TABLA DE CONTENIDO

1 INTRODUCCIÓN

El propósito de este capítulo es determinar la afectación del tráfico dentro de los **"ESTUDIOS, DISEÑOS E INGENIERÍAS PARA LA CONSTRUCCIÓN DE LOS COMPLEJOS JUDICIALES QUITO NORTE"**, en la ilustración 1 muestra la localización del complejo judicial.

A) COMPLEJO JUDICIAL NORTE

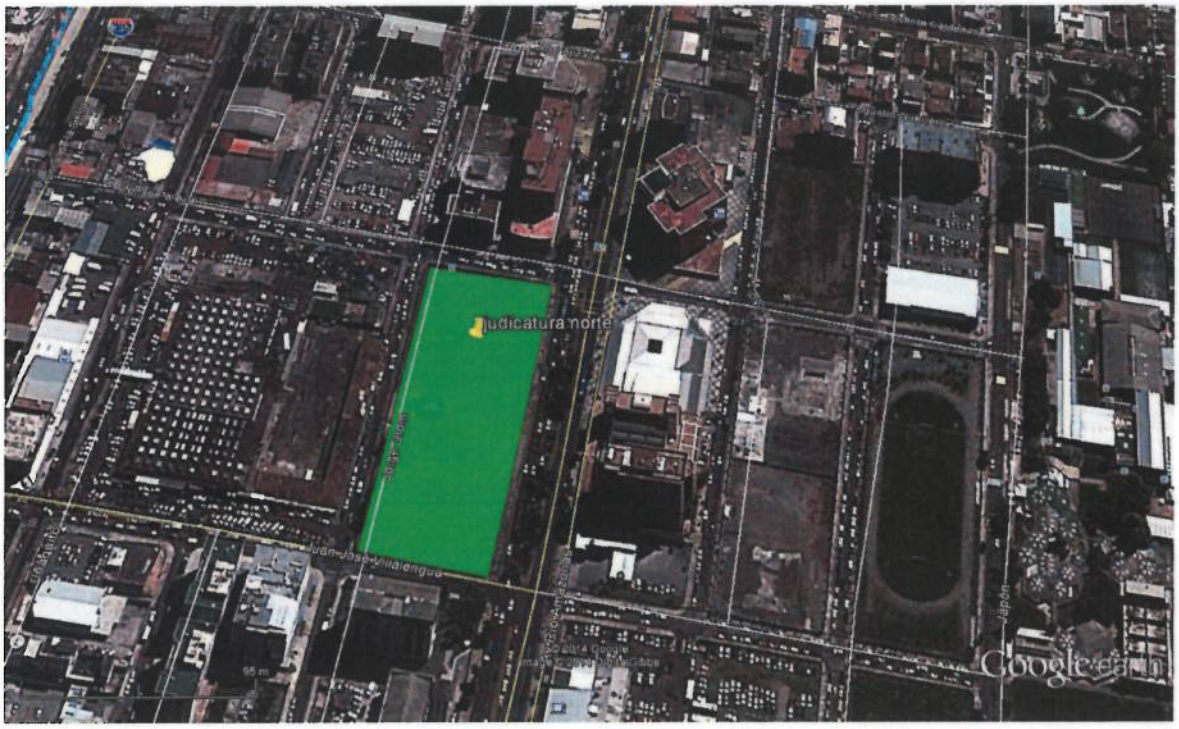

Ilustración 1 COMPLEJO JUDICIAL QUITO NORTE

**color verde*

2 UBICACIÓN JUDICATURA NORTE

ORIENTACION	DETALLE
NORTE	CALLE ALFONSO PEREIRA
SUR	CALLE JUAN JOSE VILLALENGUA
OESTE	CALLE JORGE DROM
ESTE	AV. RIO AMAZONAS

En el **anexo fotográfico** se puede apreciar la situación actual de la vía la cual está pavimentada y tiene un alto flujo de vehículos livianos en horas pico.

3 ANTECEDENTES

El Plan de Reestructuración de la Función Judicial contempla la ejecución de varios proyectos de construcción y remodelación de la infraestructura a nivel nacional para los Juzgados de Primera instancia, Cortes Provinciales y Nacional del Ecuador; en razón de que sus instalaciones no cuentan con las condiciones necesarias para su adecuado funcionamiento, o necesitan la construcción de varias dependencias para ampliar la cobertura y dar solución a los problemas de acceso a la justicia en el país.

Esta propuesta requiere de modelos de gestión estandarizados, para los servicios de justicia, construidos sobre la base de las atribuciones, competencias y productos establecidos en la normativa existente, para cada una de las materias que debe atender un juzgado.

Los modelos deben tener una estructura operativa y funcional que garantice mejoras sustanciales en la calidad de los servicios, proceso estandarizado de acuerdo a las normas jurídicas, competencia, roles, actividades y productos y servicios definidos que se sostengan en una gerencia ágil.

Mediante Memorando No. DNM-203-902 de 2 de diciembre de 2013, suscrito por el Director Nacional de Mejora Continua del Servicio Judicial, Dr. Tomás Alvear, en el cual menciona:

"En razón del estudio final plasmado en el Plan Nacional de Servicio y Cobertura Judicial 2014, así como los antecedentes trabajados desde el mes de abril del año en curso, será necesario generar los espacios necesarios tanto en el norte como en el sur ... Con estos antecedentes, a fin de cumplir con los objetivos indicados, **es necesaria la contratación de los: ESTUDIOS, DISEÑOS E INGENIERÍAS PARA LA CONSTRUCCIÓN DE LOS COMPLEJOS JUDICIALES QUITO NORTE Y QUITO SUR".**

El proyecto "**COMPLEJO JUDICIAL QUITO NORTE**" tiene planificado 444 plazas de parqueo, distribuidas en dos subsuelos; subsuelo uno 192, subsuelo dos 252.

4 DESCRIPCIÓN DEL PROYECTO RESPECTO DE LA ACCESIBILIDAD Y MOBILIDAD

El proyecto es para las actividades judiciales del "**COMPLEJO JUDICIAL QUITO NORTE"**, la cual tendrá un área de construcción de estimada de 40.673,07 m^2, adicional espera recibir 652 funcionarios distribuidos en 10 plantas.

4.1 Número de plazas de estacionamiento disponibles

El edificio de Judicatura norte está compuesto por dos subsuelos los mismos que cuentan con el siguiente número de plazas de parqueos:

- El subsuelo 1 tiene 192 parqueos.
- El subsuelo 2 tiene 252 parqueos.

Total plazas de parqueo: 444

En los planos adjuntos se muestra en planos la distribución de los estacionamientos por subsuelos.

4.2 Descripción del tipo de vehículo, horarios de llegada y salida y frecuencia y operación del estacionamiento

Los vehículos que operaran dentro de las instalaciones serán vehículos livianos.

Horario de Ingreso y Salida

El horario de ingreso y salida de la institución Pública es el siguiente:

- Ingreso: 07:00 AM
- Salida: 18:00 PM

Para funcionarios públicos.

La frecuencia de operación y Operación del estacionamiento:

Día	Horario
Lunes	07:00 AM- 18:00 PM
Martes	07:00 AM- 18:00 PM
Miércoles	07:00 AM- 18:00 PM
Jueves	07:00 AM- 18:00 PM
Viernes	07:00 AM- 18:00 PM
Sábado	07:00 AM- 18:00 PM

La operación del área de estacionamiento estará a cargo del departamento de administración de la Judicatura, la misma que definirá la política de asignación de las plazas de parqueo dentro de la misma.

4.3 Ubicación de los accesos y Esquemas de circulación externa/ interna

Ubicación de los accesos

El ingreso y salida tiene diseñado dos carriles (3.50 metros) cada acceso, los mismos que cuentan con un carril de desaceleración y aceleración respectivamente.

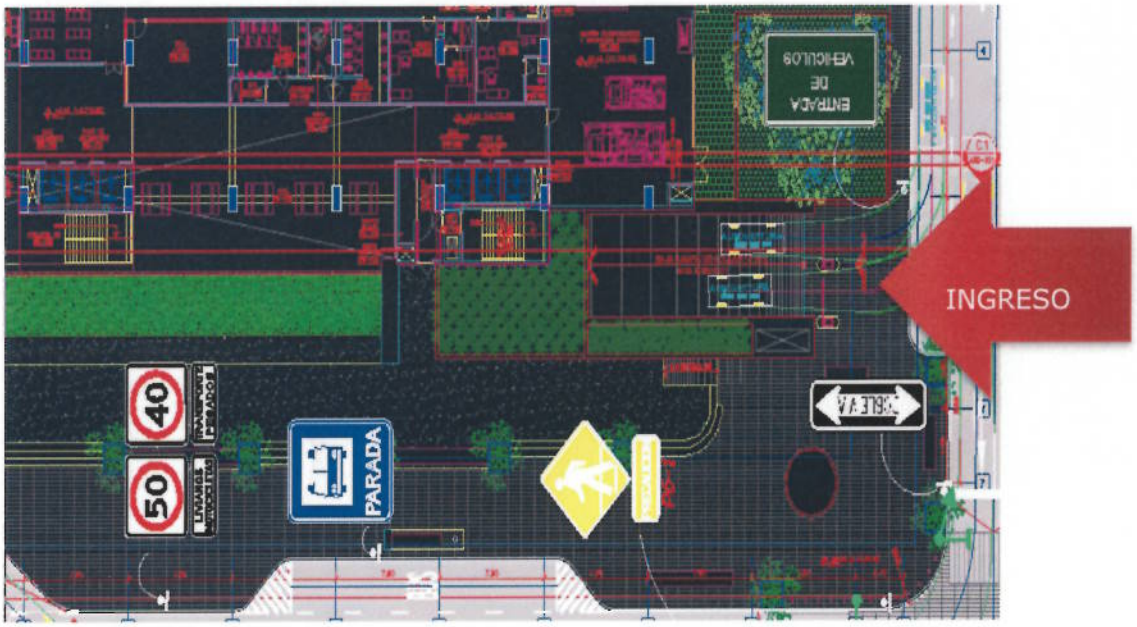

Figura de del Ingreso a parqueos internos.

