.3    .9   1.3    .9
.0    .0   2.3   2.2   2.4   2.5    .8    .6    .2    .2
 260.  *   2.4   2.2   2.4   1.1   1.1    .7   1.2    .9   1.4   1.1
.1    .1   2.3   2.3   2.4   2.6   1.5   1.4   1.1   1.1
 270.  *   1.9   1.7   3.7   2.7    .6    .5    .8    .7   2.1   1.6
.8    .4   1.8   1.8   1.7   1.7   2.7   2.4   2.6   2.6
 280.  *    .7    .6   4.0   3.4    .2    .0    .3    .2   2.6   1.9
1.2    .8    .7    .7    .5    .4   3.0   2.5   3.4   3.3
 290.  *    .2    .3   3.3   3.3    .0    .0    .2    .2   2.8   2.2
1.4    .9    .2    .2    .2    .0   2.1   2.0   3.3   3.2
 300.  *    .1    .2   2.4   2.9    .0    .0    .2    .2   2.5   2.4
1.2   1.0    .1    .1    .1    .1   1.7   1.5   2.9   2.9
 310.  *    .1    .2   1.8   2.6    .0    .0    .2    .2   2.5   2.3
1.2    .8    .1    .1    .1    .1   1.4   1.5   2.6   2.6
 320.  *    .1    .2   1.5   2.4    .0    .0    .2    .2   2.5   2.4
```

```
1.2    .7    .1    .1    .1    .1   1.4   1.6   2.4   2.4
 330.  *    .1    .3   1.2   2.2    .0    .0    .3    .3   2.1   2.3
1.1    .8    .1    .1    .1    .1   1.4   1.5   2.2   2.2
 340.  *    .1    .3   1.2   2.1    .1    .1    .3    .3   1.9   2.1
1.1    .7    .0    .0    .1    .1   1.5   1.5   2.1   2.1
 350.  *    .2    .4   1.3   2.1    .2    .2    .4    .4   1.2   1.8
1.3    .8    .0    .0    .1    .1   1.5   1.5   2.2   2.2
 360.  *    .3    .3   1.3   2.2    .3    .3    .3    .3   1.0   1.0
1.2   1.4    .1    .0    .1    .0   1.5   1.4   2.3   2.2
 ------*-----------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.7   2.3   4.0   3.4   1.5   1.2   1.4   1.2   2.8   2.4
2.4   2.2   2.3   2.3   2.4   2.6   3.0   2.5   3.4   3.3
 DEGR. *  100   110   280   280   180   180   190   190   290   300
50    30   250   260   230   260   280   280   280   280
```

THE HIGHEST CONCENTRATION OF   4.00 PPM OCCURRED AT RECEPTOR REC3 .

#28 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2015 No-Action PM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 161 Monument St 2015 NoBuild PM
RUN: I-25 Analysis

DATE :  2/28/12
TIME :  9:40:42

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)     ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *      6.0   -3280.0       6.0        .0 *
3280.   360. AG   1370.   8.4    .0 56.0
       2. Monument EB Appr    *  -3280.0     -18.0        .0     -18.0 *
3280.    90. AG   1105.   8.0    .0 44.0
       3. Monument EB Dptr    *       .0     -18.0    3280.0     -18.0 *
3280.    90. AG   1360.   8.0    .0 44.0
       4. Monument WB Appr    *   3280.0      18.0        .0      18.0 *
3280.   270. AG   1195.   8.0    .0 44.0
       5. Monument WB Dptr    *       .0      18.0   -3280.0      18.0 *
3280.   270. AG   1650.   8.0    .0 44.0
       6. I-25 Ramp SB Dptr   *    -18.0        .0     -18.0   -3280.0 *
3280.   180. AG    660.   8.4    .0 32.0
       7. Monument EB Thru-R Q*    -24.0     -18.0   -3003.2     -18.0 *
2979.   270. AG    264. 100.0    .0 24.0 1.95 151.3
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       8. Monument WB Left Q  *     24.0         .0      108.2         .0 *
84.     90. AG    134. 100.0    .0 12.0  .81   4.3
       9. Monument WB Thru Q  *     24.0       18.0      132.7       18.0 *
109.    90. AG    151. 100.0    .0 24.0  .58   5.5
      10. I-25 Ramp NB Left Q *       .0      -30.0         .0     -119.4 *
89.   180. AG    189. 100.0    .0 24.0  .53   4.5
      11. I-25 Ramp NB Right Q*     18.0      -30.0       18.0    -1245.1 *
1215.   180. AG     94. 100.0    .0 12.0 1.15  61.7
```

PAGE 2
JOB: Exit 161 Monument St 2015 NoBuild PM
RUN: I-25 Analysis

DATE : 2/28/12
TIME : 9:40:42

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
7. Monument EB Thru-R Q	*	90	70	3.0	1105	1700	63.30	2	3
8. Monument WB Left Q	*	90	71	3.0	200	1600	63.30	2	3
9. Monument WB Thru Q	*	90	40	3.0	995	1700	63.30	2	3
10. I-25 Ramp NB Left Q	*	90	50	3.0	655	1600	63.30	2	3
11. I-25 Ramp NB Right Q	*	90	50	3.0	715	1600	63.30	2	3

RECEPTOR LOCATIONS

RECEPTOR	*	X (FT)	Y (FT)	Z (FT)	*
1. REC 1	*	-34.0	40.0	5.9	*
2. REC 2	*	34.0	40.0	5.9	*
3. REC 3	*	34.0	-40.0	5.9	*
4. REC 4	*	-34.0	-40.0	5.9	*
5. REC 5	*	-34.0	122.1	5.9	*
6. REC 6	*	-34.0	204.1	5.9	*
7. REC 7	*	34.0	122.1	5.9	*
8. REC 8	*	34.0	240.1	5.9	*
9. REC 9	*	34.0	-122.1	5.9	*

10. REC 10	*	34.0	-240.1	5.9	*
11. REC 11	*	-34.0	-122.1	5.9	*
12. REC 12	*	-34.0	-204.1	5.9	*
13. REC 13	*	-116.1	40.0	5.9	*
14. REC 14	*	-198.1	40.0	5.9	*
15. REC 15	*	116.1	40.0	5.9	*
16. REC 16	*	198.1	40.0	5.9	*
17. REC 17	*	116.1	-40.0	5.9	*
18. REC 18	*	198.1	-40.0	5.9	*
19. REC 19	*	-116.1	-40.0	5.9	*
20. REC 20	*	-198.1	-40.0	5.9	*

PAGE 3
JOB: Exit 161 Monument St 2015 NoBuild PM
RUN: I-25 Analysis

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)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10
0.	.0	.0	1.2	1.4	.0	.0	.0	.0	.9	1.0
10.	.0	.0	1.0	1.3	.0	.0	.0	.0	.6	.6
20.	.0	.0	.9	1.3	.0	.0	.0	.0	.5	.3
30.	.0	.0	1.0	1.1	.0	.0	.0	.0	.5	.3
40.	.0	.0	1.0	1.3	.0	.0	.0	.0	.4	.2
50.	.0	.0	1.0	1.5	.0	.0	.0	.0	.3	.2
60.	.0	.0	1.0	1.6	.0	.0	.0	.0	.3	.2
70.	.2	.1	1.1	1.9	.0	.0	.0	.0	.3	.2
80.	.5	.5	1.0	2.1	.0	.0	.0	.0	.3	.2
90.	1.0	1.0	.9	1.8	.2	.2	.2	.1	.2	.1
100.	1.4	1.2	.4	1.5	.4	.2	.4	.2	.0	.0

WIND ANGLE (DEGR)	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.8	.9	.0	.0	.0	.0	.9	.6	1.4	1.4
10.	1.0	1.0	.0	.0	.0	.0	.7	.5	1.3	1.3
20.	1.3	1.3	.0	.0	.0	.0	.6	.5	1.4	1.4
30.	1.5	1.2	.0	.0	.0	.0	.6	.6	1.4	1.4
40.	1.6	1.0	.0	.0	.0	.0	.6	.6	1.4	1.4
50.	1.5	.8	.0	.0	.0	.0	.6	.6	1.6	1.6
60.	1.3	.8	.1	.1	.0	.0	.7	.7	1.7	1.7
70.	1.3	.8	.1	.1	.1	.1	.9	.9	1.9	1.9
80.	1.2	.8	.6	.5	.4	.4	1.0	1.0	2.1	1.9
90.	1.0	.8	1.0	1.1	.8	.8	.8	.8	1.4	1.4
100.	.7	.6	1.3	1.4	.9	.9	.4	.4	1.1	.8

110.	*	1.2	1.4	.1	1.1	.4	.2	.4	.2	.0	.0
.6	.6	1.4	1.6	.8	.8	.1	.1	.6	.4		
120.	*	1.1	1.3	.1	1.0	.5	.2	.4	.2	.0	.0
.6	.6	1.3	1.4	.8	.7	.1	.1	.5	.2		
130.	*	1.0	1.4	.0	1.0	.4	.2	.4	.2	.0	.0
.6	.6	1.6	1.6	.9	.7	.0	.0	.5	.3		
140.	*	1.2	1.3	.0	1.2	.4	.3	.3	.2	.0	.0
.8	.8	1.6	1.5	.8	.6	.0	.0	.4	.3		
150.	*	1.3	1.2	.1	1.3	.5	.3	.5	.2	.1	.1
.9	.9	1.5	1.3	.8	.5	.0	.0	.4	.3		
160.	*	1.7	1.2	.1	1.3	.8	.5	.5	.3	.1	.1
1.0	1.0	1.4	1.3	.9	.5	.0	.0	.4	.3		
170.	*	2.0	1.4	.5	1.2	.9	.6	.7	.5	.5	.5
1.1	1.1	1.4	1.2	.9	.5	.0	.0	.4	.2		
180.	*	1.9	2.0	1.0	.9	1.2	.8	1.1	.7	1.0	1.0
.9	.9	1.3	1.2	1.3	.6	.3	.1	.2	.1		
190.	*	1.3	2.0	1.4	.4	.7	.6	1.0	.7	1.3	1.3
.4	.4	1.0	1.0	1.4	.8	.4	.3	.0	.0		
200.	*	1.0	1.7	1.5	.1	.5	.4	.9	.4	1.2	1.2
.1	.1	1.0	1.0	1.4	.8	.4	.3	.0	.0		
210.	*	1.0	1.4	1.3	.0	.6	.4	.5	.4	.9	.9
.0	.0	1.0	1.0	1.7	.8	.4	.3	.0	.0		
220.	*	1.2	1.3	1.2	.0	.6	.4	.5	.4	.8	.8
.0	.0	1.2	1.2	1.7	.8	.4	.2	.0	.0		
230.	*	1.2	1.3	1.2	.0	.6	.4	.6	.4	.8	.8
.0	.0	1.2	1.2	1.9	.9	.5	.2	.0	.0		
240.	*	1.4	1.2	1.2	.0	.6	.5	.6	.4	.8	.8
.0	.0	1.4	1.4	2.0	1.1	.6	.3	.0	.0		
250.	*	1.5	1.5	1.3	.2	.6	.6	.6	.4	.7	.7
.0	.0	1.5	1.5	2.0	1.6	.8	.5	.2	.2		
260.	*	1.9	1.8	1.9	.9	.7	.5	.7	.4	.9	.7
.1	.0	1.9	1.9	1.9	1.7	1.3	1.0	.9	.9		
270.	*	1.5	1.4	2.9	1.8	.5	.2	.5	.2	1.4	.9
.5	.4	1.5	1.5	1.6	1.5	2.0	1.5	1.8	1.8		
280.	*	.7	.7	2.9	2.3	.1	.0	.1	.0	1.8	1.1
.8	.5	.7	.7	.8	.8	1.7	1.8	2.3	2.3		
290.	*	.2	.1	2.3	2.1	.0	.0	.0	.0	1.9	1.2
.8	.5	.2	.2	.2	.1	1.4	1.3	2.1	2.1		
300.	*	.1	.0	1.7	1.7	.0	.0	.0	.0	2.0	1.2
.8	.5	.1	.1	.0	.0	1.1	1.0	1.7	1.7		
310.	*	.0	.0	1.3	1.6	.0	.0	.0	.0	1.8	1.2
.6	.4	.0	.0	.0	.0	1.1	.7	1.6	1.6		
320.	*	.0	.0	1.1	1.4	.0	.0	.0	.0	1.8	1.2

```
.6    .4    .0    .0    .0    .0   1.0    .7   1.4   1.4
 330.  *    .0    .0    .8   1.4    .0    .0    .0    .0   1.7   1.4
.6    .4    .0    .0    .0    .0   1.0    .6   1.4   1.4
 340.  *    .0    .0    .9   1.4    .0    .0    .0    .0   1.5   1.3
.6    .5    .0    .0    .0    .0    .8    .5   1.4   1.4
 350.  *    .0    .0    .9   1.4    .0    .0    .0    .0   1.1   1.2
.6    .6    .0    .0    .0    .0    .8    .5   1.3   1.3
 360.  *    .0    .0   1.2   1.4    .0    .0    .0    .0    .9   1.0
.8    .9    .0    .0    .0    .0    .9    .6   1.4   1.4
 ------*------------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.0   2.0   2.9   2.3   1.2    .8   1.1    .7   2.0   1.4
1.6   1.3   1.9   1.9   2.0   1.7   2.0   1.8   2.3   2.3
 DEGR. *  170   190   270   280   180   180   180   180   300   330
40    20   260   260   240   260   270   280   280   280
```

THE HIGHEST CONCENTRATION OF   2.90 PPM OCCURRED AT RECEPTOR REC3 .