El ingreso estará ubicada en la calle Alfonso Pereira.

La salida estará ubicada en la calle J.J. Villalengua. (ver plano adjunto)

4.4 Encuesta de Origen y Destino y Usuarios del Complejo Judicial Norte

En la sección de Anexos se adjunta la Encuesta de Origen y Destino realizada.

4.5 Esquemas de circulación de llegada y salida en las vías e intersecciones aledañas al proyecto (rutas de acceso y salida)

Esquema de circulación externa

Los vehículos que arriben al PROYECTO tendrán las siguientes rutas *posibles*:

Figura Rutas de ingreso para el PROYECTO

El flujo vehicular que ingresan al COMPLEJO JUDICAL QUITO NORTE considera las siguientes alternativas:

- Los flujos vehiculares que INGRESAN al COMPLEJO JUDICAL QUITO NORTE, pueden arribar por 3 rutas con una distribución proporcional por ruta (33.3%).
- El volumen vehicular que ingresara en la hora pico del proyecto será del 40% lo que representa una demanda vehicular de 178 vehicular por hora.

Las rutas de circulación:

i) Gaspar de Villarroel, Calle Jorge Drom, calle Alfonso Pereira

ii) Av. 10 de Agosto, Calle Alfonso Pereira,

iii) Av. Amazonas, calle J.J Villalengua, calle Iñaquito, calle Alfonso Pereira

La ruta más importante para acceder al COMPLEJO JUDICAL NORTE QUITO, es la ruta iii.

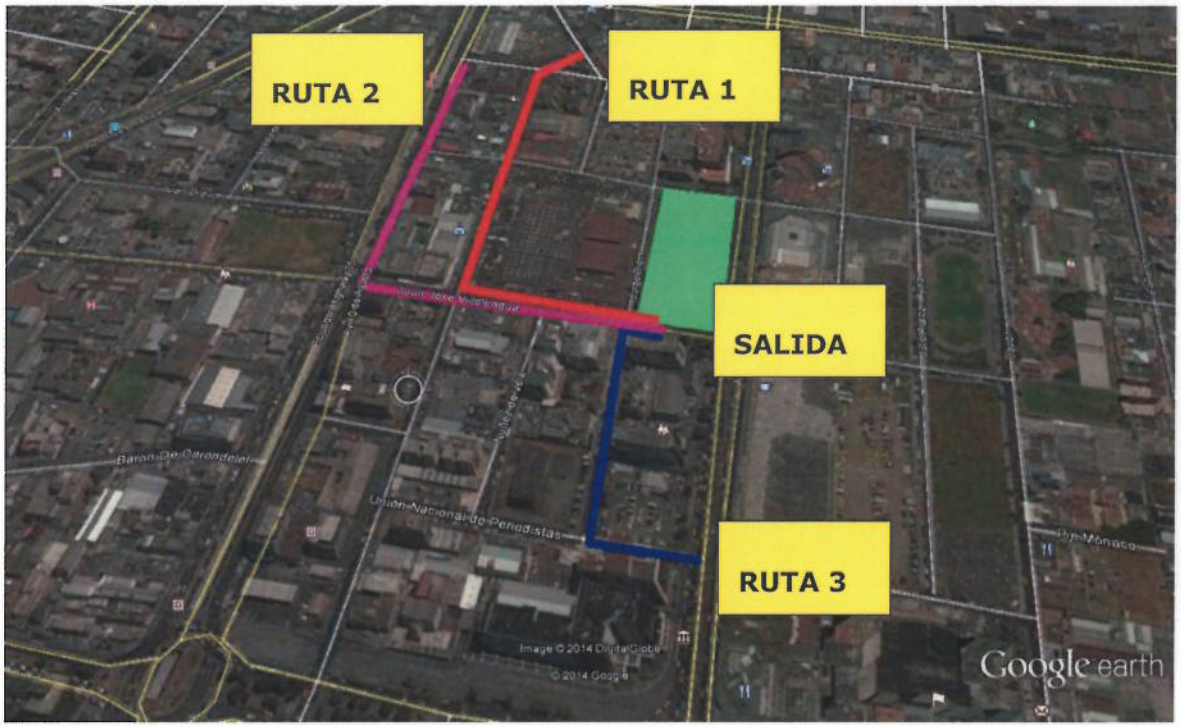

Figura Rutas de salida para el PROYECTO

- El volumen vehicular que sale del área de parqueo (no necesariamente en la hora pico) será del 60% lo que representa una demanda vehicular de 266 vehicular por hora.

Las rutas de circulación:

i) Calle J.J Villalengua y Av. 10 de Agosto, , Calle Jorge Drom, calle Alfonso Pereira

ii) Calle J.J Villalengua, calle Iñaquito, Gaspar de Villarroel

iii) calle J.J Villalengua, calle Jorge Drom, Unión Nacional de Periodistas , Av. Amazonas

Esquema de circulación interna

La circulación es de doble vía dentro de los subsuelos.

En el plano de señalización horizontal y vertical se puede apreciar ***ARQ-101_ARQUITECTONICO SUBSUELO 1*** y ***ARQ-102_ARQUITECTONICO SUBSUELO 2*** el esquema de circulación interna. Los cuales muestran las marcas viales, como flechas direccionales; marcas blancas longitudinales, marcas amarillas,

según lo establece las normas INEN.

4.6 Encuesta

En la sección de Anexos se adjunta la Encuesta de Origen y Destino realizada.

- Establecer si los funcionarios tienen parqueos en las instalaciones de trabajo.

detalle	% Funcionarios
⊟FEMENINO	
NO TIENE PARQUEO	23.25%
⊟MASCULINO	
NO TIENE PARQUEO	74.33%
SI TIENE PARQUEO	2.42%
Grand Total	**100.00%**

Tabla Distribución por genero los parqueos vehiculares.

- Determinar cómo arriba y parten de las instalaciones de trabajo

Llega al trabajo	% Funcionarios
BUS	26.95%
CAMINA	7.66%
LO PASAN DEJANDO	13.84%
TROLEBUS	11.90%
VEHICULO PROPIO	39.65%
Llega al trabajo	**100.00%**

Salida del trabajo	% Funcionarios
BUS	34.34%
CAMINA	3.63%
LO PASAN RECOGIENDO	6.25%
TROLEBUS	16.13%
VEHICULO PROPIO	39.65%
Salida del	**100.00%**

Tabla Distribución de llegada al sitio de trabajo y de salida del sitio de trabajo.

Según los Términos de Referencia (TDR) del proyecto la esperanza de funcionarios que arriben a la instalación es 652 –funcionarios-.

En base a la encuesta realizada se encontró que el 39.65% de los funcionarios (259) llegan a su sitio de trabajo en vehículo propio, de los cuales el 97.58% funcionarios (636) no tienen parqueo dentro de las instalaciones del complejo de la JUDICATURA, parqueando sus vehículos por los alrededores de la zona. Su horario de trabajo es de 8:00am hasta las 17:00pm.

Como origen: las zonas del norte, centro y sur y destino: COMPLEJO JUDICATURA NORTE están *distribuidos* 40%, 20%, 40% respectivamente.

Norte por las zonas: 1, 2, 3, 13, 14,15

Centro por las zonas: 4, 5

Sur por las zonas: 6, 7,8, 9, 10, 11, 12, 16, 17

En los anexos se puede revisar la zonificación realizada para la ciudad de Quito.

5 OBJETIVO DEL ESTUDIO

El objetivo del estudio de tráfico es medir el impacto sobre la zona respecto a tráfico vehicular, el estudio tiene por objeto:

a) Determinar los generadores/atractores de viajes de la zona.

b) Determinar los niveles de servicio de la zona y proyección.

6 ALCANCE DEL INFORME FINAL

- El alcance del Estudio de tráfico del presente proyecto, tiene como objeto encontrar los niveles de servicios presentes y futuros en el entorno del Proyecto del complejo judicial Norte.

7 NORMAS TÉCNICAS A CONSIDERARSE

Se realizara el estudio cumpliendo con las normativas locales e internacionales vigentes, aplicables en cada caso, Normas INEN, HCM 2010.

8 METODOLOGÍA GENERAL DEL TRABAJO

Fase 1. Información Demográfica

Fase 2. Escenario de Generadores de Viajes

Fase 3. Distribución de Viajes.

Fase 4. Conclusiones

8.1 FASE 1. INFORMACIÓN DEMOGRÁFICA

8.1.1 CARACTERIZACIÓN DEMOGRÁFICA

Considerando los objetivos del estudio, en donde se busca analizar la movilidad de la población, es importante considerar las características socioeconómicas de sus habitantes en temas relacionados a la población total, su composición por género, grupos etarios, población económicamente activa, entre otros aspectos.

Estas cifras se obtienen del VII Censo de Población y VI de Vivienda realizado en el año 2010 por el Instituto Nacional de Estadística y Censos (INEC), siendo esta base una fuente oficial de datos, resulta apropiada para el estudio, como información fundamental.