#29 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2025 No-Action PM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 161 Monument St 2025 NoBuild PM
RUN: I-25 Analysis

DATE :  2/27/12
TIME : 14:24:55

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =     .0 CM/S        VD =     .0 CM/S        Z0 = 108. CM
        U =  1.0 M/S           CLAS =    4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *      6.0   -3280.0       6.0        .0 *
3280.   360. AG   1490.   6.7    .0 56.0
       2. Monument EB Appr    *  -3280.0     -18.0        .0     -18.0 *
3280.    90. AG   1465.   6.4    .0 44.0
       3. Monument EB Dptr    *       .0     -18.0    3280.0     -18.0 *
3280.    90. AG   1660.   6.4    .0 44.0
       4. Monument WB Appr    *   3280.0      18.0        .0      18.0 *
3280.   270. AG   1520.   6.4    .0 44.0
       5. Monument WB Dptr    *       .0      18.0   -3280.0      18.0 *
3280.   270. AG   1980.   6.4    .0 44.0
       6. I-25 Ramp SB Dptr   *    -18.0        .0     -18.0   -3280.0 *
3280.   180. AG    835.   6.7    .0 32.0
       7. Monument EB Thru-R Q*    -24.0     -18.0   -5205.1     -18.0 *
5181.   270. AG    222. 100.0    .0 24.0 2.87 263.2
```

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       8. Monument WB Left Q  *      24.0         .0      160.0          .0 *
136.    90. AG    110. 100.0    .0 12.0  .94   6.9
       9. Monument WB Thru Q  *      24.0       18.0      164.0        18.0 *
140.    90. AG    111. 100.0    .0 24.0  .68   7.1
      10. I-25 Ramp NB Left Q *        .0      -30.0         .0      -144.8 *
115.   180. AG    166. 100.0    .0 24.0  .63   5.8
      11. I-25 Ramp NB Right Q*      18.0      -30.0       18.0     -2671.8 *
2642.   180. AG     83. 100.0    .0 12.0 1.41 134.2
```

PAGE 2
JOB: Exit 161 Monument St 2025 NoBuild PM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 14:24:55

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
7. Monument EB Thru-R Q	100	80	3.0	1465	1700	51.70	2	3
8. Monument WB Left Q	100	79	3.0	240	1600	51.70	2	3
9. Monument WB Thru Q	100	40	3.0	1280	1700	51.70	2	3
10. I-25 Ramp NB Left Q	100	60	3.0	700	1600	51.70	2	3
11. I-25 Ramp NB Right Q	100	60	3.0	790	1600	51.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	X (FT)	Y (FT)	Z (FT)
1. REC 1	-34.0	40.0	5.9
2. REC 2	34.0	40.0	5.9
3. REC 3	34.0	-40.0	5.9
4. REC 4	-34.0	-40.0	5.9
5. REC 5	-34.0	122.1	5.9
6. REC 6	-34.0	204.1	5.9
7. REC 7	34.0	122.1	5.9
8. REC 8	34.0	240.1	5.9
9. REC 9	34.0	-122.1	5.9

10. REC 10	*	34.0	-240.1	5.9	*
11. REC 11	*	-34.0	-122.1	5.9	*
12. REC 12	*	-34.0	-204.1	5.9	*
13. REC 13	*	-116.1	40.0	5.9	*
14. REC 14	*	-198.1	40.0	5.9	*
15. REC 15	*	116.1	40.0	5.9	*
16. REC 16	*	198.1	40.0	5.9	*
17. REC 17	*	116.1	-40.0	5.9	*
18. REC 18	*	198.1	-40.0	5.9	*
19. REC 19	*	-116.1	-40.0	5.9	*
20. REC 20	*	-198.1	-40.0	5.9	*

PAGE 3
JOB: Exit 161 Monument St 2025 NoBuild PM
RUN: I-25 Analysis

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)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10
0.	.0	.0	.9	1.3	.0	.0	.0	.0	.9	.8
10.	.0	.0	1.0	1.2	.0	.0	.0	.0	.5	.6
20.	.0	.0	.9	1.3	.0	.0	.0	.0	.5	.3
30.	.0	.0	1.0	1.1	.0	.0	.0	.0	.4	.2
40.	.0	.0	1.0	1.3	.0	.0	.0	.0	.5	.2
50.	.0	.0	1.0	1.4	.0	.0	.0	.0	.3	.2
60.	.0	.1	1.1	1.4	.0	.0	.0	.0	.3	.2
70.	.2	.1	1.1	1.8	.0	.0	.0	.0	.3	.2
80.	.5	.5	1.1	2.0	.0	.0	.0	.0	.3	.2
90.	1.1	1.0	.8	1.8	.2	.2	.2	.1	.2	.1
100.	1.3	1.3	.4	1.5	.4	.2	.4	.2	.0	.0

WIND ANGLE (DEGR)	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.8	.8	.0	.0	.0	.0	1.0	.6	1.2	1.2
10.	.9	.9	.0	.0	.0	.0	.9	.5	1.2	1.2
20.	1.2	1.2	.0	.0	.0	.0	.9	.5	1.2	1.2
30.	1.5	1.3	.0	.0	.0	.0	.9	.6	1.3	1.3
40.	1.4	.9	.0	.0	.0	.0	.8	.6	1.3	1.3
50.	1.5	.8	.0	.0	.0	.0	.8	.6	1.4	1.5
60.	1.3	.8	.1	.1	.1	.1	.7	.7	1.6	1.5
70.	1.3	.8	.1	.1	.1	.1	.9	.9	1.8	1.7
80.	1.3	.8	.5	.5	.4	.4	1.0	1.0	2.1	1.8
90.	1.2	.8	1.1	1.0	.8	.8	.8	.8	1.4	1.4
100.	.9	.6	1.3	1.3	1.0	.9	.4	.4	1.0	.8

110.	*	1.3	1.3	.1	1.1	.4	.2	.4	.2	.0	.0
.9	.6	1.3	1.5	1.0	.8	.1	.1	.6	.3		
120.	*	1.1	1.4	.1	1.0	.4	.2	.3	.2	.0	.0
.8	.6	1.2	1.4	1.1	.8	.1	.1	.5	.2		
130.	*	.9	1.2	.0	1.0	.5	.2	.4	.2	.0	.0
.8	.6	1.4	1.4	1.0	.6	.0	.0	.4	.3		
140.	*	1.2	1.2	.0	1.0	.4	.3	.4	.2	.0	.0
.7	.6	1.5	1.4	1.0	.6	.0	.0	.5	.3		
150.	*	1.2	1.0	.0	1.2	.5	.4	.4	.2	.0	.0
.8	.8	1.5	1.3	1.0	.5	.0	.0	.4	.3		
160.	*	1.5	1.1	.1	1.2	.8	.4	.4	.3	.1	.1
.9	.9	1.4	1.3	1.0	.5	.0	.0	.4	.3		
170.	*	1.9	1.3	.5	1.3	.9	.6	.6	.5	.5	.5
1.1	1.1	1.4	1.3	1.0	.5	.0	.0	.4	.3		
180.	*	1.7	1.7	1.0	.9	1.1	.8	1.1	.7	.9	.9
.8	.8	1.3	1.1	1.3	.6	.3	.1	.3	.1		
190.	*	1.1	2.0	1.4	.3	.7	.5	.8	.7	1.2	1.2
.3	.3	1.0	1.0	1.4	.8	.4	.3	.0	.0		
200.	*	.9	1.7	1.3	.1	.5	.4	.7	.4	1.0	1.0
.1	.1	1.0	1.0	1.4	.8	.4	.3	.0	.0		
210.	*	1.0	1.2	1.2	.0	.5	.4	.5	.3	.8	.8
.0	.0	1.0	1.0	1.5	.8	.4	.3	.0	.0		
220.	*	1.1	1.1	1.2	.0	.5	.4	.5	.3	.9	.8
.0	.0	1.1	1.1	1.7	1.0	.5	.2	.0	.0		
230.	*	1.1	1.2	1.0	.0	.5	.4	.5	.4	.8	.6
.0	.0	1.1	1.1	1.6	1.1	.4	.2	.0	.0		
240.	*	1.3	1.1	1.0	.0	.6	.4	.6	.4	.8	.6
.0	.0	1.3	1.3	1.7	1.3	.5	.4	.0	.0		
250.	*	1.5	1.4	1.2	.2	.6	.5	.6	.4	.9	.6
.0	.0	1.5	1.5	1.7	1.8	.7	.4	.2	.2		
260.	*	1.7	1.7	1.8	.8	.6	.5	.6	.4	1.0	.6
.1	.0	1.7	1.7	1.6	1.8	1.1	.8	.8	.8		
270.	*	1.4	1.3	2.6	1.8	.5	.3	.5	.2	1.5	.9
.5	.4	1.4	1.4	1.4	1.5	1.9	1.4	1.8	1.8		
280.	*	.7	.7	2.7	2.1	.1	.0	.1	.0	1.8	1.0
.8	.5	.7	.7	.7	.7	1.7	1.7	2.1	2.1		
290.	*	.2	.1	2.2	1.9	.0	.0	.0	.0	1.8	1.0
.8	.4	.2	.2	.2	.1	1.3	1.3	1.9	1.9		
300.	*	.1	.0	1.6	1.6	.0	.0	.0	.0	1.7	1.0
.7	.4	.1	.1	.0	.0	1.1	1.1	1.6	1.6		
310.	*	.0	.0	1.2	1.5	.0	.0	.0	.0	1.6	1.0
.6	.4	.0	.0	.0	.0	1.1	.9	1.5	1.5		
320.	*	.0	.0	1.0	1.3	.0	.0	.0	.0	1.6	1.2

```
.6    .4    .0    .0    .0    .0   1.0    .8   1.3   1.3
 330.  *    .0    .0    .7   1.3    .0    .0    .0    .0   1.5   1.2
.5    .4    .0    .0    .0    .0    .9    .7   1.3   1.3
 340.  *    .0    .0    .8   1.2    .0    .0    .0    .0   1.5   1.4
.5    .5    .0    .0    .0    .0    .9    .5   1.2   1.2
 350.  *    .0    .0    .9   1.3    .0    .0    .0    .0    .9   1.3
.5    .4    .0    .0    .0    .0    .9    .5   1.2   1.2
 360.  *    .0    .0    .9   1.3    .0    .0    .0    .0    .9    .8
.8    .8    .0    .0    .0    .0   1.0    .6   1.2   1.2
 ------*-----------------------------------------------------------------
--------------------------------------------------------
 MAX   *   1.9   2.0   2.7   2.1   1.1    .8   1.1    .7   1.8   1.4
1.5   1.3   1.7   1.7   1.7   1.8   1.9   1.7   2.1   2.1
 DEGR. *  170   190   280   280   180   180   180   180   280   340
30    30   260   260   220   250   270   280    80   280
```

THE HIGHEST CONCENTRATION OF   2.70 PPM OCCURRED AT RECEPTOR REC3 .