8.1.2 POBLACIÓN

Conforme se presenta en la Tabla 1 la población de la ciudad de Quito para el año 2001 fue de 1.454.316 habitantes y para el 2010 se estima una población de 2.239.191 habitantes.

Años	Población Quito (habitantes)
2001	1.454.316
2010	2.239.191

Tabla 1 Proyección de la población de la ciudad de Quito
Fuente: INEC, Censo de Población y Vivienda 2010
Elaboración: Propia

Acorde se presenta en la tabla 1 la ciudad de Quito al año 2010 tiene 2.239.191 habitantes, en donde la población masculina representa el 49%, es decir, 1.088.811 personas y la femenina, el 51%, es decir, 1.150.380

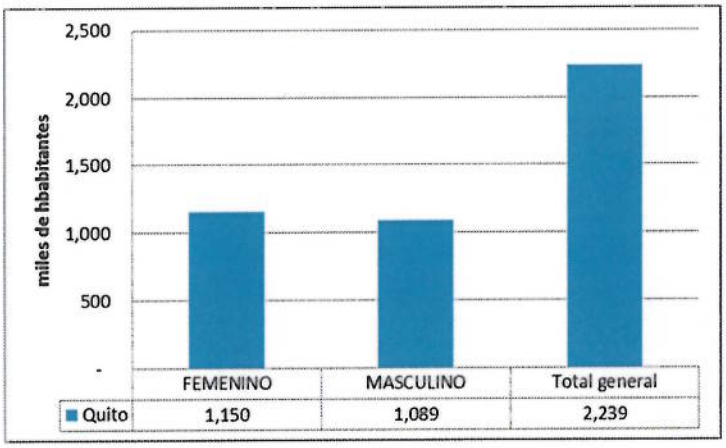

Ilustración 2 Población de la ciudad de Quito según genero

Fuente: INEC, Censo de Población y Vivienda 2010
Elaboración: Propia

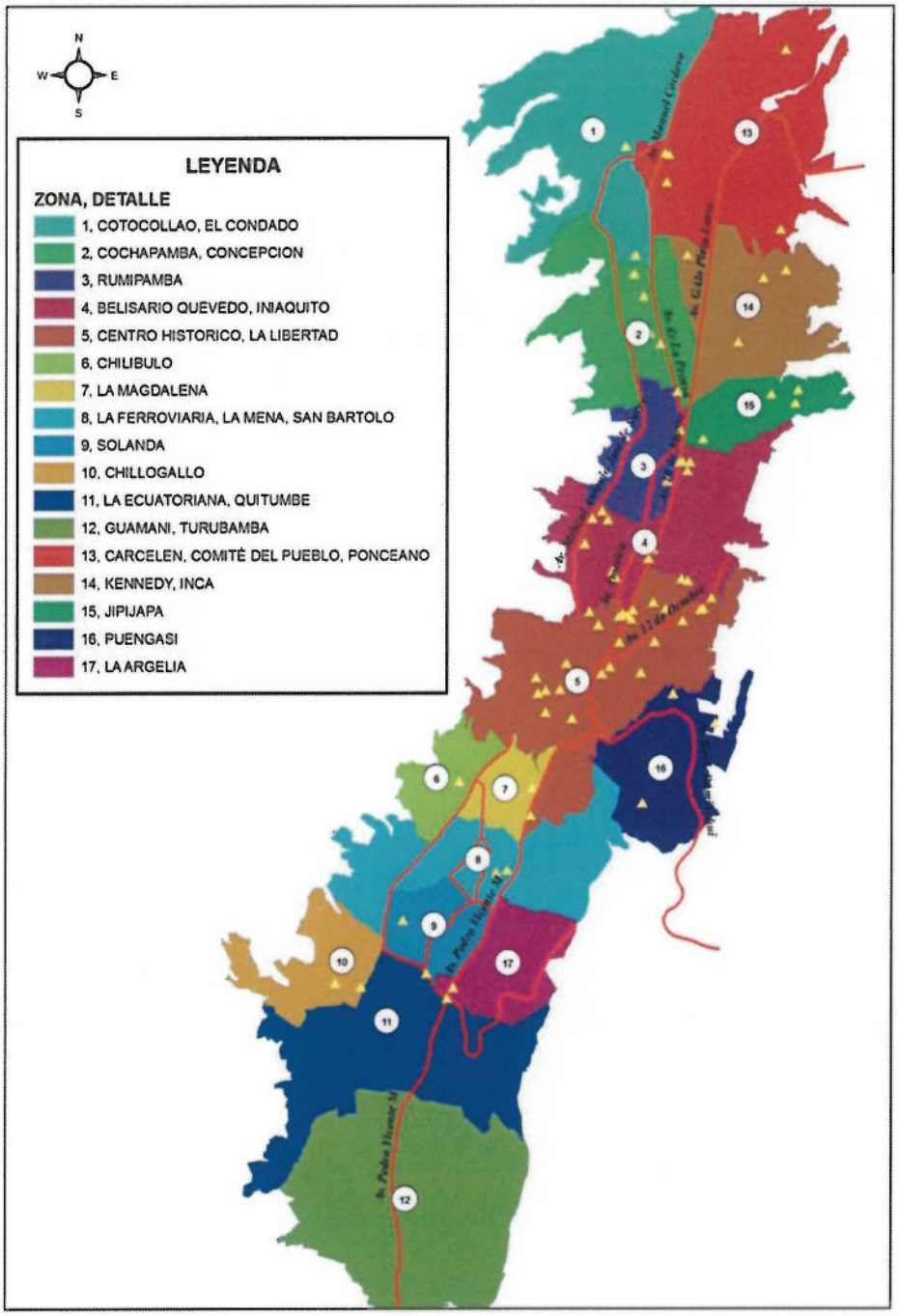

Ilustración 3 Zonificación de la Ciudad de Quito

8.2 FASE 2. ESCENARIO DE GENERADORES DE VIAJES

8.2.1 INFORMACIÓN POBLACIONAL DE LA ZONA DE AFECTACIÓN DEL TRÁFICO

Se realizó una zonificación de la Ciudad de Quito (Ver ANEXO),

8.2.2 Complejo norte, identificación de las zonas que influyen en el tráfico.

Zona	Detalle De Zona	Generadores De Viaje
3	Rumipamba	Quito & Golf Club
4	Belisario Quevedo, Iñaquito	Parque La Isla, C.C América, Seminario Mayor, Sheraton, Parque Náutico, Jardín Botánico, Parque La Carolina, C.C. Naciones Unidas, CCI, Carcol, Quicentro, Estadio Olímpico Atahualpa
15	Jipijapa	Cementerio Del Batan, Parque El Heraldo, Dispensario Del IESS, Estación De Transferencia Rio Coca, Estadio Olímpico Atahualpa

Tabla 1 ZONAS DE AFECTACION DE TRÁFICO EN EL COMPLEJO JUDICIAL NORTE

Zona	Detalle De Zona	Uso De Suelo
3	Rumipamba	Zona residencial media alta, zona comercial
4	Belisario Quevedo, Iñaquito	Zona comercial, zona residencial
15	Jipijapa	Zona residencial mixta, zona comercial

Tabla 2 TIPOS DE SUELO PARA LA CIUDAD DE QUITO, SEGÚN ZONAS DE TRANSPORTE COMPLEJO JUDICIAL NORTE

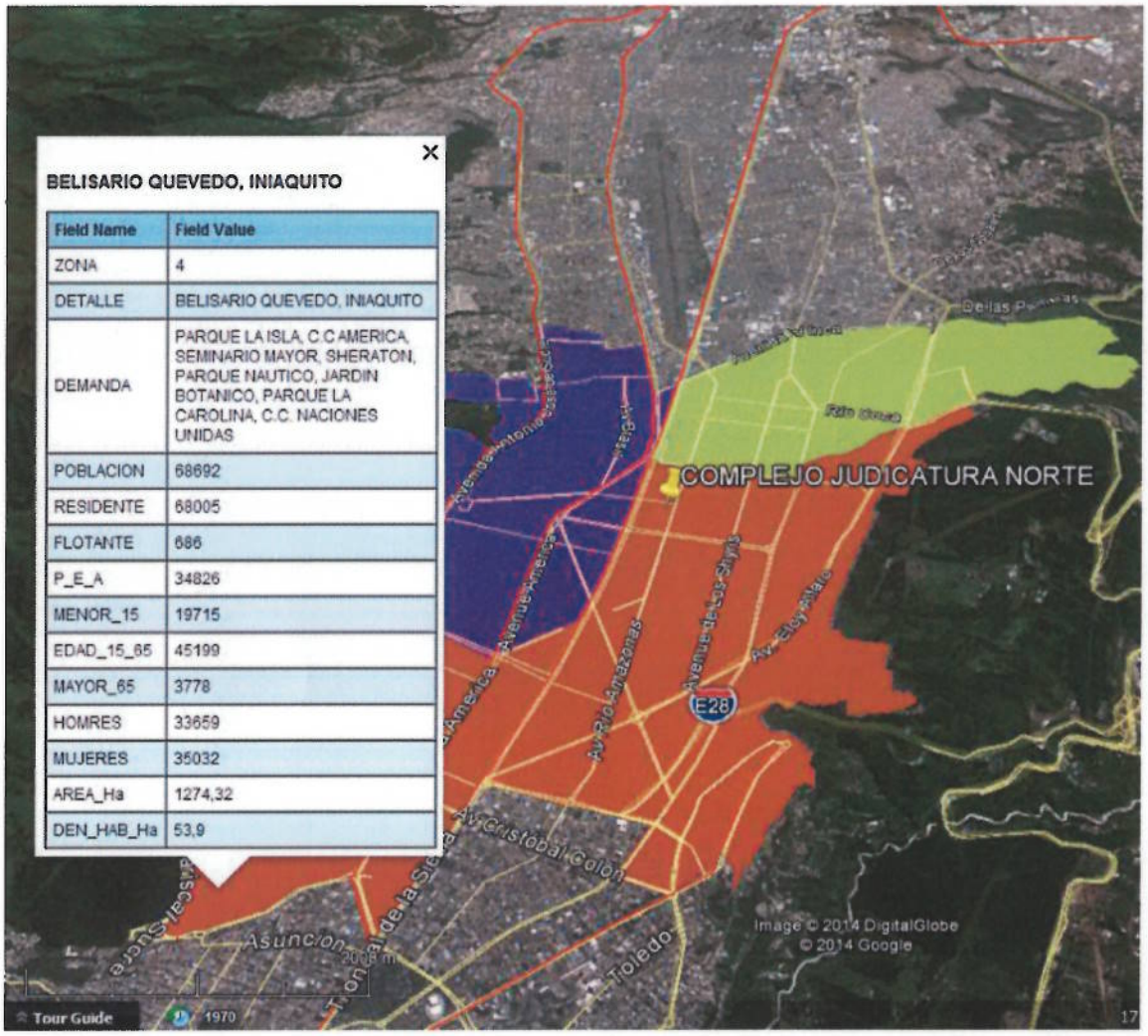

Ilustración 4 ZONA 4 - Belisario Quevedo, Iñaquito

La Tabla 1 ZONAS DE AFECTACION DE TRÁFICO EN EL COMPLEJO JUDICIAL NORTE y Tabla 2 TIPOS DE SUELO PARA LA CIUDAD DE QUITO, SEGÚN ZONAS DE TRANSPORTE COMPLEJO JUDICIAL NORTE, en la zona 4 se encuentra ubicado el complejo judicial norte, sin embargo está rodeado por las zonas (3) Rumipamba y (15) Jipijapa, respectivamente, importantes generadores/atractores de viajes.

8.3 FASE 3. DISTRIBUCIÓN DE VIAJES

8.3.1 ANÁLISIS DE CIRCULACIÓN DE TRÁFICO

LA vialidad principal que define el COMPLEJO DE JUDICATURA QUITO NORTE está delimitado por:

ORIENTACION	DETALLE
NORTE	CALLE ALFONSO PEREIRA
SUR	CALLE JUAN JOSE VILLALENGUA
OESTE	CALLE JORGE DROM
ESTE	AV. RIO AMAZONAS

En la Ilustración 1 COMPLEJO JUDICIAL QUITO NORTE se muestra la figura del polígono la compone.

8.3.1.1 Características geométricas

ORIENTACION	DETALLE	OBSERVACIONES
NORTE	CALLE ALFONSO PEREIRA	**2 CARRILES**, CARRIL IZQUIERDO OCUPADO POR VEHICULOS ESTACIONADOS, (EXISTE SEÑALETICA PROHIBIDO ESTACIONAR), LA LONGITUD DE COLA ES DE 190 METROS, EXISTE BLOQUEO DE INTERSECCION CON LA CALLE JORGE DROM. PAVIMENTOS FLEXIBLE SUPERFICIE DE RODADURA.
SUR	CALLE JUAN JOSE VILLALENGUA	**2 CARRILES**, VEHICULOS PARQUEADOS DEL LADO DERECHO DE LA VIA, BUSES ESPERANDO TRABAJADORES. PAVIMENTOS FLEXIBLE SUPERFICIE DE RODADURA.
OESTE	CALLE JORGE DROM	**2 CARRILES**, VEHICULOS PARQUEADOS DEL LADO DERECHO, VEHICULOS LIVIANOS PARQUADOS (20) EN UNA LONGITUD DE 100 METROS, ESTOS PERMANECEN ESTACIONADOS MAS DE 4 HORAS.

ORIENTACION	DETALLE	OBSERVACIONES
ESTE	AV. RIO AMAZONAS	SENTIDO NORTE SUR, **3 CARRILES**, CONGESTION VEHICULAR, Y COLAS. PAVIMENTOS FLEXIBLE SUPERFICIE DE RODADURA.
		SENTIDO SUR NORTE, **3 CARRILES**, CONGESTION VEHICULAR, Y COLAS. PAVIMENTOS FLEXIBLE SUPERFICIE DE RODADURA.

La siguiente tabla muestra las secciones transversales del Proyecto.

DETALLE	TIPO DE VIA	SENTIDO DE CIRCULACION	ANCHO DE VIA	CARRILES
CALLE ALFONSO PEREIRA	LOCAL	UNA VIA	12 metros	2 por sentido
CALLE JUAN JOSE VILLALENGUA	COLECTORA	UNA VIA	12 metros	2 por sentido
CALLE JORGE DROM	LOCAL	UNA VIA	12 metros	2 por sentido
AV. RIO AMAZONAS	ARTERIAL	DOBLE VIA	30 metros	3 por sentido

Las rutas de transporte público que circulan por la Av. Amazonas:

ALAMEDA - CARCELEN	MARIN - SAN VICENTE
BELLA VISTA	PARLAMENTO - CARCELEN
CARCELEN - MARIN	PARLAMENTO -EL INCA
JARRIN	PULIDA- ALAMEDA

Los estacionamientos se encuentran restringido en la Av. Amazonas, sin embargo se permite parqueo exterior en las calles Alfonso Pereira, J.J. Villalengua y Jorge Drom. La capacidad de estacionamiento en la vías permitidas es de 60 vehículos.

DISPOSITIVOS DE CONTROL DE TRÁFICO

A continuación se muestra la situación actual de los sentidos viales.

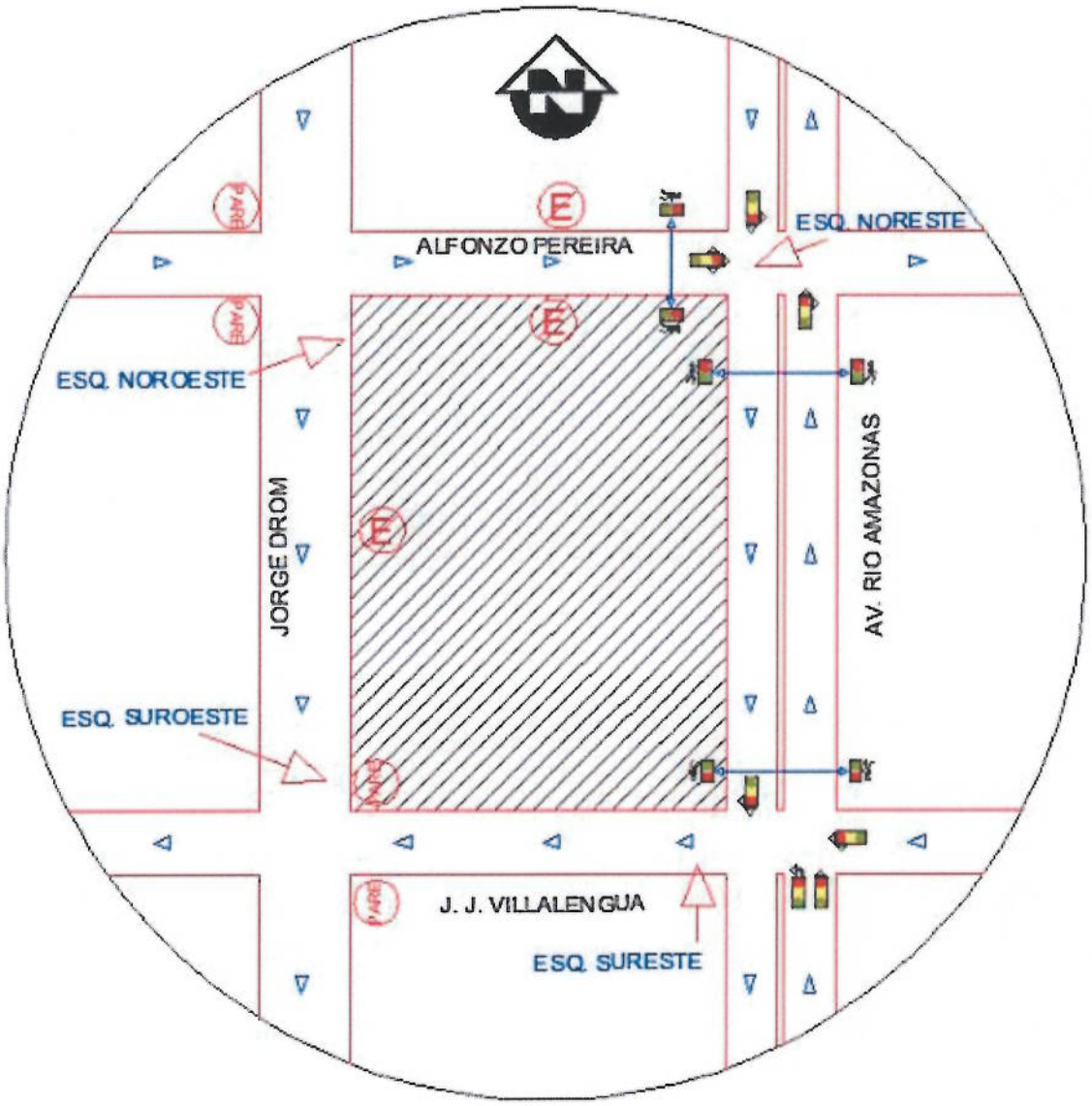

Ilustración 5 SENTIDO DEL FLUJO DE TRÁFICO ACTUAL Y UBICACIÓN DE DISPOSITIVOS DE CONTROL DE TRÁFICO COMPLEJO JUDICIAL NORTE

Nota: área achurada, complejo judicial norte.