#30 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2035 No-Action PM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 149 Woodmen Drive 2035 NoBuild AM
RUN: I-25 Analysis

DATE :  2/21/12
TIME : 11:14: 1

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)     ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *     -6.0   -3280.0      -6.0        .0 *
3280.   360. AG   1575.   7.2    .0 44.0
       2. I-25 Ramp NB Dptr   *     -6.0        .0      -6.0    3280.0 *
3280.   360. AG    750.   6.2    .0 44.0
       3. Woodmen EB Appr     *  -3280.0     -48.0        .0     -48.0 *
3280.    90. AG   2210.   6.2    .0 56.0
       4. Woodmen EB Dptr     *       .0     -48.0    3280.0     -48.0 *
3280.    90. AG   2710.   6.2    .0 56.0
       5. Woodmen WB Appr     *   3280.0      24.0        .0      24.0 *
3280.   270. AG   3705.   6.2    .0 80.0
       6. Woodmen WB Dptr     *       .0      24.0   -3280.0      24.0 *
3280.   270. AG   4030.   6.2    .0 80.0
       7. Woodmen EB Left Q   *    -30.0     -18.0    -406.6     -18.0 *
377.   270. AG    216. 100.0    .0 24.0 1.06  19.1
```

```
      8. Woodmen EB Thru Q   *    -30.0     -48.0   -4457.2     -48.0 *
4427.   270. AG    346. 100.0    .0 36.0 3.33 224.9
      9. Woodmen WB Thru Q   *     30.0      24.0     303.6      24.0 *
274.    90. AG    319. 100.0    .0 60.0  .84  13.9
     10. Woodmen WB Right Q  *     30.0      60.0     120.6      60.0 *
91.    90. AG     64. 100.0    .0 12.0  .30   4.6
     11. I-25 Ramp NB Left Q *    -18.0     -66.0     -18.0    -226.6 *
161.   180. AG    188. 100.0    .0 24.0  .67   8.2
     12. I-25 Ramp NB Right Q*     12.0     -66.0      12.0    -263.1 *
197.   180. AG    282. 100.0    .0 36.0  .82  10.0
```

PAGE 2
JOB: Exit 149 Woodmen Drive 2035 NoBuild AM
RUN: I-25 Analysis

DATE : 2/21/12
TIME : 11:14: 1

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
7. Woodmen EB Left Q	*	150	122	3.0	520	1600	49.60	2	3
8. Woodmen EB Thru Q	*	150	130	3.0	1690	1700	49.60	2	3
9. Woodmen WB Thru Q	*	150	72	3.0	3475	1700	49.60	2	3
10. Woodmen WB Right Q	*	150	72	3.0	230	1600	49.60	2	3
11. I-25 Ramp NB Left Q	*	150	106	3.0	555	1600	49.60	2	3
12. I-25 Ramp NB Right Q	*	150	106	3.0	1020	1600	49.60	2	3

RECEPTOR LOCATIONS

RECEPTOR	*	X (FT)	Y (FT)	Z (FT)	*
1. REC 1	*	-28.0	64.0	5.9	*
2. REC 2	*	16.0	76.0	5.9	*
3. REC 3	*	40.0	-76.0	5.9	*
4. REC 4	*	-40.0	-76.0	5.9	*
5. REC 5	*	-28.0	146.1	5.9	*
6. REC 6	*	-28.0	228.1	5.9	*
7. REC 7	*	16.0	158.1	5.9	*

8. REC 8	*	16.0	240.1	5.9	*
9. REC 9	*	40.0	-158.1	5.9	*
10. REC 10	*	40.0	-240.1	5.9	*
11. REC 11	*	-40.0	-158.1	5.9	*
12. REC 12	*	-40.0	-240.1	5.9	*
13. REC 13	*	-110.1	64.0	5.9	*
14. REC 14	*	-192.1	64.0	5.9	*
15. REC 15	*	98.1	76.0	5.9	*
16. REC 16	*	180.1	76.0	5.9	*
17. REC 17	*	122.1	-76.0	5.9	*
18. REC 18	*	204.1	-76.0	5.9	*
19. REC 19	*	-122.1	-76.0	5.9	*
20. REC 20	*	-204.1	-76.0	5.9	*

PAGE 3
JOB: Exit 149 Woodmen Drive 2035 NoBuild AM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	.3	.3	1.3	2.2	.3	.3	.3	.3	1.0	1.0	1.2	1.4	.1	.0	.1	.0	1.4	1.4	2.3	2.2
10.	.3	.1	1.3	2.0	.3	.3	.1	.1	.8	.8	1.8	1.9	.1	.1	.0	.0	1.4	1.4	2.3	2.3
20.	.3	.1	1.4	1.8	.3	.3	.1	.1	.7	.6	2.0	2.0	.1	.1	.0	.0	1.4	1.4	2.2	2.2
30.	.2	.0	1.4	1.8	.2	.2	.0	.0	.8	.6	2.1	2.2	.2	.2	.0	.0	1.4	1.4	2.3	2.3
40.	.2	.0	1.5	1.8	.2	.2	.0	.0	.9	.6	2.3	2.1	.2	.1	.0	.0	1.5	1.4	2.6	2.4
50.	.2	.0	1.5	1.9	.2	.2	.0	.0	.9	.5	2.4	1.9	.2	.1	.0	.0	1.5	1.2	2.6	2.7
60.	.2	.0	1.7	2.4	.2	.2	.0	.0	.7	.4	2.3	1.7	.2	.1	.0	.0	1.5	1.3	2.8	3.0
70.	.3	.1	1.7	2.6	.1	.1	.0	.0	.6	.4	2.1	1.5	.3	.2	.1	.1	1.6	1.4	2.8	3.2
80.	1.1	.5	1.6	2.7	.2	.1	.1	.0	.6	.4	2.0	1.4	.9	.8	.5	.3	1.6	1.5	2.8	3.0
90.	2.1	1.3	1.3	2.6	.6	.5	.4	.2	.4	.2	1.8	1.0	1.8	1.6	1.1	1.0	1.2	1.2	2.1	2.1
100.	2.6	2.2	.6	1.9	.8	.5	.7	.4	.1	.0	1.5	.8	2.2	1.9	1.8	1.6	.6	.6	1.2	1.1

```
 110.  *   2.3   2.3    .2   1.6   1.0    .7    .8    .5    .0    .0
1.4    .6   1.8   1.9   2.0   1.7    .2    .2    .8    .6
 120.  *   1.9   2.2    .1   1.5   1.2    .9    .9    .5    .0    .0
1.5    .5   1.5   1.9   2.1   1.8    .1    .1    .7    .5
 130.  *   1.6   1.9    .1   1.5   1.2    .9   1.0    .6    .0    .0
1.5    .4   1.6   2.1   2.0   1.8    .1    .1    .7    .3
 140.  *   1.5   1.6    .0   1.7   1.1    .8    .9    .6    .0    .0
1.6    .4   1.8   2.1   1.8   1.6    .0    .0    .6    .2
 150.  *   1.5   1.4    .0   1.7   1.0    .8   1.0    .6    .0    .0
1.4    .4   2.1   1.9   1.8   1.6    .0    .0    .4    .1
 160.  *   2.0   1.4    .0   1.7    .9    .9    .7    .5    .0    .0
1.3    .5   2.0   1.6   1.6   1.4    .0    .0    .2    .1
 170.  *   2.2   1.6    .3   1.3   1.5   1.0   1.1    .8    .2    .1
.9    .5   2.0   1.7   1.7   1.5    .0    .0    .2    .1
 180.  *   2.2   1.9    .8    .8   1.5   1.2   1.3   1.1    .6    .3
.5    .4   1.7   1.7   2.0   1.7    .1    .1    .1    .1
 190.  *   1.9   1.9   1.4    .3   1.2    .9   1.4   1.2   1.0    .4
.2    .2   1.6   1.6   2.1   1.6    .2    .1    .0    .0
 200.  *   1.6   1.6   1.7    .0   1.0    .6   1.3    .9   1.3    .5
.0    .0   1.6   1.6   2.2   1.6    .3    .1    .0    .0
 210.  *   1.6   1.8   1.7    .0   1.0    .7   1.1    .8   1.4    .5
.0    .0   1.6   1.6   2.3   2.0    .4    .1    .0    .0
 220.  *   1.8   1.6   1.6    .0   1.0    .8   1.1    .9   1.4    .6
.0    .0   1.8   1.8   2.2   2.0    .6    .2    .0    .0
 230.  *   1.9   1.8   1.5    .0   1.0    .8   1.2   1.0   1.5    .8
.0    .0   1.9   1.9   2.4   2.2    .7    .4    .0    .0
 240.  *   2.0   2.0   1.4    .1   1.2    .8   1.3   1.0   1.4    .9
.0    .0   2.0   2.0   2.3   2.4    .8    .5    .1    .1
 250.  *   2.3   2.1   1.7    .2   1.2    .7   1.2    .8   1.4   1.0
.0    .0   2.3   2.2   2.4   2.5    .8    .6    .2    .2
 260.  *   2.4   2.1   2.5   1.1   1.1    .7   1.1    .8   1.5   1.2
.1    .1   2.3   2.3   2.4   2.6   1.5   1.4   1.1   1.1
 270.  *   1.9   1.7   3.8   2.7    .6    .5    .8    .7   2.2   1.7
.8    .4   1.8   1.8   1.7   1.7   2.7   2.4   2.6   2.6
 280.  *    .7    .5   4.1   3.4    .2    .0    .2    .1   2.7   2.0
1.2    .8    .7    .7    .5    .4   3.0   2.5   3.4   3.3
 290.  *    .2    .2   3.4   3.3    .0    .0    .1    .1   2.9   2.3
1.4    .9    .2    .2    .2    .0   2.1   2.0   3.3   3.2
 300.  *    .1    .2   2.5   2.9    .0    .0    .2    .2   2.6   2.5
1.2   1.0    .1    .1    .1    .0   1.7   1.5   2.9   2.9
 310.  *    .1    .2   1.9   2.6    .0    .0    .2    .2   2.6   2.4
1.2    .8    .1    .1    .1    .0   1.3   1.5   2.6   2.6
 320.  *    .1    .2   1.5   2.4    .0    .0    .2    .2   2.5   2.4
```

```
1.2    .7    .1    .1    .1    .0   1.4   1.5   2.4   2.4
 330.  *    .1    .2   1.2   2.2    .0    .0    .2    .2   2.1   2.3
1.1    .8    .1    .1    .1    .1   1.4   1.4   2.2   2.2
 340.  *    .1    .3   1.2   2.1    .1    .1    .3    .3   1.9   2.1
1.1    .7    .0    .0    .1    .1   1.5   1.5   2.1   2.1
 350.  *    .1    .3   1.2   2.1    .1    .1    .3    .3   1.2   1.8
1.3    .8    .0    .0    .1    .1   1.5   1.5   2.2   2.2
 360.  *    .3    .3   1.3   2.2    .3    .3    .3    .3   1.0   1.0
1.2   1.4    .1    .0    .1    .0   1.4   1.4   2.3   2.2
 ------*-------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.6   2.3   4.1   3.4   1.5   1.2   1.4   1.2   2.9   2.5
2.4   2.2   2.3   2.3   2.4   2.6   3.0   2.5   3.4   3.3
 DEGR. *  100   110   280   280   170   180   190   190   290   300
50    30   250   260   230   260   280   280   280   280
```

THE HIGHEST CONCENTRATION OF   4.10 PPM OCCURRED AT RECEPTOR REC3 .

#31 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2015 Proposed Action AM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 161 Monument St 2015 Build AM
RUN: I-25 Analysis

DATE :  2/28/12
TIME :  9:28: 4

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =     .0 CM/S       VD =     .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S          CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *      6.0   -3280.0       6.0        .0 *
3280.   360. AG   1200.   8.4    .0 56.0
       2. Monument EB Appr    *  -3280.0     -18.0        .0     -18.0 *
3280.    90. AG    860.   8.0    .0 44.0
       3. Monument EB Dptr    *       .0     -18.0    3280.0     -18.0 *
3280.    90. AG   1080.   8.0    .0 44.0
       4. Monument WB Appr    *   3280.0      18.0        .0      18.0 *
3280.   270. AG   1300.   8.0    .0 44.0
       5. Monument WB Dptr    *       .0      18.0   -3280.0      18.0 *
3280.   270. AG   1490.   8.0    .0 44.0
       6. I-25 Ramp SB Dptr   *    -18.0        .0     -18.0   -3280.0 *
3280.   180. AG    790.   8.4    .0 32.0
       7. Monument EB Thru-R Q*    -24.0     -18.0    -177.5     -18.0 *
154.   270. AG    222. 100.0    .0 24.0  .88   7.8
```

```
       8. Monument WB Left Q  *     24.0        .0     138.7        .0 *
115.    90. AG    115. 100.0    .0 12.0  .80   5.8
       9. Monument WB Thru Q  *     24.0      18.0     115.9      18.0 *
92.    90. AG    132. 100.0    .0 24.0  .51   4.7
      10. I-25 Ramp NB Left Q *       .0     -30.0        .0    -109.7 *
80.   180. AG    207. 100.0    .0 24.0  .50   4.0
      11. I-25 Ramp NB Right Q*     18.0     -30.0      18.0   -1685.1 *
1655.   180. AG    104. 100.0    .0 12.0 1.26  84.1
```

PAGE 2
JOB: Exit 161 Monument St 2015 Build AM
RUN: I-25 Analysis

DATE : 2/28/12
TIME : 9:28: 4

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
7. Monument EB Thru-R Q	90	59	3.0	860	1700	63.20	2	3
8. Monument WB Left Q	90	61	3.0	340	1600	63.20	2	3
9. Monument WB Thru Q	90	35	3.0	960	1700	63.20	2	3
10. I-25 Ramp NB Left Q	90	55	3.0	530	1600	63.20	2	3
11. I-25 Ramp NB Right Q	90	55	3.0	670	1600	63.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-34.0	40.0	5.9
2. REC 2	34.0	40.0	5.9
3. REC 3	34.0	-40.0	5.9
4. REC 4	-34.0	-40.0	5.9
5. REC 5	-34.0	122.1	5.9
6. REC 6	-34.0	204.1	5.9
7. REC 7	34.0	122.1	5.9
8. REC 8	34.0	240.1	5.9
9. REC 9	34.0	-122.1	5.9

10. REC 10	*	34.0	-240.1	5.9	*
11. REC 11	*	-34.0	-122.1	5.9	*
12. REC 12	*	-34.0	-204.1	5.9	*
13. REC 13	*	-116.1	40.0	5.9	*
14. REC 14	*	-198.1	40.0	5.9	*
15. REC 15	*	116.1	40.0	5.9	*
16. REC 16	*	198.1	40.0	5.9	*
17. REC 17	*	116.1	-40.0	5.9	*
18. REC 18	*	198.1	-40.0	5.9	*
19. REC 19	*	-116.1	-40.0	5.9	*
20. REC 20	*	-198.1	-40.0	5.9	*

PAGE 3
JOB: Exit 161 Monument St 2015 Build AM
RUN: I-25 Analysis

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.