La Avenida Amazonas y J.J. Villalengua; Avenida Amazonas y Alfonso Pereira se encuentran semaforizadas.

8.3.2 Flujos de tráfico

A Continuación se muestra la partición modal de la zona, es importante indicar que en la zona se generan colas en la Av. Rio Amazonas, colas que cubren desde la calle Villalengua hasta la calle Alfonso Pereira. (Ver archivo de Excel)

Los viajes tienen una distribución para el complejo Norte en un día promedio,

Zona	Particular	Taxi	Bus	Trole-Ecovía	Bicicleta	A pie	Total
3	11,186	13,315	38,618	15,839	1,062	5,221	85,241
4	11,961	21,261	74,849	37,966	1,841	10,748	158,626
15	8,105	17,912	45,449	30,090	1,789	3,491	106,836
Total	31,252	52,488	158,916	83,896	4,692	19,460	350,703

Tabla 3 Demanda de Viajes en la zona de análisis

Zona	Particular	Taxi	Bus	Trole-Ecovía	Bicicleta	A pie
3	13.12%	15.62%	45.30%	18.58%	1.25%	6.13%
4	**7.54%**	**13.40%**	**47.19%**	**23.93%**	**1.16%**	**6.78%**
15	7.59%	16.77%	42.54%	28.17%	1.67%	3.27%

Tabla 4 Distribución de Viajes en la zona de análisis

8.3.3 Situación actual de tráfico en las vías aledañas al proyecto

En la zona se encuentra la intersección de la Av. Amazonas y N.N.U.U. con el proyecto al 2020 tendrá un flujo de vehicular de 13,905 vehículos/hora. (ver anexo en Excel)

Para el presente análisis se utilizó Vistro de PTV GROUP.

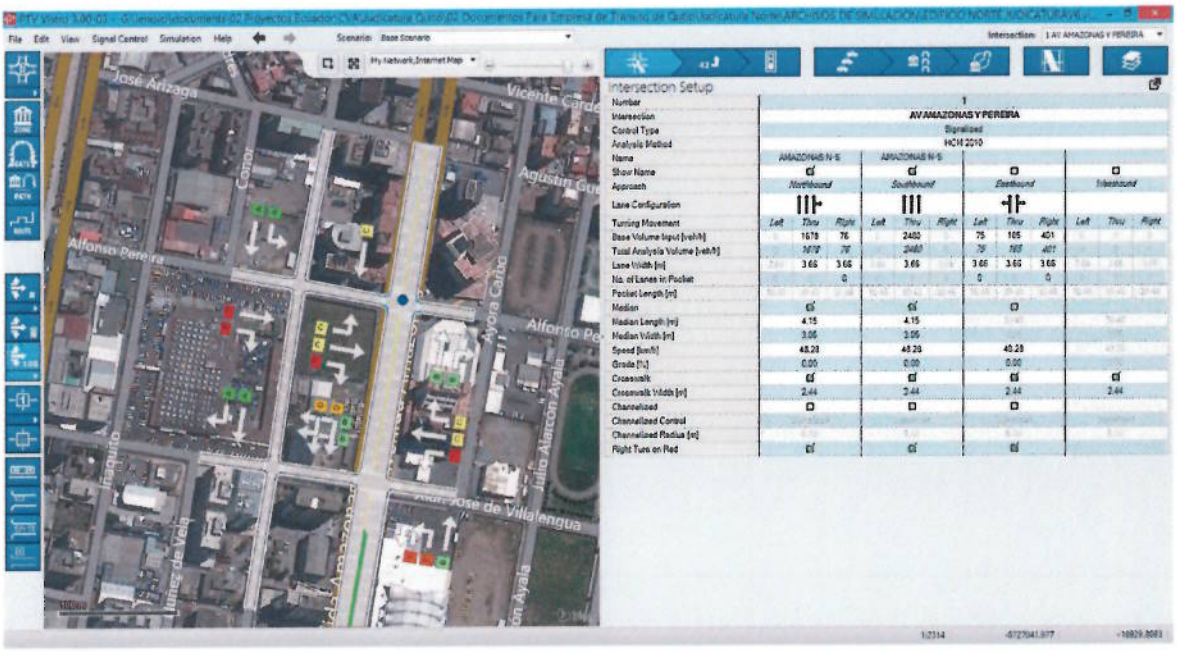

Ilustración 6 Simulación en Vistro

Es importante indicar que además de levantar el volumen vehicular de la zona se levantó adicional el volumen de peatones en:

ALFONSO PEREIRA Y JORGE DROM,

ALFONSO PEREIRA Y AMAZONAS

Este volumen de peatones fue ingresado en el simulador como un parámetro para la simulación, en el anexo se muestran los datos y distribuciones. La fecha de levantamiento de los datos fue realizada el viernes 05 diciembre 2014.

8.3.4 Situación actual de tráfico

Para nuestro análisis se seleccionó la HORA PICO DE 7:15 – 8:15 AM.

SITUACIÓN ACTUAL DE TRÁFICO – 2014 -

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Version 3.00-03

CONSULTORA VERA

Vistro File: G:\...\EDIFICIO NORTE JUDICATURAV6.vistro
Report File: C:\...\SITUACION ACTUAL.pdf

Scenario: Base Scenario
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.034	42.3	D
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	WBL	1.013	41.0	D
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	4.624	800.8	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.306	11.0	B

8.3.5 Situación con Proyecto de tráfico

Para nuestro análisis se seleccionó la HORA PICO DE 7:15 – 8:15 AM.

SITUACIÓN CON PROYECTO

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CONSULTORA VERA

Vistro File: G:\...\EDIFICIO NORTE JUDICATURAV6.vistro
Report File: C:\...\CON PROYECTO 2015.pdf

Scenario 4: Con Proyecto 2015
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.137	61.7	E
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	WBL	1.115	61.3	E
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	9.788	2,018.9	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.518	13.1	B
5	INGRESO EDIFICIO	Two-way stop	HCM2010	EBR	0.002	0.0	A
6	SALIDA EDIFICIO	Two-way stop	HCM2010	SBR	0.245	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value; for all other control types, they are taken for the whole intersection.

8.3.6 Situación con Futura con Proyecto

Para nuestro análisis se seleccionó la HORA PICO DE 7:15 – 8:15 AM.

SITUACIÓN FUTURA CON PROYECTO 2020

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Version 3.00-03

CONSULTORA VERA

Vistro File: G:\...\EDIFICIO NORTE JUDICATURAV6.vistro
Report File: C:\...\CON PROYECTO 2020.pdf

Scenario 5: Con Proyecto 2020
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.344	115.1	F
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	NBU	1.317	121.8	F
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	1.984	110.4	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.599	14.2	B
5	INGRESO EDIFICIO	Two-way stop	HCM2010	EBR	0.002	0.0	A
6	SALIDA EDIFICIO	Two-way stop	HCM2010	SBR	0.245	8.8	A

SITUACIÓN FUTURA con PROYECTO 2025

Generated with PTV VISTRO
Version 3.00-03

CONSULTORA VERA

Vistro File: G:\...\EDIFICIO NORTE JUDICATURAV6.vistro
Report File: C:\...\CON PROYECTO 2025.pdf

Scenario 6: Con Proyecto 2025
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.615	214.4	F
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	NBU	1.520	201.6	F
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	2.666	242.3	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.683	15.7	C
5	INGRESO EDIFICIO	Two-way stop	HCM2010	EBR	0.002	0.0	A
6	SALIDA EDIFICIO	Two-way stop	HCM2010	SBR	0.245	8.8	A

8.3.7 Situación con Futura sin Proyecto 2020/2025

Para nuestro análisis se seleccionó la HORA PICO DE 7:15 – 8:15 AM.

SITUACIÓN FUTURA SIN PROYECTO 2020

Generated with PTV VISTRO
Version 3.00-03

CONSULTORA VERA

Vistro File: G:\...\EDIFICIO NORTE JUDICATURAV6.vistro
Report File: C:\...\SIN PROYECTO 2020.pdf

Scenario 2: Sin Proyecto 2020
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.318	175.9	F
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	WBL	0.000	502.4	F
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	7.806	1,565.5	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.417	11.9	B

SITUACIÓN FUTURA SIN PROYECTO 2025

Generated with PTV VISTRO
Version 3.00-03

CONSULTORA VERA

Vistro File: G:\...\EDIFICIO NORTE JUDICATURAV6.vistro
Report File: C:\...\SIN PROYECTO 2015.pdf

Scenario 1: Sin Proyecto 2015
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.137	61.7	E
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	WBL	1.115	61.3	E
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	5.543	1,022.0	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.342	11.2	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value; for all other control types, they are taken for the whole intersection.

En las proyecciones del 2020 y 2025 se consideran los vehículos que atraerá el PROYECTO DE COMPLEJO JUDICIAL NORTE **y adicional** se considera el crecimiento del tráfico de la ciudad con una tasa estimada del 5% anual.

	
SITUACION ACTUAL – NIVEL DE SERVICIO	SITUACION CON PROYECTO – NIVEL DE SERVICIO

Es importante considerar que estos incrementos de flujo vehicular para el periodo 2020 y 2025 no se deben al proyecto *per se* sino al **incremento del tráfico en la ciudad**.