CONCENTRATION (PPM)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10
0.	.0	.0	.9	1.1	.0	.0	.0	.0	.9	.9
10.	.0	.0	1.0	1.1	.0	.0	.0	.0	.6	.5
20.	.0	.0	.9	1.2	.0	.0	.0	.0	.5	.3
30.	.0	.0	.9	1.0	.0	.0	.0	.0	.4	.2
40.	.0	.0	.9	1.3	.0	.0	.0	.0	.3	.2
50.	.0	.0	1.0	1.2	.0	.0	.0	.0	.2	.2
60.	.0	.1	1.0	1.4	.0	.0	.0	.0	.2	.2
70.	.1	.1	.9	1.6	.0	.0	.0	.0	.4	.2
80.	.6	.4	1.0	1.9	.0	.0	.0	.0	.4	.2
90.	1.0	.9	.7	1.7	.2	.1	.2	.1	.2	.0
100.	1.3	1.4	.4	1.4	.3	.2	.3	.2	.0	.0

WIND ANGLE (DEGR)	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.9	.8	.0	.0	.0	.0	.8	.5	1.0	.4
10.	1.0	1.0	.0	.0	.0	.0	.8	.5	1.0	.4
20.	1.2	1.3	.0	.0	.0	.0	.6	.5	1.0	.5
30.	1.6	1.2	.0	.0	.0	.0	.6	.5	1.1	.6
40.	1.6	1.0	.0	.0	.0	.0	.5	.5	1.2	.9
50.	1.5	1.0	.0	.0	.0	.0	.6	.6	1.3	1.1
60.	1.1	.8	.1	.1	.1	.1	.7	.7	1.5	1.2
70.	1.2	.8	.1	.1	.1	.1	.8	.8	1.7	1.4
80.	1.1	.8	.5	.4	.4	.4	.9	.9	1.8	1.5
90.	.8	.8	1.0	.9	.8	.8	.7	.7	1.2	1.3
100.	.6	.6	1.2	1.2	1.0	1.0	.4	.4	.9	.8

110.	*	1.2	1.3	.1	1.2	.3	.2	.3	.2	.0	.0
.6	.6	1.3	1.4	.8	.8	.1	.1	.6	.5		
120.	*	1.0	1.3	.0	1.1	.4	.2	.3	.2	.0	.0
.6	.6	1.2	1.4	.7	.7	.0	.0	.4	.3		
130.	*	.9	1.2	.0	1.3	.5	.2	.3	.2	.0	.0
.8	.8	1.3	1.5	.6	.6	.0	.0	.4	.3		
140.	*	1.0	1.2	.0	1.3	.4	.2	.5	.2	.0	.0
.8	.8	1.4	1.2	.6	.6	.0	.0	.4	.3		
150.	*	1.2	1.1	.0	1.3	.5	.3	.4	.2	.0	.0
.9	.9	1.4	1.1	.6	.5	.0	.0	.4	.3		
160.	*	1.5	1.2	.1	1.2	.8	.5	.4	.2	.1	.1
1.0	1.0	1.3	1.0	.6	.5	.0	.0	.4	.3		
170.	*	1.8	1.5	.6	1.3	1.0	.6	.7	.5	.6	.6
1.2	1.2	1.3	.9	.8	.5	.0	.0	.4	.3		
180.	*	1.7	1.9	1.1	.9	1.0	.7	1.1	.5	1.1	1.0
.8	.8	1.2	.6	1.3	.7	.3	.1	.3	.1		
190.	*	1.2	2.1	1.4	.4	.8	.5	1.0	.7	1.3	1.3
.4	.4	.9	.5	1.4	.8	.4	.3	.0	.0		
200.	*	.9	1.5	1.3	.1	.5	.3	.7	.3	1.1	1.1
.1	.1	.9	.5	1.4	.8	.4	.3	.0	.0		
210.	*	.9	1.4	1.4	.0	.5	.3	.5	.3	1.0	1.0
.0	.0	.8	.5	1.6	.8	.4	.3	.0	.0		
220.	*	.9	1.1	1.3	.0	.5	.2	.5	.3	.8	.8
.0	.0	.8	.5	1.7	.9	.4	.3	.0	.0		
230.	*	1.1	1.2	1.2	.0	.4	.2	.5	.2	.7	.7
.0	.0	.9	.7	1.6	1.1	.5	.3	.0	.0		
240.	*	1.1	1.1	1.2	.0	.3	.2	.4	.2	.7	.7
.0	.0	.9	.8	1.8	1.2	.4	.3	.0	.0		
250.	*	1.1	1.1	1.2	.1	.3	.2	.3	.2	.7	.7
.0	.0	.9	.9	1.7	1.4	.6	.5	.1	.1		
260.	*	1.1	1.2	1.7	.4	.3	.2	.3	.2	.7	.7
.0	.0	1.0	1.0	1.4	1.3	.9	.8	.3	.3		
270.	*	.9	1.0	2.1	1.1	.3	.1	.3	.1	.9	.8
.2	.1	.8	.8	1.0	1.0	1.4	1.0	.8	.7		
280.	*	.5	.5	2.3	1.5	.0	.0	.0	.0	1.1	.9
.3	.2	.5	.5	.5	.4	1.2	1.2	1.2	.9		
290.	*	.1	.1	1.9	1.5	.0	.0	.0	.0	1.3	.9
.3	.2	.1	.1	.1	.1	1.2	1.0	1.2	.7		
300.	*	.1	.0	1.6	1.4	.0	.0	.0	.0	1.5	.9
.4	.2	.1	.1	.0	.1	1.0	.8	1.3	.6		
310.	*	.0	.0	1.1	1.4	.0	.0	.0	.0	1.6	1.0
.5	.2	.0	.0	.0	.0	.9	.8	1.3	.6		
320.	*	.0	.0	1.1	1.3	.0	.0	.0	.0	1.7	1.1

```
.4    .3    .0    .0    .0    .0    .9    .5   1.3    .6
 330.  *    .0    .0    .7   1.2    .0    .0    .0    .0   1.6   1.4
.5    .3    .0    .0    .0    .0    .9    .5   1.1    .4
 340.  *    .0    .0   1.0   1.0    .0    .0    .0    .0   1.4   1.3
.5    .5    .0    .0    .0    .0    .9    .5   1.0    .4
 350.  *    .0    .0    .9   1.1    .0    .0    .0    .0   1.0   1.2
.5    .5    .0    .0    .0    .0    .9    .5   1.0    .4
 360.  *    .0    .0    .9   1.1    .0    .0    .0    .0    .9    .9
.9    .8    .0    .0    .0    .0    .8    .5   1.0    .4
 ------*------------------------------------------------------------
--------------------------------------------------------
 MAX   *   1.8   2.1   2.3   1.9   1.0    .7   1.1    .7   1.7   1.4
1.6   1.3   1.4   1.5   1.8   1.4   1.4   1.2   1.8   1.5
 DEGR. *  170   190   280    80   170   180   180   190   320   330
30    20   140   130   240   250   270   280    80    80
```

THE HIGHEST CONCENTRATION OF   2.30 PPM OCCURRED AT RECEPTOR REC3 .

#32 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2025 Proposed Action AM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 161 Monument St 2025 Build AM
RUN: I-25 Analysis

      DATE :  2/27/12
      TIME : 13:30:38

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)     ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *      6.0   -3280.0       6.0        .0 *
3280.   360. AG   1405.   6.7    .0 56.0
       2. Monument EB Appr    *  -3280.0     -18.0        .0     -18.0 *
3280.    90. AG   1225.   6.4    .0 44.0
       3. Monument EB Dptr    *       .0     -18.0    3280.0     -18.0 *
3280.    90. AG   1410.   6.4    .0 44.0
       4. Monument WB Appr    *   3280.0      18.0        .0      18.0 *
3280.   270. AG   1700.   6.4    .0 44.0
       5. Monument WB Dptr    *       .0      18.0   -3280.0      18.0 *
3280.   270. AG   1865.   6.4    .0 44.0
       6. I-25 Ramp SB Dptr   *    -18.0        .0     -18.0   -3280.0 *
3280.   180. AG   1055.   6.7    .0 32.0
       7. Monument EB Thru-R Q*    -24.0     -18.0   -3629.8     -18.0 *
3606.   270. AG    216. 100.0    .0 24.0 2.16 183.2
```

```
       8. Monument WB Left Q  *      24.0          .0      334.2          .0 *
310.    90. AG     94. 100.0    .0 12.0 1.02  15.8
       9. Monument WB Thru Q  *      24.0        18.0      145.0        18.0 *
121.    90. AG    108. 100.0    .0 24.0  .67   6.1
      10. I-25 Ramp NB Left Q *        .0       -30.0         .0      -120.2 *
90.   180. AG    169. 100.0    .0 24.0  .56   4.6
      11. I-25 Ramp NB Right Q*      18.0       -30.0       18.0     -3075.7 *
3046.   180. AG     85. 100.0    .0 12.0 1.51 154.7
```

PAGE 2
JOB: Exit 161 Monument St 2025 Build AM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 13:30:38

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
7. Monument EB Thru-R Q	90	70	3.0	1225	1700	51.70	2	3
8. Monument WB Left Q	90	61	3.0	435	1600	51.70	2	3
9. Monument WB Thru Q	90	35	3.0	1265	1700	51.70	2	3
10. I-25 Ramp NB Left Q	90	55	3.0	600	1600	51.70	2	3
11. I-25 Ramp NB Right Q	90	55	3.0	805	1600	51.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-34.0	40.0	5.9
2. REC 2	34.0	40.0	5.9
3. REC 3	34.0	-40.0	5.9
4. REC 4	-34.0	-40.0	5.9
5. REC 5	-34.0	122.1	5.9
6. REC 6	-34.0	204.1	5.9
7. REC 7	34.0	122.1	5.9
8. REC 8	34.0	240.1	5.9
9. REC 9	34.0	-122.1	5.9

10. REC 10	*	34.0	-240.1	5.9	*
11. REC 11	*	-34.0	-122.1	5.9	*
12. REC 12	*	-34.0	-204.1	5.9	*
13. REC 13	*	-116.1	40.0	5.9	*
14. REC 14	*	-198.1	40.0	5.9	*
15. REC 15	*	116.1	40.0	5.9	*
16. REC 16	*	198.1	40.0	5.9	*
17. REC 17	*	116.1	-40.0	5.9	*
18. REC 18	*	198.1	-40.0	5.9	*
19. REC 19	*	-116.1	-40.0	5.9	*
20. REC 20	*	-198.1	-40.0	5.9	*

PAGE 3
JOB: Exit 161 Monument St 2025 Build AM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
	CONCENTRATION (PPM)																			
0.	.0	.0	.8	1.2	.0	.0	.0	.0	.7	.8	.9	.8	.0	.0	.0	.0	.8	.6	1.1	1.1
10.	.0	.0	.9	1.2	.0	.0	.0	.0	.5	.5	.9	.9	.0	.0	.0	.0	.8	.6	1.0	1.0
20.	.0	.0	.8	1.2	.0	.0	.0	.0	.5	.3	1.1	1.2	.0	.0	.0	.0	.7	.6	1.0	1.0
30.	.0	.0	.9	1.0	.0	.0	.0	.0	.4	.3	1.5	1.3	.0	.0	.0	.0	.8	.7	1.1	1.1
40.	.0	.0	.9	1.3	.0	.0	.0	.0	.3	.2	1.5	1.0	.0	.0	.0	.0	.7	.7	1.2	1.3
50.	.0	.0	1.1	1.3	.0	.0	.0	.0	.3	.2	1.5	1.0	.0	.0	.0	.0	.9	.9	1.2	1.4
60.	.0	.1	1.0	1.4	.0	.0	.0	.0	.5	.2	1.5	.8	.1	.1	.1	.1	.9	.9	1.4	1.5
70.	.1	.1	1.1	1.7	.0	.0	.0	.0	.4	.2	1.3	.7	.1	.1	.1	.1	1.0	.9	1.8	1.6
80.	.6	.5	1.0	1.9	.0	.0	.0	.0	.4	.2	1.2	.7	.5	.4	.4	.4	1.0	1.0	1.8	1.8
90.	1.1	1.1	.8	1.8	.2	.1	.2	.1	.2	.0	1.1	.9	1.1	1.0	.9	.8	.8	.7	1.3	1.5
100.	1.4	1.4	.4	1.3	.3	.2	.3	.2	.0	.0	.6	.5	1.2	1.3	1.1	1.1	.4	.4	.8	.9