En base a estos criterios del nivel de servicio se recomienda que los accesos de ingreso y salida al COMPLEJO JUDICIAL NORTE sean por la calle CALLE ALFONSO PEREIRA y

CALLE JUAN JOSE VILLALENGUA respectivamente.

En el COMPLEJO JUDICIAL NORTE se espera que asistan 652 funcionares de los cuales 70% arriban en transporte institucional 456 funcionarios y el 30% en vehículo privado que corresponden a 196 vehículos.

Para los funcionarios que llegan en transporte institucional se necesitaría 10 buses de capacidad de 50 personas. El estacionamiento de los buses es considerada en la Calle Jorge Drom, Alfonso Pereira.

Ilustración 9 INGRESO Y SALIDA POR LA CALLE ALFONSO PEREIRA y CALLE JUAN JOSE VILLALENGUA RESPECTIVAMENTE

Los planos de señalización horizontal y vertical de adjuntan en formato CAD.

Se adjunta plano de mitigación para la ejecución de obra en formato CAD.

9 IDENTIFICACIÓN DE IMPACTOS A GENERARSE CON LA IMPLANTACIÓN DEL PROYECTO EN LA CIRCULACIÓN (ALEDAÑAS PEATONAL Y VEHICULAR) EN LAS INTERSECCIONES Y VÍAS ALEDAÑAS

Uno de los problemas será el incremento de la *demora del viaje* en cruzar la zona del COMPLEJO JUDICIAL NORTE que podría ser en promedio superior a 5 minutos. Es importante en la etapa de construcción el proyecto contar con personal de control de tránsito para los peatones, dado que la zona es un alto atractor de viajes.

10 MEDIDAS DE MITIGACIÓN

Se recomienda dentro de las medidas de mitigación,

Señalización

Uso de la señalización anaranjada de seguridad vial como lo indica el plano de

mitigación, adicional se recomienda que el ingreso de vehículos pesado se realice por la calle Jorge Drom para la etapa de construcción y se recomienda reducir la velocidad a 30 Km/h en la vía. Adición en el ingreso y salida de vehículos pesados en la etapa de construcción se recomienda un banderero.

Por otro lado considerar paneles de mensajería variable para que indiquen la cantidad de parqueos disponibles en línea ya en el momento de funcionamiento del proyecto.

Prohibir el estacionamiento en todo el perímetro exterior de la COMPLEJO JUDICATURA NORTE. Una solución para suplir los estacionamientos es que los usuarios a la zona utilicen transporte Público, y Adicional, los usuarios busquen estaciones de parqueo privadas o zonas azules existentes.

Reformas Geométricas

- Implantar una bahía de embarque y desembarque de pasajeros en la Av. Amazonas entre la Calle J.J. Villalengua y la Calle Alfonso Pereira.

- Implantar una bahía de embarque y desembarque (drop off) de pasajeros en la calle Jorge Drom.

- Las rampas de accesos y salidas al estacionamiento del COMPLEJO JUDICATURA NORTE deberán permitir el rebasamiento de vehículos, para situaciones de emergencias.

Distribución interna de los estacionamientos

- El control de ingresos vehiculares deberán estar alejados de los accesos, de tal forma que la cola para ingreso se forme dentro del área de estacionamientos.

Acceso peatonal a la estación del Metro

- Establecer una conexión subterránea desde la estación del Metro en la Av. Naciones Unidas hasta la Av. Amazonas y esta sirva a su vez para proyectos futuros como la **PLATAFORMA GUBERNAMENTAL CENTRO NORTE IÑAQUITO**.

Ubicación de la PLATAFORMA GUBERNAMENTAL CENTRO NORTE IÑAQUITO

NORTE: Calles Pereira y Villalengua.

SUR: Calle Unión Nacional de Periodista.

OESTE: Avenida Amazonas.

ESTE: Calle Japón.

11 JUSTIFICACIÓN DEL NÚMERO DE ESTACIONAMIENTOS PROPUESTOS

La cantidad de estacionamientos propuestos están ajustados a requerimientos institucionales.

12 CONCLUSIONES

- Para el complejo JUDICATURA NORTE se recomienda el ingreso y salida por la calle CALLE ALFONSO PEREIRA y CALLE JUAN JOSE VILLALENGUA respectivamente. En la situación Actual, los niveles de servicio de la Av. Amazonas y Pereira es C en el acceso, sin embargo en el Acceso de la Pereira es F debiendo verificar el control de tránsito de agentes para mejor la circulación vehicular. A futuro (año 2020, 2025) los niveles de servicio cambian sustancialmente mostrando congestión vehicular en la Av. Amazonas; la Ciudad de Quito deberá tener en consideración un plan no solo para la zona del COMPLEJO JUDICICATURA NORTE QUITO sino para toda la ciudad; Es importante que se considere una simulación macroscópica, mesoscopica, y microscópica.

- Los niveles de servicio pueden actualizarse para mejorar el flujo vehicular a futuro siempre y cuando se ejecute el Metro de Quito y este permita a los usuarios de la zona del Complejo de la Judicatura Norte y otros proyectos del Gobierno en desarrollo como la PLATAFORMA GUBERNAMENTAL utilizar este transporte Público masivo, sin embargo es complicado que usuarios que viajan en transporte privado lo dejen para usar transporte masivo; en la zona a futuro se puede crear un cordón de tarifado – Congestion Pricing- (el cordón puede ser imaginario y controlado con RFID) una ventaja del RFID es que podrían calcular la matriz origen destino por horas o cada 15 minutos en tiempo real, esto permitiría modelar la ciudad con simuladores como Vissim/Visum de PTV Group, ampliamente utilizado en los Estados Unidos de Norteamérica.

- Es importante tener en cuenta que el 39.65% de los funcionarios llegan en vehículo particular a la instalación de la JUDICATURA en la actualidad, sin embargo con el transporte institucional que será usado por el 70% de los funcionarios, y el otro 30% en vehículo particulares; para los 652 funcionarios del Complejo Judicial Sur se espera en promedio arriben en vehículo particular un número de 259 vehículos, igual cantidad de parqueos en la zona que serán ocupados.

13 ANEXOS

13.1 Zonificación de la ciudad de Quito. Generadores importantes de viaje.

Los generadores de viaje tienen relación con el equipamiento urbano, entendiéndose como equipamiento, el conjunto de instalaciones que en una ciudad responden a las necesidades de su comunidad. En este sentido responden a necesidades como: educación, salud, alimentación, organización, congregación, recreación y esparcimiento, entre otras.

A continuación se presenta en la Tabla 5 GENERADORES DE VIAJE, SEGÚN ZONAS DE TRANSPORTE más relevantes según zonas de transporte.

Zona	Detalle De Zona	Generadores De Viaje
1	Cotocollao, El Condado	Biblioteca Aurelio Espinoza, Centro Cultural Marqueza De Solanda, Condado Shopping
2	Cochapamba, Concepción	C.C El Bosque , Teleférico, C.C Aeropuerto, Aeropuerto
3	Rumipamba	Quito & Golf Club
4*	Belisario Quevedo, Iñaquito	Parque La Isla, C.C América, Seminario Mayor, Sheraton, Parque Náutico, Jardín Botánico, Parque La Carolina, C.C. Naciones Unidas, CCI, Carcol, Quicentro, Estadio Olímpico Atahualpa
5	Centro Histórico, Chimbacalle, Itchimbía, La Libertad, Mariscal Sucre, San Juan	Panecillo, Plaza Grande, San Francisco, Museo Temático, Estación De Ferrocarriles, Teatro México, Centro Cultura Itchimbía , Observatorio Astronómico, Antiguo Terminal Terrestre Cumandá, terminal de transferencias
6	Chilibulo	Mirador De Longui, Cárcel N.-2 , Colegio Alejandro Cárdenas, Hospital del Sur

Zona	Detalle De Zona	Generadores De Viaje
7	La Magdalena	Ministerio De Defensa, Colegio Abdón Calderón
8	La Ferroviaria, La Mena, San Bartolo	Estación Villa Flora, El Camal, C.C. El Recreo, Colegio Nacional Quito
9	Solanda	Mercado Mayorista, Parque Clemente Ballen, Registro Civil del Sur
10	Chillogallo	Estadio Sociedad Deportiva Aucas, El Caballo, Fundeporte
11	La Ecuatoriana, Quitumbe	Terminal Terrestre Quitumbe, Zona Industrial, Estación Moran Valverde, Hospital Padre Carollo, Patio de Retención Vehicular las Cuadras.
12	Guamaní, Turubamba	Planta Procesadora De Alimento, Petrocomercial Beaterio
13	Carcelén, Comité del Pueblo, Ponceano	Mirador Mitad Del Mundo, Estadio Liga Deportiva Universitaria
14	Kennedy, Inca	Cárcel De Mujeres, Solca, Nueva Embajada Americana, Colegio Aeronautico, Parque la Luz, Hospital SOLCA, Emabajada Americana
15	Jipijapa	Cementerio Del Batan, Parque El Heraldo, Dispensario Del IESS, Estación De Transferencia Rio Coca, Estadio Olímpico Atahualpa
16	Puengasí	C.C. Cumbayá, Planta De Tratamiento De Agua Potable
17	La Argelia	Cuartel Eplicaclima, El Mirador Bajo

Tabla 5 GENERADORES DE VIAJE, SEGÚN ZONAS DE TRANSPORTE

* Complejo Judicial Norte

Usos del suelo.

Los usos de suelo requieren de una interpretación desde la economía urbana pues son las actividades productivas las que generan puestos de trabajo y esto ofrece oportunidades de empleo que atraen población al área de estudio. La población localizada a su vez demanda suelos y espacios por localizarse, vale decir un stock edificado, si estos espacios existen dentro de la ciudad son ocupados por viviendas, servicios y empresas, si no existen, se produce una presión por localizarse sea al interior de la ciudad mediante el aumento de la densidad edificada, o una expansión hacia la periferia.

En la Tabla 6 TIPOS DE SUELO PARA LA CIUDAD DE QUITO, SEGÚN ZONAS DE TRANSPORTE se muestra la agrupación de la ciudad de Quito en las 17 zonas para el estudio, con sus respetivos usos de suelo.

Zona	Detalle De Zona	Uso De Suelo
1	Cotocollao, El Condado	Zona de servicio, zona residencial, zona urbanizable
2	Cochapamba, Concepción	Zona de servicio, zona comercial, zona residencial media
3	Rumipamba	Zona residencial media alta, zona comercial
4	Belisario Quevedo, Iñaquito	Zona comercial, zona residencial
5	Centro Histórico, Chimbacalle, Itchimbía, La Libertad, Mariscal Sucre, San Juan	Zona cultural, zona residencial, zona comercial
6	Chilibulo	Zona residencial mixta baja,
7	La Magdalena	Zona residencial media baja

Zona	Detalle De Zona	Uso De Suelo
8	La Ferroviaria, La Mena, San Bartolo	Zona residencial media baja, zona residencial mixta baja
9	Solanda	Zona residencial mixta, zona comercial
10	Chillogallo	Zona residencial media
11	La Ecuatoriana, Quitumbe	Zona residencial media
12	Guamaní, Turubamba	Zona residencial media baja
13	Carcelén, Comité del Pueblo, Ponceano	Zona residencial mixta, zona residencial media
14	Kennedy, Inca	Zona residencial media, zona comercial
15	Jipijapa	Zona residencial mixta, zona comercial
16	Puengasí	Zona no urbanizable, zona residencial media baja
17	La Argelia	Zona residencial media

Tabla 6 TIPOS DE SUELO PARA LA CIUDAD DE QUITO, SEGÚN ZONAS DE TRANSPORTE

Fuente: Consultora Vera & Asociados

13.2 Encuesta a funcionarios de la Judicatura

FORMULARIO

INSTRUCCION: NO NECESITA IDENTIFICARSE.

SITIO DE TRABAJO – SELECCIONAR - **NORTE** X **SUR**	**GENERO:** MASCULINO X FEMENIO
EDAD EDAD 37	**HORARIO LABORAL** HORA DE INGRESO: 07:00
TIENE PARQUEO VEHICULAR DENTRO DE LA INSTITUCION: SI X NO	HORA DE SALIDA: 20:00

COMO LLEGA A SU TRABAJO EN UN DIA CUALQUIERA DE LA SEMANA – POR FAVOR PONGA UNA "X" EN EL RECUADRO INFERIOR

VEHICULO PROPIO	TAXI	LO PASAN DEJANDO POR EL TRABAJO	BUS	TROLEBUS	BICICLETA	CAMINANDO
X						

COMO SALE DE SU TRABAJO EN UN DIA CUALQUIERA DE LA SEMANA – POR FAVOR PONGA UNA "X" EN EL RECUADRO INFERIOR

VEHICULO PROPIO	TAXI	LO PASAN RECOGIENDO POR EL TRABAJO	BUS	TROLEBUS	BICICLETA	CAMINANDO
X						

ESCRIBA SU DIRECCION: - POR FAVOR SOLO LAS VIAS PRINCIPALES, Y LA CIUDADELA O REFERENCIA; NO NECESITA INDICAR NUMERO DE VILLA NI MANZANA.

CALLE PRINCIPAL: NACIONES UNIDAS
CALLE SECUNDARIA: LOS SHIRYS
CIUDADELA O REFERENCIA: PARQUE LA CAROLINA

COMENTARIOS SOBRE PARQUEOS O TRÁFICO EN LA ZONA DE SU TRABAJO:

UNA CICLOVIA ES NECESARIA. DEBERIAN MEJORAR LOS TIEMPOS EN SEMAFOROS PEATONALES.

Datos recolectados

Obs.	SITIO TRABAJO	EDAD	GENERO	TIENE PARQUEO	HORA INGRESO	HORA SALIDA
1	NORTE	29	F	NO	8:00:00 AM	17:00 PM
2	NORTE	30	M	NO	8:00:00 AM	17:00 PM
3	NORTE	30	M	NO	8:00:00 AM	17:00 PM
4	NORTE	31	M	NO	8:00:00 AM	17:00 PM
5	NORTE	36	M	SI	8:00:00 AM	17:00 PM
6	SUR	62	M	NO	8:00:00 AM	17:00 PM
7	NORTE	60	M	NO	8:00:00 AM	17:00 PM
8	NORTE	30	F	NO	8:00:00 AM	17:00 PM
9	NORTE	34	F	NO	8:00:00 AM	17:00 PM
10	NORTE	42	M	NO	8:00:00 AM	17:00 PM

11	NORTE	45	F	NO	8:00:00 AM	17:00 PM
12	NORTE	55	M	NO	7:45:00 AM	17:00 PM
13	NORTE	45	M	NO	8:00:00 AM	17:00 PM
Obs.	**SITIO TRABAJO**	**EDAD**	**GENERO**	**TIENE PARQUEO**	**HORA INGRESO**	**HORA SALIDA**
14	NORTE	61	M	NO	8:00:00 AM	17:00 PM
15	NORTE	35	M	NO	8:00:00 AM	17:00 PM
16	NORTE	34	M	NO	8:00:00 AM	17:00 PM
17	NORTE	61	M	NO	8:00:00 AM	17:00 PM
18	NORTE	31	F	NO	8:00:00 AM	17:00 PM
19	NORTE	35	M	NO	8:00:00 AM	17:00 PM
20	NORTE	36	M	NO	8:00:00 AM	17:00 PM
21	NORTE	33	M	NO	8:00:00 AM	17:00 PM

22	NORTE	28	M	NO	8:00:00 AM	17:00 PM
23	NORTE	62	M	NO	8:00:00 AM	17:00 PM
24	SUR	27	M	NO	8:00:00 AM	17:00 PM
25	NORTE	34	F	NO	8:00:00 AM	17:00 PM
26	NORTE	25	M	NO	8:00:00 AM	17:00 PM
Obs.	**SITIO TRABAJO**	**EDAD**	**GENERO**	**TIENE PARQUEO**	**HORA INGRESO**	**HORA SALIDA**
27	NORTE	30	F	NO	8:00:00 AM	17:00 PM
28	SUR	30	M	NO	8:00:00 AM	17:00 PM
29	NORTE	24	F	NO	8:00:00 AM	17:00 PM
30	NORTE	54	M	NO	8:00:00 AM	17:00 PM
31	NORTE	34	M	NO	8:00:00 AM	17:00 PM
32	NORTE	26	F	NO	8:00:00 AM	17:00 PM

33	NORTE	31	M	NO	8:00:00 AM	17:00 PM
34	NORTE	37	M	NO	8:00:00 AM	17:00 PM
35	NORTE	27	M	NO	8:00:00 AM	17:00 PM
36	NORTE	40	M	NO	8:00:00 AM	17:00 PM
37	NORTE	33	M	NO	8:00:00 AM	17:00 PM
38	NORTE	30	F	NO	8:00:00 AM	17:00 PM
39	SUR	28	M	NO	8:00:00 AM	17:00 PM
Obs.	**SITIO TRABAJO**	**EDAD**	**GENERO**	**TIENE PARQUEO**	**HORA INGRESO**	**HORA SALIDA**
40	NORTE	33	F	NO	8:00:00 AM	17:00 PM