```
 110.  *   1.4   1.5    .1   1.0    .4    .2    .3    .2    .0    .0
.5    .5   1.3   1.4   1.2   1.0    .1    .1    .6    .4
 120.  *   1.0   1.3    .0   1.0    .5    .2    .4    .2    .0    .0
.6    .6   1.2   1.4   1.1    .9    .0    .0    .4    .3
 130.  *    .9   1.2    .0   1.1    .5    .3    .5    .2    .0    .0
.7    .7   1.4   1.5   1.0    .8    .0    .0    .4    .3
 140.  *   1.2   1.1    .0   1.1    .4    .4    .5    .2    .0    .0
.7    .7   1.3   1.3   1.1    .8    .0    .0    .3    .3
 150.  *   1.2   1.1    .0   1.1    .5    .4    .5    .3    .0    .0
.8    .8   1.5   1.3   1.1    .8    .0    .0    .4    .3
 160.  *   1.5   1.0    .1   1.2    .8    .4    .4    .3    .1    .1
1.0   1.0   1.3   1.2    .9    .6    .0    .0    .4    .3
 170.  *   1.8   1.3    .6   1.2   1.0    .6    .7    .5    .6    .6
1.1   1.1   1.4   1.3    .9    .6    .0    .0    .4    .3
 180.  *   1.7   1.9   1.0    .9    .9    .7   1.0    .5   1.0   1.0
.9    .9   1.3   1.1   1.3    .8    .3    .1    .3    .1
 190.  *   1.3   1.8   1.3    .5    .8    .5    .9    .6   1.2   1.2
.5    .5   1.0   1.0   1.3    .9    .4    .3    .0    .0
 200.  *   1.0   1.5   1.2    .1    .5    .3    .7    .4   1.0   1.0
.1    .1    .9    .9   1.3    .9    .4    .3    .0    .0
 210.  *   1.0   1.3   1.2    .0    .5    .4    .4    .3    .9    .9
.0    .0   1.0   1.0   1.6   1.1    .4    .3    .0    .0
 220.  *   1.0   1.1   1.3    .0    .5    .4    .5    .3    .9    .9
.0    .0   1.0   1.0   1.5   1.1    .4    .3    .0    .0
 230.  *   1.1   1.2   1.0    .0    .5    .4    .5    .4    .6    .6
.0    .0   1.1   1.1   1.6   1.3    .4    .3    .0    .0
 240.  *   1.2   1.2   1.0    .0    .6    .4    .6    .4    .6    .6
.0    .0   1.2   1.2   1.7   1.4    .4    .3    .0    .0
 250.  *   1.4   1.3   1.2    .2    .6    .4    .6    .4    .6    .6
.0    .0   1.4   1.4   1.7   1.7    .7    .5    .2    .2
 260.  *   1.5   1.5   1.8    .8    .6    .4    .6    .4    .8    .6
.1    .0   1.5   1.5   1.6   1.6   1.0    .9    .8    .7
 270.  *   1.3   1.3   2.4   1.7    .5    .2    .5    .2   1.2    .8
.4    .3   1.3   1.3   1.4   1.3   1.7   1.3   1.7   1.7
 280.  *    .6    .6   2.7   1.9    .0    .0    .0    .0   1.7   1.0
.8    .4    .6    .6    .6    .6   1.6   1.4   1.9   1.9
 290.  *    .1    .1   2.1   1.7    .0    .0    .0    .0   1.5   1.0
.6    .4    .1    .1    .1    .1   1.2   1.2   1.7   1.7
 300.  *    .1    .0   1.5   1.5    .0    .0    .0    .0   1.6   1.0
.6    .4    .1    .1    .1    .1   1.0   1.0   1.5   1.5
 310.  *    .0    .0   1.2   1.4    .0    .0    .0    .0   1.6   1.0
.6    .4    .0    .0    .0    .0    .9    .9   1.4   1.4
 320.  *    .0    .0    .9   1.3    .0    .0    .0    .0   1.6   1.3
```

```
.5    .4    .0    .0    .0    .0    .9    .8   1.3   1.3
 330.  *    .0    .0    .7   1.3    .0    .0    .0    .0   1.5   1.3
.5    .4    .0    .0    .0    .0    .9    .7   1.1   1.1
 340.  *    .0    .0    .9   1.0    .0    .0    .0    .0   1.5   1.2
.5    .5    .0    .0    .0    .0    .8    .6   1.0   1.0
 350.  *    .0    .0    .9   1.1    .0    .0    .0    .0    .9   1.1
.5    .5    .0    .0    .0    .0    .8    .6   1.0   1.0
 360.  *    .0    .0    .8   1.2    .0    .0    .0    .0    .7    .8
.9    .8    .0    .0    .0    .0    .8    .6   1.1   1.1
 ------*------------------------------------------------------------
--------------------------------------------------------
 MAX   *   1.8   1.9   2.7   1.9   1.0    .7   1.0    .6   1.7   1.3
1.5   1.3   1.5   1.5   1.7   1.7   1.7   1.4   1.9   1.9
 DEGR. *  170   180   280    80   170   180   180   190   280   320
30    30   150   130   240   250   270   280   280   280
```

THE HIGHEST CONCENTRATION OF   2.70 PPM OCCURRED AT RECEPTOR REC3 .

#33 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2035 Proposed Action AM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 161 Monument St 2035 Build AM
RUN: I-25 Analysis

DATE :  2/24/12
TIME : 16:17:51

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)     ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *      6.0   -3280.0       6.0        .0 *
3280.   360. AG   1605.   6.4    .0 56.0
       2. Monument EB Appr    *  -3280.0     -18.0        .0     -18.0 *
3280.    90. AG   1585.   6.2    .0 44.0
       3. Monument EB Dptr    *       .0     -18.0    3280.0     -18.0 *
3280.    90. AG   1735.   6.2    .0 44.0
       4. Monument WB Appr    *   3280.0      18.0        .0      18.0 *
3280.   270. AG   2095.   6.2    .0 44.0
       5. Monument WB Dptr    *       .0      18.0   -3280.0      18.0 *
3280.   270. AG   2235.   6.2    .0 44.0
       6. I-25 Ramp SB Dptr   *    -18.0        .0     -18.0   -3280.0 *
3280.   180. AG   1315.   6.4    .0 32.0
       7. Monument EB Thru-R Q*    -24.0     -18.0   -6122.1     -18.0 *
6098.   270. AG    218. 100.0    .0 24.0 3.43 309.8
```

```
       8. Monument WB Left Q  *      24.0         .0     1549.8         .0 *
1526.    90. AG     93. 100.0    .0 12.0 1.30  77.5
       9. Monument WB Thru Q  *      24.0       18.0      190.8       18.0 *
167.    90. AG     94. 100.0    .0 24.0  .77   8.5
      10. I-25 Ramp NB Left Q *        .0      -30.0         .0     -160.1 *
130.   180. AG    172. 100.0    .0 24.0  .68   6.6
      11. I-25 Ramp NB Right Q*      18.0      -30.0       18.0    -4880.4 *
4850.   180. AG     86. 100.0    .0 12.0 1.89 246.4
```

PAGE 2
JOB: Exit 161 Monument St 2035 Build AM
RUN: I-25 Analysis

DATE : 2/24/12
TIME : 16:17:51

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
7. Monument EB Thru-R Q	110	90	3.0	1585	1700	49.60	2	3
8. Monument WB Left Q	110	77	3.0	530	1600	49.60	2	3
9. Monument WB Thru Q	110	39	3.0	1565	1700	49.60	2	3
10. I-25 Ramp NB Left Q	110	71	3.0	670	1600	49.60	2	3
11. I-25 Ramp NB Right Q	110	71	3.0	935	1600	49.60	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-34.0	40.0	5.9
2. REC 2	34.0	40.0	5.9
3. REC 3	34.0	-40.0	5.9
4. REC 4	-34.0	-40.0	5.9
5. REC 5	-34.0	122.1	5.9
6. REC 6	-34.0	204.1	5.9
7. REC 7	34.0	122.1	5.9
8. REC 8	34.0	240.1	5.9
9. REC 9	34.0	-122.1	5.9

10. REC 10	*	34.0	-240.1	5.9	*
11. REC 11	*	-34.0	-122.1	5.9	*
12. REC 12	*	-34.0	-204.1	5.9	*
13. REC 13	*	-116.1	40.0	5.9	*
14. REC 14	*	-198.1	40.0	5.9	*
15. REC 15	*	116.1	40.0	5.9	*
16. REC 16	*	198.1	40.0	5.9	*
17. REC 17	*	116.1	-40.0	5.9	*
18. REC 18	*	198.1	-40.0	5.9	*
19. REC 19	*	-116.1	-40.0	5.9	*
20. REC 20	*	-198.1	-40.0	5.9	*

PAGE 3
JOB: Exit 161 Monument St 2035 Build AM
RUN: I-25 Analysis

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)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.0	.0	1.0	1.4	.0	.0	.0	.0	.8	.9	.9	.9	.0	.0	.0	.0	1.0	.8	1.2	1.2
10.	.0	.0	.9	1.3	.0	.0	.0	.0	.5	.5	1.1	1.4	.0	.0	.0	.0	.9	.7	1.2	1.2
20.	.0	.0	.9	1.4	.0	.0	.0	.0	.5	.3	1.4	1.4	.0	.0	.0	.0	.9	.7	1.2	1.2
30.	.0	.0	1.1	1.3	.0	.0	.0	.0	.6	.3	1.5	1.5	.0	.0	.0	.0	1.0	.9	1.3	1.3
40.	.0	.0	1.1	1.5	.0	.0	.0	.0	.6	.3	1.7	1.3	.0	.0	.0	.0	1.0	.9	1.4	1.4
50.	.0	.0	1.1	1.6	.0	.0	.0	.0	.5	.3	1.7	1.1	.0	.0	.0	.0	1.0	.9	1.5	1.5
60.	.0	.1	1.2	1.5	.0	.0	.0	.0	.5	.3	1.6	1.0	.1	.1	.1	.1	1.1	1.0	1.5	1.5
70.	.2	.2	1.3	2.1	.0	.0	.0	.0	.5	.3	1.6	1.0	.2	.1	.2	.2	1.2	1.2	1.9	1.7
80.	.7	.7	1.3	2.4	.0	.0	.0	.0	.5	.2	1.6	1.0	.6	.7	.6	.6	1.3	1.3	2.2	2.1
90.	1.4	1.4	1.1	2.1	.4	.2	.4	.1	.3	.2	1.4	.9	1.2	1.2	1.3	1.2	1.1	1.1	1.5	1.7
100.	1.6	1.7	.5	1.7	.5	.4	.5	.2	.0	.0	1.1	.7	1.5	1.5	1.6	1.4	.5	.5	1.2	1.0

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 110.  *   1.5   1.5    .1   1.2    .6    .4    .5    .3    .0    .0
1.1    .7   1.5   1.7   1.5   1.2    .1    .1    .6    .4
 120.  *   1.2   1.5    .1   1.1    .5    .3    .5    .3    .0    .0
1.1    .7   1.5   1.5   1.4   1.1    .1    .1    .5    .4
 130.  *   1.0   1.3    .0   1.1    .5    .3    .5    .3    .0    .0
1.0    .7   1.5   1.6   1.3   1.0    .0    .0    .4    .3
 140.  *   1.3   1.2    .0   1.2    .5    .4    .5    .3    .0    .0
1.0    .8   1.6   1.5   1.2    .9    .0    .0    .5    .3
 150.  *   1.2   1.1    .0   1.4    .4    .4    .5    .3    .0    .0
1.1   1.0   1.6   1.4   1.1    .8    .0    .0    .4    .3
 160.  *   1.8   1.1    .1   1.4    .8    .4    .5    .3    .1    .1
1.1   1.1   1.5   1.2   1.0    .7    .0    .0    .5    .3
 170.  *   2.0   1.4    .6   1.5   1.2    .7    .9    .6    .6    .6
1.3   1.3   1.5   1.3   1.0    .7    .0    .0    .5    .3
 180.  *   2.0   1.9   1.2   1.3   1.1    .9   1.2    .7   1.1   1.1
1.2   1.2   1.4   1.3   1.3    .9    .3    .2    .3    .2
 190.  *   1.3   2.0   1.4    .5    .8    .6   1.0    .7   1.2   1.2
 .5    .5   1.0   1.0   1.4   1.1    .4    .3    .0    .0
 200.  *   1.0   1.9   1.3    .1    .5    .3    .8    .5   1.0   1.0
 .1    .1    .9    .9   1.5   1.1    .4    .3    .0    .0
 210.  *   1.1   1.4   1.3    .0    .5    .4    .6    .3   1.1   1.0
 .0    .0   1.1   1.1   1.6   1.3    .4    .3    .0    .0
 220.  *   1.1   1.3   1.3    .0    .5    .4    .5    .3   1.1    .9
 .0    .0   1.1   1.1   1.7   1.5    .5    .3    .0    .0
 230.  *   1.2   1.3   1.2    .0    .5    .4    .5    .4   1.1    .8
 .0    .0   1.2   1.2   1.6   1.6    .5    .3    .0    .0
 240.  *   1.3   1.3   1.1    .1    .6    .5    .6    .4   1.1    .7
 .0    .0   1.4   1.4   1.8   1.7    .5    .5    .1    .1
 250.  *   1.6   1.6   1.3    .2    .7    .5    .7    .5   1.1    .7
 .0    .0   1.6   1.6   2.0   2.1    .7    .5    .2    .2
 260.  *   1.8   1.8   1.9    .8    .7    .5    .7    .4   1.2    .7
 .1    .0   1.8   1.8   1.9   1.9   1.3    .9    .8    .8
 270.  *   1.4   1.4   2.7   1.8    .5    .3    .5    .2   1.6   1.0
 .5    .4   1.4   1.4   1.5   1.6   1.8   1.6   1.8   1.8
 280.  *    .7    .7   2.9   2.2    .2    .0    .2    .0   1.9   1.1
 .8    .5    .7    .7    .7    .8   2.0   1.7   2.2   2.2
 290.  *    .2    .2   2.2   1.9    .0    .0    .0    .0   1.8   1.1
 .7    .5    .2    .2    .2    .1   1.4   1.3   2.0   2.0
 300.  *    .1    .0   1.6   1.8    .0    .0    .0    .0   1.8   1.1
 .7    .4    .1    .1    .1    .1   1.1   1.3   1.8   1.8
 310.  *    .1    .0   1.3   1.5    .0    .0    .0    .0   1.9   1.2
 .7    .4    .1    .1    .0    .0   1.1   1.1   1.5   1.5
 320.  *    .0    .0   1.0   1.4    .0    .0    .0    .0   1.8   1.4
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```
.6     .4     .0     .0     .0     .0    1.1    1.1    1.4    1.4
 330.   *     .0     .0     .7    1.3     .0     .0     .0     .0    1.5    1.3
.6     .4     .0     .0     .0     .0    1.1    1.0    1.3    1.3
 340.   *     .0     .0     .9    1.3     .0     .0     .0     .0    1.5    1.5
.5     .5     .0     .0     .0     .0     .9     .8    1.2    1.2
 350.   *     .0     .0     .9    1.3     .0     .0     .0     .0    1.0    1.3
.7     .5     .0     .0     .0     .0     .9     .8    1.2    1.2
 360.   *     .0     .0    1.0    1.4     .0     .0     .0     .0     .8     .9
.9     .9     .0     .0     .0     .0    1.0     .8    1.2    1.2
 ------*-------------------------------------------------------------------------
-----------------------------------------------------------
 MAX    *    2.0    2.0    2.9    2.4    1.2     .9    1.2     .7    1.9    1.5
1.7    1.5    1.8    1.8    2.0    2.1    2.0    1.7    2.2    2.2
 DEGR. *  170    190    280     80    170    180    180    180    280    340
40     30    260    260    250    250    280    280    280    280
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THE HIGHEST CONCENTRATION OF   2.90 PPM OCCURRED AT RECEPTOR REC3 .

#34 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2015 Proposed Action PM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 161 Monument St 2015 Build PM
RUN: I-25 Analysis

DATE :  2/28/12
TIME :  9:36: 1

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =     .0 CM/S        VD =     .0 CM/S        Z0 = 108. CM
        U =  1.0 M/S           CLAS =    4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M    AMB =    .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. I-25 Ramp NB Appr   *      6.0   -3280.0       6.0         .0 *
3280.   360. AG   1425.   8.4    .0 56.0
       2. Monument EB Appr    *  -3280.0     -18.0        .0      -18.0 *
3280.    90. AG   1135.   8.0    .0 44.0
       3. Monument EB Dptr    *       .0     -18.0    3280.0      -18.0 *
3280.    90. AG   1400.   8.0    .0 44.0
       4. Monument WB Appr    *   3280.0      18.0        .0       18.0 *
3280.   270. AG   1220.   8.0    .0 44.0
       5. Monument WB Dptr    *       .0      18.0   -3280.0       18.0 *
3280.   270. AG   1690.   8.0    .0 44.0
       6. I-25 Ramp SB Dptr   *    -18.0        .0     -18.0    -3280.0 *
3280.   180. AG    690.   8.4    .0 32.0
       7. Monument EB Thru-R Q*    -24.0     -18.0   -3159.8      -18.0 *
3136.   270. AG    264. 100.0    .0 24.0 2.00 159.3
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       8. Monument WB Left Q  *     24.0        .0     117.5        .0 *
94.    90. AG    134. 100.0    .0 12.0  .85   4.8
       9. Monument WB Thru Q  *     24.0      18.0     134.5      18.0 *
110.    90. AG    151. 100.0    .0 24.0  .59   5.6
      10. I-25 Ramp NB Left Q *       .0     -30.0        .0    -123.0 *
93.   180. AG    189. 100.0    .0 24.0  .55   4.7
      11. I-25 Ramp NB Right Q*     18.0     -30.0      18.0   -1552.9 *
1523.   180. AG     94. 100.0    .0 12.0 1.20  77.4
```

PAGE 2
JOB: Exit 161 Monument St 2015 Build PM
RUN: I-25 Analysis

DATE : 2/28/12
TIME : 9:36: 1

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
7. Monument EB Thru-R Q	90	70	3.0	1135	1700	63.30	2	3
8. Monument WB Left Q	90	71	3.0	210	1600	63.30	2	3
9. Monument WB Thru Q	90	40	3.0	1010	1700	63.30	2	3
10. I-25 Ramp NB Left Q	90	50	3.0	680	1600	63.30	2	3
11. I-25 Ramp NB Right Q	90	50	3.0	745	1600	63.30	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-34.0	40.0	5.9
2. REC 2	34.0	40.0	5.9
3. REC 3	34.0	-40.0	5.9
4. REC 4	-34.0	-40.0	5.9
5. REC 5	-34.0	122.1	5.9
6. REC 6	-34.0	204.1	5.9
7. REC 7	34.0	122.1	5.9
8. REC 8	34.0	240.1	5.9
9. REC 9	34.0	-122.1	5.9

10.	REC 10	*	34.0	-240.1	5.9	*
11.	REC 11	*	-34.0	-122.1	5.9	*
12.	REC 12	*	-34.0	-204.1	5.9	*
13.	REC 13	*	-116.1	40.0	5.9	*
14.	REC 14	*	-198.1	40.0	5.9	*
15.	REC 15	*	116.1	40.0	5.9	*
16.	REC 16	*	198.1	40.0	5.9	*
17.	REC 17	*	116.1	-40.0	5.9	*
18.	REC 18	*	198.1	-40.0	5.9	*
19.	REC 19	*	-116.1	-40.0	5.9	*
20.	REC 20	*	-198.1	-40.0	5.9	*

PAGE 3
JOB: Exit 161 Monument St 2015 Build PM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.0	.0	1.2	1.4	.0	.0	.0	.0	.9	1.0	.8	.9	.0	.0	.0	.0	.9	.6	1.4	1.4
10.	.0	.0	1.1	1.3	.0	.0	.0	.0	.7	.6	1.0	1.1	.0	.0	.0	.0	.9	.6	1.3	1.3
20.	.0	.0	1.0	1.3	.0	.0	.0	.0	.5	.3	1.3	1.3	.0	.0	.0	.0	.6	.5	1.4	1.4
30.	.0	.0	1.0	1.1	.0	.0	.0	.0	.5	.3	1.6	1.2	.0	.0	.0	.0	.7	.6	1.4	1.4
40.	.0	.0	1.1	1.3	.0	.0	.0	.0	.4	.2	1.8	1.1	.0	.0	.0	.0	.6	.6	1.4	1.4
50.	.0	.0	1.1	1.5	.0	.0	.0	.0	.3	.2	1.6	.9	.0	.0	.0	.0	.7	.7	1.6	1.6
60.	.0	.1	1.1	1.7	.0	.0	.0	.0	.3	.2	1.3	.8	.1	.1	.1	.1	.7	.7	1.7	1.7
70.	.2	.1	1.1	2.0	.0	.0	.0	.0	.3	.2	1.3	.8	.1	.1	.1	.1	.9	.9	1.9	1.9
80.	.5	.5	1.0	2.1	.0	.0	.0	.0	.3	.2	1.2	.8	.6	.5	.4	.4	1.0	1.0	2.2	1.9
90.	1.0	1.0	.9	1.8	.2	.2	.2	.1	.2	.1	1.0	.8	1.0	1.1	.8	.8	.9	.9	1.4	1.5
100.	1.4	1.3	.5	1.5	.4	.2	.4	.2	.0	.0	.7	.6	1.3	1.6	1.0	.9	.5	.5	1.1	.8

CONCENTRATION (PPM)

110.	*	1.3	1.4	.1	1.1	.4	.2	.4	.2	.0	.0	.7	.6	1.4	1.6	.9	.8	.1	.1	.7	.5
120.	*	1.1	1.5	.1	1.0	.5	.2	.4	.2	.0	.0	.6	.6	1.3	1.4	.9	.8	.1	.1	.5	.3
130.	*	1.0	1.4	.0	1.1	.5	.2	.4	.2	.0	.0	.7	.7	1.6	1.7	.9	.7	.0	.0	.5	.3
140.	*	1.2	1.3	.0	1.3	.4	.3	.3	.2	.0	.0	.9	.9	1.6	1.5	.9	.6	.0	.0	.4	.3
150.	*	1.3	1.2	.1	1.3	.5	.3	.5	.2	.1	.1	.9	.9	1.5	1.3	.8	.5	.0	.0	.4	.3
160.	*	1.7	1.2	.1	1.4	.8	.5	.5	.3	.1	.1	1.1	1.1	1.4	1.3	.9	.5	.0	.0	.4	.3
170.	*	2.0	1.5	.5	1.2	.9	.6	.7	.5	.5	.5	1.1	1.1	1.4	1.3	1.0	.5	.0	.0	.4	.3
180.	*	1.9	2.0	1.1	.9	1.2	.9	1.1	.8	1.1	1.1	.9	.9	1.3	1.2	1.4	.6	.4	.1	.2	.1
190.	*	1.3	2.0	1.4	.4	.7	.6	1.0	.7	1.3	1.3	.4	.4	1.0	1.0	1.5	.8	.4	.3	.0	.0
200.	*	1.0	1.9	1.5	.1	.5	.4	.9	.4	1.2	1.2	.1	.1	1.0	1.0	1.5	.9	.4	.4	.0	.0
210.	*	1.0	1.4	1.3	.0	.6	.4	.5	.4	.9	.9	.0	.0	1.0	1.0	1.7	.8	.4	.3	.0	.0
220.	*	1.2	1.3	1.3	.0	.6	.4	.5	.4	.9	.9	.0	.0	1.2	1.2	1.8	.9	.4	.3	.0	.0
230.	*	1.3	1.3	1.2	.0	.6	.4	.6	.4	.8	.8	.0	.0	1.3	1.3	1.9	1.0	.5	.2	.0	.0
240.	*	1.4	1.2	1.2	.0	.6	.5	.6	.4	.8	.8	.0	.0	1.4	1.4	2.0	1.1	.6	.3	.0	.0
250.	*	1.7	1.6	1.4	.2	.7	.6	.7	.4	.8	.7	.0	.0	1.7	1.7	2.0	1.6	.8	.5	.2	.2
260.	*	1.9	1.9	2.0	.9	.7	.5	.7	.4	1.0	.8	.1	.0	1.9	1.9	1.9	1.8	1.3	1.0	.9	.9
270.	*	1.5	1.4	2.9	1.8	.5	.2	.5	.2	1.4	.9	.5	.4	1.5	1.5	1.6	1.6	2.0	1.6	1.8	1.8
280.	*	.7	.7	2.9	2.3	.1	.0	.1	.0	1.9	1.2	.8	.5	.7	.7	.8	.8	1.8	1.8	2.3	2.3
290.	*	.2	.1	2.4	2.1	.0	.0	.0	.0	1.9	1.2	.8	.5	.2	.2	.2	.1	1.4	1.4	2.1	2.1
300.	*	.1	.0	1.8	1.7	.0	.0	.0	.0	2.0	1.2	.8	.5	.1	.1	.0	.0	1.2	1.1	1.7	1.7
310.	*	.0	.0	1.3	1.6	.0	.0	.0	.0	1.8	1.2	.6	.4	.0	.0	.0	.0	1.2	.8	1.6	1.6
320.	*	.0	.0	1.1	1.4	.0	.0	.0	.0	1.9	1.3										

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.6    .4    .0    .0    .0    .0   1.0    .7   1.4   1.4
 330.  *    .0    .0    .9   1.4    .0    .0    .0    .0   1.7   1.4
.6    .4    .0    .0    .0    .0   1.0    .6   1.4   1.4
 340.  *    .0    .0   1.0   1.4    .0    .0    .0    .0   1.6   1.4
.6    .5    .0    .0    .0    .0    .9    .5   1.4   1.4
 350.  *    .0    .0   1.0   1.4    .0    .0    .0    .0   1.1   1.3
.6    .6    .0    .0    .0    .0   1.0    .6   1.3   1.3
 360.  *    .0    .0   1.2   1.4    .0    .0    .0    .0    .9   1.0
.8    .9    .0    .0    .0    .0    .9    .6   1.4   1.4
 ------*------------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.0   2.0   2.9   2.3   1.2    .9   1.1    .8   2.0   1.4
1.8   1.3   1.9   1.9   2.0   1.8   2.0   1.8   2.3   2.3
 DEGR. *  170   190   270   280   180   180   180   180   300   330
40    20   260   260   240   260   270   280   280   280
```

THE HIGHEST CONCENTRATION OF   2.90 PPM OCCURRED AT RECEPTOR REC3 .

#35 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2025 Proposed Action PM Peak

```
CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 161 Monument St 2025 Build PM
RUN: I-25 Analysis

DATE :  2/27/12
TIME : 13:50:34

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *      6.0   -3280.0       6.0        .0 *
3280.   360. AG   1660.   6.7    .0 56.0
       2. Monument EB Appr    *  -3280.0     -18.0        .0     -18.0 *
3280.    90. AG   1710.   6.4    .0 44.0
       3. Monument EB Dptr    *       .0     -18.0    3280.0     -18.0 *
3280.    90. AG   1945.   6.4    .0 44.0
       4. Monument WB Appr    *   3280.0      18.0        .0      18.0 *
3280.   270. AG   1585.   6.4    .0 44.0
       5. Monument WB Dptr    *       .0      18.0   -3280.0      18.0 *
3280.   270. AG   2070.   6.4    .0 44.0
       6. I-25 Ramp SB Dptr   *    -18.0        .0     -18.0   -3280.0 *
3280.   180. AG    940.   6.7    .0 32.0
       7. Monument EB Thru-R Q*    -24.0     -18.0   -7028.3     -18.0 *
7004.   270. AG    231. 100.0    .0 24.0 4.03 355.8
```

```
       8. Monument WB Left Q  *     24.0         .0      392.7         .0 *
369.     90. AG    111. 100.0    .0 12.0 1.07  18.7
       9. Monument WB Thru Q  *     24.0       18.0      200.0       18.0 *
176.     90. AG    113. 100.0    .0 24.0  .70   8.9
      10. I-25 Ramp NB Left Q *       .0      -30.0         .0     -176.4 *
146.    180. AG    164. 100.0    .0 24.0  .64   7.4
      11. I-25 Ramp NB Right Q*     18.0      -30.0       18.0    -3649.3 *
3619.   180. AG     82. 100.0    .0 12.0 1.54 183.9
```

PAGE 2
JOB: Exit 161 Monument St 2025 Build PM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 13:50:34

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
7. Monument EB Thru-R Q	120	100	3.0	1710	1700	51.70	2	3
8. Monument WB Left Q	120	96	3.0	270	1600	51.70	2	3
9. Monument WB Thru Q	120	49	3.0	1315	1700	51.70	2	3
10. I-25 Ramp NB Left Q	120	71	3.0	755	1600	51.70	2	3
11. I-25 Ramp NB Right Q	120	71	3.0	905	1600	51.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1	-34.0	40.0	5.9
2. REC 2	34.0	40.0	5.9
3. REC 3	34.0	-40.0	5.9
4. REC 4	-34.0	-40.0	5.9
5. REC 5	-34.0	122.1	5.9
6. REC 6	-34.0	204.1	5.9
7. REC 7	34.0	122.1	5.9
8. REC 8	34.0	240.1	5.9
9. REC 9	34.0	-122.1	5.9

10. REC 10	*	34.0	-240.1	5.9	*
11. REC 11	*	-34.0	-122.1	5.9	*
12. REC 12	*	-34.0	-204.1	5.9	*
13. REC 13	*	-116.1	40.0	5.9	*
14. REC 14	*	-198.1	40.0	5.9	*
15. REC 15	*	116.1	40.0	5.9	*
16. REC 16	*	198.1	40.0	5.9	*
17. REC 17	*	116.1	-40.0	5.9	*
18. REC 18	*	198.1	-40.0	5.9	*
19. REC 19	*	-116.1	-40.0	5.9	*
20. REC 20	*	-198.1	-40.0	5.9	*

PAGE 3
JOB: Exit 161 Monument St 2025 Build PM
RUN: I-25 Analysis

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)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.0	.0	.9	1.4	.0	.0	.0	.0	1.0	1.0	.8	.8	.0	.0	.0	.0	1.0	.9	1.4	1.4
10.	.0	.0	1.1	1.2	.0	.0	.0	.0	.7	.7	.9	1.4	.0	.0	.0	.0	1.0	.9	1.2	1.3
20.	.0	.0	1.0	1.3	.0	.0	.0	.0	.6	.5	1.2	1.5	.0	.0	.0	.0	1.0	.8	1.3	1.3
30.	.0	.0	1.0	1.1	.0	.0	.0	.0	.5	.3	1.5	1.6	.0	.0	.0	.0	1.0	.8	1.4	1.4
40.	.0	.0	1.1	1.3	.0	.0	.0	.0	.5	.3	1.6	1.5	.0	.0	.0	.0	1.1	.9	1.4	1.4
50.	.0	.0	1.1	1.4	.0	.0	.0	.0	.5	.2	1.5	1.1	.0	.0	.0	.0	1.0	.9	1.5	1.5
60.	.0	.1	1.3	1.7	.0	.0	.0	.0	.4	.2	1.5	1.0	.1	.1	.1	.1	1.2	1.1	1.8	1.7
70.	.2	.1	1.3	2.0	.0	.0	.0	.0	.5	.2	1.5	1.0	.1	.1	.1	.1	1.2	1.2	2.0	1.9
80.	.5	.5	1.4	2.2	.0	.0	.0	.0	.4	.2	1.4	.9	.6	.5	.4	.4	1.3	1.2	2.1	2.0
90.	1.3	1.2	1.0	2.0	.2	.2	.2	.2	.3	.1	1.3	.8	1.2	1.1	1.1	1.0	1.0	1.0	1.6	1.6
100.	1.5	1.6	.5	1.5	.4	.2	.4	.2	.0	.0	1.0	.6	1.3	1.4	1.5	1.2	.5	.5	1.0	.9

CONCENTRATION (PPM)

110.	*	1.4	1.5	.1	1.1	.6	.2	.5	.2	.0	.0
1.0	.6	1.4	1.6	1.4	1.1	.1	.1	.6	.4		
120.	*	1.1	1.4	.1	1.0	.6	.3	.6	.2	.0	.0
1.0	.6	1.4	1.5	1.4	1.0	.1	.1	.6	.4		
130.	*	.9	1.3	.0	1.0	.6	.4	.6	.2	.0	.0
1.0	.6	1.4	1.4	1.3	.9	.0	.0	.5	.3		
140.	*	1.2	1.3	.0	1.2	.4	.4	.4	.3	.0	.0
1.1	.8	1.6	1.5	1.3	.9	.0	.0	.5	.3		
150.	*	1.3	1.1	.1	1.2	.5	.4	.4	.4	.1	.1
1.0	.8	1.5	1.3	1.1	.8	.0	.0	.4	.3		
160.	*	1.8	1.2	.1	1.5	.8	.4	.4	.4	.1	.1
1.2	1.1	1.5	1.3	1.1	.9	.0	.0	.4	.3		
170.	*	2.1	1.6	.6	1.4	1.0	.7	.7	.5	.6	.6
1.2	1.2	1.4	1.3	1.1	.9	.0	.0	.4	.3		
180.	*	2.0	1.9	1.1	1.0	1.1	.8	1.1	.7	1.0	1.0
.9	.9	1.4	1.2	1.3	1.0	.3	.1	.3	.1		
190.	*	1.5	2.1	1.5	.5	.8	.5	1.0	.7	1.3	1.3
.5	.5	1.0	1.0	1.4	1.4	.4	.3	.0	.0		
200.	*	1.0	1.9	1.5	.1	.5	.4	.8	.4	1.2	1.1
.1	.1	1.0	1.0	1.6	1.4	.4	.3	.0	.0		
210.	*	1.0	1.2	1.4	.0	.5	.4	.5	.3	1.2	1.0
.0	.0	1.0	1.0	1.6	1.4	.4	.3	.0	.0		
220.	*	1.1	1.4	1.2	.0	.5	.4	.5	.4	1.1	.8
.0	.0	1.1	1.1	1.8	1.7	.5	.3	.0	.0		
230.	*	1.2	1.2	1.1	.0	.5	.4	.5	.4	1.1	.7
.0	.0	1.2	1.2	1.6	1.7	.5	.3	.0	.0		
240.	*	1.4	1.3	1.0	.1	.7	.5	.7	.4	1.0	.6
.0	.0	1.4	1.4	1.8	1.7	.7	.4	.1	.1		
250.	*	1.5	1.5	1.3	.2	.7	.5	.7	.4	1.0	.6
.0	.0	1.5	1.5	1.8	1.9	.8	.3	.2	.2		
260.	*	1.8	1.7	1.9	.8	.8	.5	.8	.4	1.1	.6
.1	.0	1.8	1.8	1.8	1.9	1.3	.9	.8	.8		
270.	*	1.5	1.4	2.8	2.0	.5	.4	.5	.2	1.6	1.1
.5	.4	1.5	1.5	1.5	1.5	1.9	1.6	2.0	2.0		
280.	*	.7	.7	2.7	2.2	.1	.0	.1	.0	1.8	1.0
.8	.5	.7	.7	.7	.8	1.8	1.8	2.2	2.2		
290.	*	.2	.1	2.4	2.0	.0	.0	.0	.0	1.8	1.0
.8	.5	.2	.2	.2	.1	1.3	1.4	2.0	2.0		
300.	*	.1	.0	1.8	1.7	.0	.0	.0	.0	1.7	1.0
.7	.4	.1	.1	.0	.0	1.2	1.2	1.7	1.7		
310.	*	.0	.0	1.5	1.5	.0	.0	.0	.0	1.8	1.1
.7	.4	.0	.0	.0	.0	1.2	1.1	1.6	1.6		
320.	*	.0	.0	1.1	1.4	.0	.0	.0	.0	1.8	1.3

```
.7    .4    .0    .0    .0    .0   1.1   1.1   1.4   1.4
 330.  *    .0    .0    .8   1.4    .0    .0    .0    .0   1.5   1.4
.7    .4    .0    .0    .0    .0   1.0   1.0   1.4   1.4
 340.  *    .0    .0   1.0   1.3    .0    .0    .0    .0   1.5   1.5
.5    .5    .0    .0    .0    .0   1.0   1.0   1.3   1.3
 350.  *    .0    .0   1.0   1.3    .0    .0    .0    .0   1.0   1.4
.5    .7    .0    .0    .0    .0   1.0    .9   1.3   1.3
 360.  *    .0    .0    .9   1.4    .0    .0    .0    .0   1.0   1.0
.8    .8    .0    .0    .0    .0   1.0    .9   1.4   1.4
 ------*------------------------------------------------------------------
--------------------------------------------------------
 MAX   *   2.1   2.1   2.8   2.2   1.1    .8   1.1    .7   1.8   1.5
1.6   1.6   1.8   1.8   1.8   1.9   1.9   1.8   2.2   2.2
 DEGR. *  170   190   270    80   180   180   180   180   280   340
40    30   260   260   220   250   270   280   280   280
```

THE HIGHEST CONCENTRATION OF   2.80 PPM OCCURRED AT RECEPTOR REC3 .

#36 of 36
Exit 161 I-25/SH105 NB Ramps Intersection
2035 Proposed Action PM Peak

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CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221
PAGE  1

JOB: Exit 161 Monument St 2035 Build PM
RUN: I-25 Analysis

DATE :  2/27/12
TIME :  8:58:32

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

       SITE & METEOROLOGICAL VARIABLES
       -------------------------------
       VS =    .0 CM/S       VD =    .0 CM/S       Z0 = 108. CM
        U =  1.0 M/S         CLAS =   4  (D)      ATIM =  60. MINUTES
MIXH =  1000. M   AMB =   .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. I-25 Ramp NB Appr   *      6.0   -3280.0       6.0        .0 *
3280.   360. AG   1890.   6.4    .0 56.0
       2. Monument EB Appr    *  -3280.0     -18.0        .0     -18.0 *
3280.    90. AG   2275.   6.2    .0 44.0
       3. Monument EB Dptr    *       .0     -18.0    3280.0     -18.0 *
3280.    90. AG   2475.   6.2    .0 44.0
       4. Monument WB Appr    *   3280.0      18.0        .0      18.0 *
3280.   270. AG   1940.   6.2    .0 44.0
       5. Monument WB Dptr    *       .0      18.0   -3280.0      18.0 *
3280.   270. AG   2445.   6.2    .0 44.0
       6. I-25 Ramp SB Dptr   *    -18.0        .0     -18.0   -3280.0 *
3280.   180. AG   1185.   6.4    .0 32.0
       7. Monument EB Thru-R Q*    -24.0     -18.0  -10660.7     -18.0 *
*****   270. AG    231. 100.0    .0 24.0 6.73 540.3
```

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       8. Monument WB Left Q  *     24.0        .0     772.6         .0 *
749.    90. AG    106. 100.0    .0 12.0 1.17  38.0
       9. Monument WB Thru Q  *     24.0      18.0     284.4       18.0 *
260.    90. AG    105. 100.0    .0 24.0  .83  13.2
      10. I-25 Ramp NB Left Q *       .0     -30.0        .0     -236.5 *
207.   180. AG    162. 100.0    .0 24.0  .72  10.5
      11. I-25 Ramp NB Right Q*     18.0     -30.0      18.0    -5463.7 *
5434.   180. AG     81. 100.0    .0 12.0 1.84 276.0
```

PAGE 2
JOB: Exit 161 Monument St 2035 Build PM
RUN: I-25 Analysis

DATE : 2/27/12
TIME : 8:58:32

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
7. Monument EB Thru-R Q	150	130	3.0	2275	1700	49.70	2	3
8. Monument WB Left Q	150	119	3.0	325	1600	49.70	2	3
9. Monument WB Thru Q	150	59	3.0	1615	1700	49.70	2	3
10. I-25 Ramp NB Left Q	150	91	3.0	830	1600	49.70	2	3
11. I-25 Ramp NB Right Q	150	91	3.0	1060	1600	49.70	2	3

RECEPTOR LOCATIONS

RECEPTOR	X (FT)	Y (FT)	Z (FT)
1. REC 1	-34.0	40.0	5.9
2. REC 2	34.0	40.0	5.9
3. REC 3	34.0	-40.0	5.9
4. REC 4	-34.0	-40.0	5.9
5. REC 5	-34.0	122.1	5.9
6. REC 6	-34.0	204.1	5.9
7. REC 7	34.0	122.1	5.9
8. REC 8	34.0	240.1	5.9
9. REC 9	34.0	-122.1	5.9

10.	REC 10	*	34.0	-240.1	5.9	*
11.	REC 11	*	-34.0	-122.1	5.9	*
12.	REC 12	*	-34.0	-204.1	5.9	*
13.	REC 13	*	-116.1	40.0	5.9	*
14.	REC 14	*	-198.1	40.0	5.9	*
15.	REC 15	*	116.1	40.0	5.9	*
16.	REC 16	*	198.1	40.0	5.9	*
17.	REC 17	*	116.1	-40.0	5.9	*
18.	REC 18	*	198.1	-40.0	5.9	*
19.	REC 19	*	-116.1	-40.0	5.9	*
20.	REC 20	*	-198.1	-40.0	5.9	*

PAGE 3
JOB: Exit 161 Monument St 2035 Build PM
RUN: I-25 Analysis

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)

WIND ANGLE (DEGR)	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	.0	.0	1.1	1.6	.0	.0	.0	.0	.9	1.0	1.0	.9	.0	.0	.0	.0	1.1	1.1	1.5	1.5
10.	.0	.0	1.2	1.5	.0	.0	.0	.0	.7	.7	1.2	1.6	.0	.0	.0	.0	1.1	1.1	1.3	1.4
20.	.0	.0	1.1	1.4	.0	.0	.0	.0	.6	.5	1.4	1.5	.0	.0	.0	.0	1.1	1.1	1.4	1.4
30.	.0	.0	1.2	1.5	.0	.0	.0	.0	.5	.5	1.8	1.7	.0	.0	.0	.0	1.2	1.2	1.5	1.5
40.	.0	.0	1.3	1.6	.0	.0	.0	.0	.5	.3	1.7	1.6	.0	.0	.0	.0	1.3	1.3	1.5	1.5
50.	.0	.0	1.3	1.6	.0	.0	.0	.0	.6	.3	1.8	1.7	.1	.1	.0	.0	1.3	1.2	1.7	1.7
60.	.0	.1	1.4	2.0	.0	.0	.0	.0	.7	.4	1.8	1.5	.1	.1	.1	.1	1.4	1.3	1.9	1.8
70.	.2	.1	1.6	2.2	.0	.0	.0	.0	.6	.3	1.6	1.4	.1	.1	.1	.1	1.5	1.4	2.2	2.3
80.	.7	.7	1.7	2.6	.0	.0	.0	.0	.6	.3	1.7	1.4	.7	.5	.7	.5	1.7	1.6	2.5	2.4
90.	1.4	1.4	1.4	2.5	.3	.2	.3	.2	.3	.2	1.4	1.3	1.4	1.5	1.3	1.2	1.3	1.3	1.9	2.0
100.	1.9	1.9	.7	1.8	.5	.3	.5	.2	.1	.0	1.2	1.1	1.7	1.7	1.8	1.7	.7	.6	1.2	1.1

110. * 1.5 1.7 .2 1.2 .6 .4 .6 .3 .0 .0
1.0 .9 1.7 1.8 1.7 1.6 .2 .2 .8 .4
120. * 1.4 1.6 .1 1.1 .6 .4 .6 .3 .0 .0
1.1 1.0 1.6 1.8 1.6 1.6 .1 .1 .7 .4
130. * 1.1 1.5 .1 1.2 .6 .4 .6 .3 .0 .0
1.2 1.0 1.8 1.6 1.5 1.5 .1 .1 .7 .5
140. * 1.4 1.2 .0 1.2 .6 .4 .6 .4 .0 .0
1.2 1.0 1.9 1.7 1.2 1.2 .0 .0 .6 .3
150. * 1.5 1.2 .1 1.3 .6 .4 .6 .4 .1 .1
1.3 1.0 1.8 1.5 1.2 1.2 .0 .0 .5 .3
160. * 1.9 1.3 .1 1.6 .9 .4 .6 .4 .1 .1
1.5 1.2 1.7 1.5 1.2 1.2 .0 .0 .4 .3
170. * 2.3 1.8 .6 1.6 1.3 .9 1.1 .6 .6 .6
1.4 1.2 1.6 1.5 1.2 1.2 .0 .0 .4 .3
180. * 2.1 2.2 1.4 1.2 1.1 1.0 1.4 .7 1.3 1.2
1.1 1.0 1.5 1.4 1.6 1.4 .4 .2 .3 .2
190. * 1.7 2.3 1.6 .6 1.0 .5 1.2 .8 1.5 1.3
.6 .6 1.2 1.2 1.6 1.5 .4 .3 .0 .0
200. * 1.3 2.0 1.5 .1 .6 .4 .9 .5 1.4 1.1
.1 .1 1.2 1.2 1.7 1.6 .4 .4 .0 .0
210. * 1.2 1.6 1.4 .0 .6 .4 .7 .3 1.4 1.0
.0 .0 1.2 1.2 1.8 1.5 .5 .3 .0 .0
220. * 1.3 1.5 1.4 .0 .6 .4 .6 .4 1.4 1.0
.0 .0 1.3 1.3 1.8 1.6 .6 .3 .0 .0
230. * 1.3 1.3 1.2 .1 .6 .5 .6 .4 1.2 .8
.0 .0 1.3 1.3 2.0 1.8 .7 .5 .1 .1
240. * 1.6 1.3 1.2 .1 .8 .5 .8 .5 1.2 .8
.0 .0 1.6 1.6 1.8 1.9 .7 .5 .1 .1
250. * 1.7 1.7 1.4 .3 .8 .6 .8 .5 1.1 .7
.0 .0 1.7 1.7 1.9 2.2 .9 .4 .3 .3
260. * 2.0 1.9 2.0 1.1 .8 .6 .8 .5 1.3 .8
.2 .0 2.0 2.0 2.1 2.3 1.3 1.1 1.1 1.0
270. * 1.7 1.7 2.9 2.1 .6 .4 .6 .4 1.7 1.2
.6 .4 1.7 1.7 1.8 1.8 2.2 1.9 2.1 2.1
280. * .8 .8 3.2 2.5 .2 .0 .2 .0 2.0 1.4
.9 .7 .8 .8 .7 .8 2.2 2.2 2.5 2.5
290. * .2 .2 2.6 2.2 .0 .0 .0 .0 1.9 1.5
.9 .7 .2 .2 .2 .1 1.7 1.7 2.2 2.2
300. * .1 .0 2.1 2.0 .0 .0 .0 .0 1.8 1.5
.7 .6 .1 .1 .1 .1 1.4 1.5 2.0 2.0
310. * .1 .0 1.5 1.8 .0 .0 .0 .0 1.9 1.6
.7 .4 .1 .1 .0 .0 1.2 1.3 1.8 1.8
320. * .0 .0 1.2 1.5 .0 .0 .0 .0 2.0 1.8

```
.7    .4    .0    .0    .0    .0   1.2   1.3   1.5   1.5
 330.  *    .0    .0   1.0   1.5    .0    .0    .0    .0   1.8   1.7
.7    .4    .0    .0    .0    .0   1.2   1.2   1.5   1.5
 340.  *    .0    .0   1.1   1.4    .0    .0    .0    .0   1.5   1.8
.7    .5    .0    .0    .0    .0   1.1   1.1   1.4   1.4
 350.  *    .0    .0   1.1   1.4    .0    .0    .0    .0   1.2   1.7
.8    .7    .0    .0    .0    .0   1.1   1.1   1.4   1.4
 360.  *    .0    .0   1.1   1.6    .0    .0    .0    .0    .9   1.0
1.0    .9    .0    .0    .0    .0   1.1   1.1   1.5   1.5
 ------*------------------------------------------------------------------
---------------------------------------------------------
 MAX   *   2.3   2.3   3.2   2.6   1.3   1.0   1.4    .8   2.0   1.8
1.8   1.7   2.0   2.0   2.1   2.3   2.2   2.2   2.5   2.5
 DEGR. *  170   190   280    80   170   180   180   190   280   340
30    30   260   260   260   260   270   280    80   280
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THE HIGHEST CONCENTRATION OF   3.20 PPM OCCURRED AT RECEPTOR REC3 .