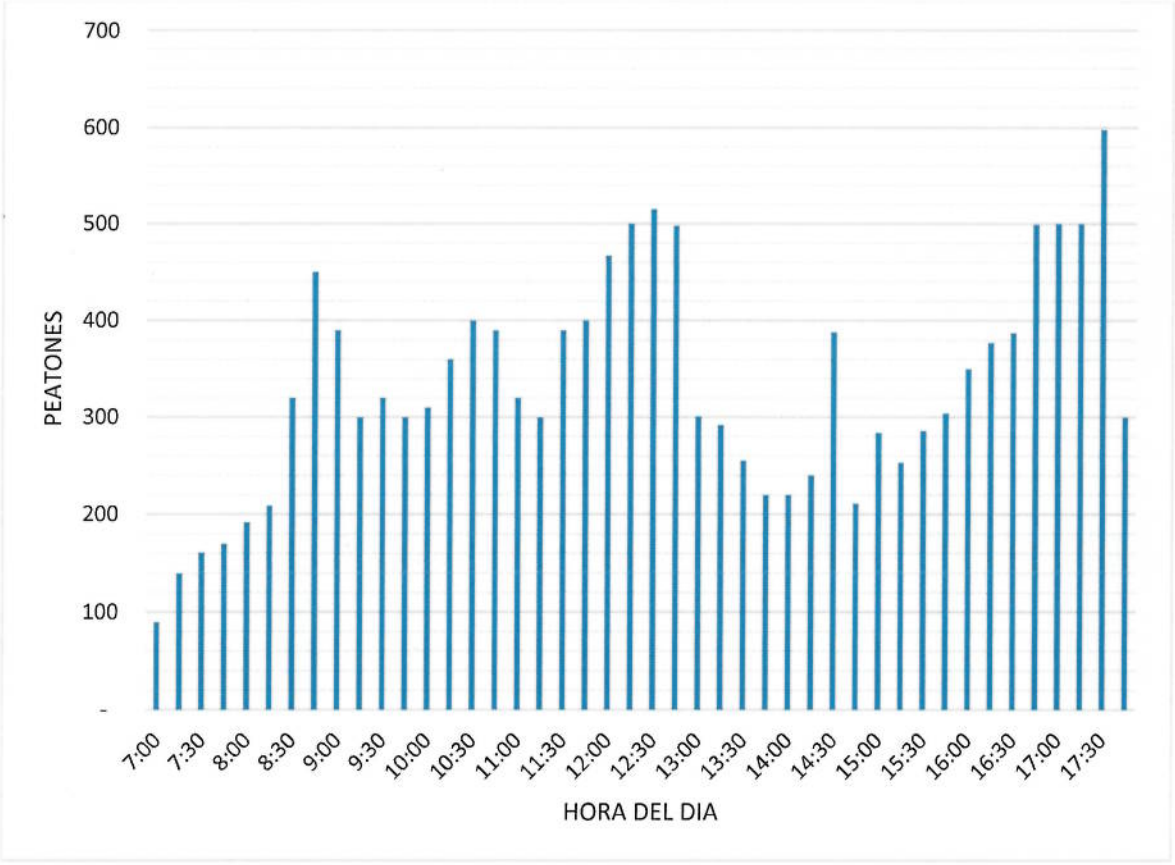
Datos de cómo llegan los funcionarios a las instalaciones de Judicatura

OBS	COMO LLEGA A SU TRABAJO	COMO SALE DE SU TRABAJO
1	LO PASAN DEJANDO	LO PASAN RECOGIENDO
2	TROLEBUS	TROLEBUS
3	VEHICULO PROPIO	VEHICULO PROPIO
4	BUS	BUS
5	VEHICULO PROPIO	VEHICULO PROPIO
6	VEHICULO PROPIO	VEHICULO PROPIO
7	CAMINA	BUS
8	VEHICULO PROPIO	VEHICULO PROPIO
9	BUS	BUS
10	BUS	BUS
11	LO PASAN DEJANDO	BUS
12	BUS	BUS
13	BUS	BUS
14	VEHICULO PROPIO	VEHICULO PROPIO
15	VEHICULO PROPIO	VEHICULO PROPIO

16	BUS	BUS
17	VEHICULO PROPIO	VEHICULO PROPIO
18	BUS	BUS
19	LO PASAN DEJANDO	TROLEBUS
20	VEHICULO PROPIO	VEHICULO PROPIO
21	LO PASAN DEJANDO	BUS
22	BUS	TROLEBUS
23	TROLEBUS	TROLEBUS
24	TROLEBUS	TROLEBUS
25	LO PASAN DEJANDO	LO PASAN RECOGIENDO
26	VEHICULO PROPIO	VEHICULO PROPIO
27	LO PASAN DEJANDO	LO PASAN RECOGIENDO
28	TROLEBUS	TROLEBUS
29	VEHICULO PROPIO	VEHICULO PROPIO
30	CAMINA	CAMINA
31	BUS	BUS
32	VEHICULO PROPIO	VEHICULO PROPIO

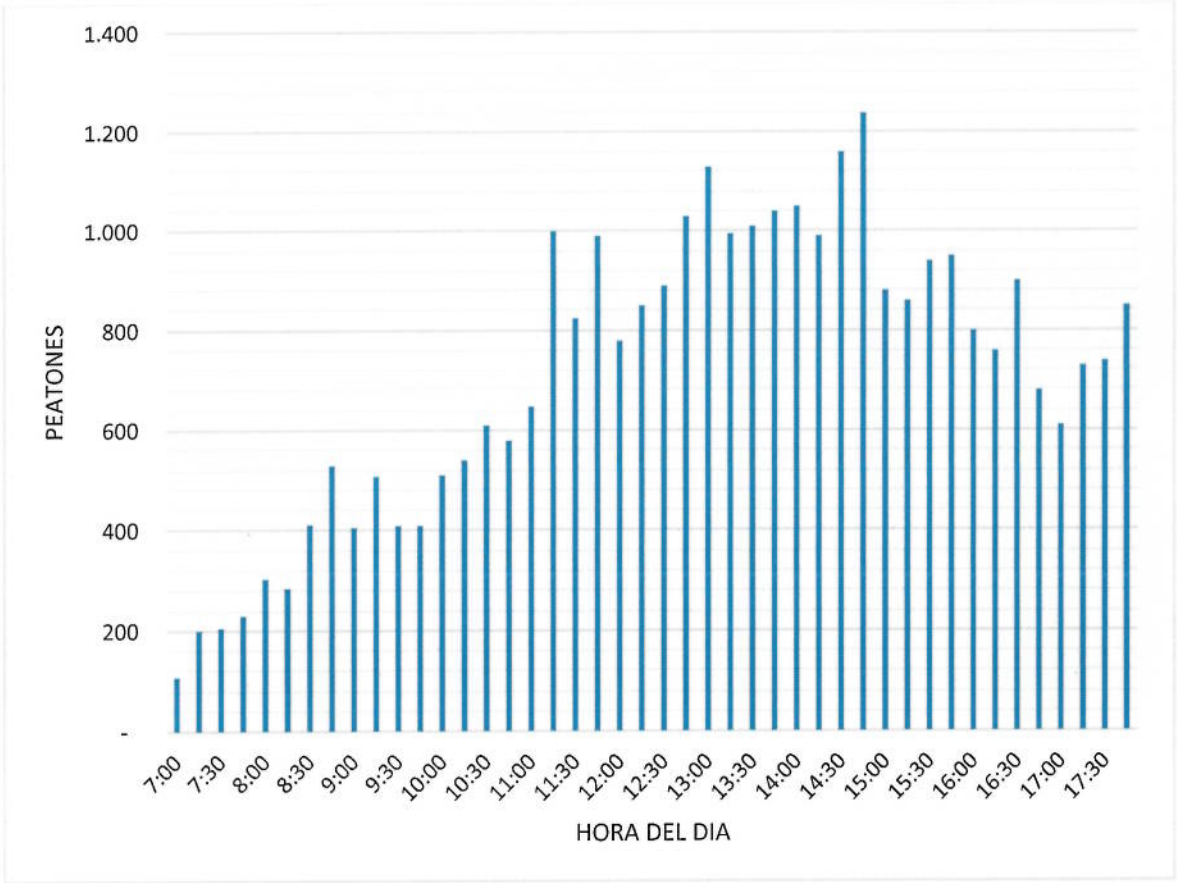
33	VEHICULO PROPIO	VEHICULO PROPIO
34	VEHICULO PROPIO	VEHICULO PROPIO
35	BUS	BUS
36	BUS	BUS
37	VEHICULO PROPIO	VEHICULO PROPIO
38	VEHICULO PROPIO	VEHICULO PROPIO
39	TROLEBUS	TROLEBUS
40	VEHICULO PROPIO	VEHICULO PROPIO

ALFONSO PEREIRA Y JORGE DROM PEATONES					
7:00	7:15	90	12:15	12:30	500
7:15	7:30	140	12:30	12:45	515
7:30	7:45	161	12:45	13:00	498
7:45	8:00	170	13:00	13:15	301
8:00	8:15	192	13:15	13:30	292
8:15	8:30	209	13:30	13:45	255
8:30	8:45	320	13:45	14:00	220
8:45	9:00	450	14:00	14:15	220
9:00	9:15	390	14:15	14:30	240
9:15	9:30	300	14:30	14:45	388
9:30	9:45	320	14:45	15:00	211
9:45	10:00	300	15:00	15:15	284
10:00	10:15	310	15:15	15:30	253
10:15	10:30	360	15:30	15:45	286
10:30	10:45	400	15:45	16:00	304
10:45	11:00	390	16:00	16:15	350
11:00	11:15	320	16:15	16:30	377
11:15	11:30	300	16:30	16:45	387
11:30	11:45	390	16:45	17:00	499
11:45	12:00	400	17:00	17:15	500
12:00	12:15	467	17:15	17:30	500
			17:30	17:45	598
			17:45	18:00	300



Distribución de Peatones, ALFONSO PEREIRA Y JORGE DROM

ALFONSO PEREIRA Y AMAZONAS – CONTEO DE PEATONES EN LA ZONAS					
PEATONES					
7:00	7:15	108	12:15	12:30	850
7:15	7:30	201	12:30	12:45	890
7:30	7:45	206	12:45	13:00	1,030
7:45	8:00	230	13:00	13:15	1,130
8:00	8:15	304	13:15	13:30	995
8:15	8:30	285	13:30	13:45	1,010
8:30	8:45	412	13:45	14:00	1,040
8:45	9:00	529	14:00	14:15	1,050
9:00	9:15	406	14:15	14:30	990
9:15	9:30	508	14:30	14:45	1,160
9:30	9:45	410	14:45	15:00	1,239
9:45	10:00	410	15:00	15:15	880
10:00	10:15	510	15:15	15:30	860
10:15	10:30	540	15:30	15:45	940
10:30	10:45	610	15:45	16:00	950
10:45	11:00	580	16:00	16:15	800
11:00	11:15	648	16:15	16:30	760
11:15	11:30	1,000	16:30	16:45	900
11:30	11:45	825	16:45	17:00	680
11:45	12:00	990	17:00	17:15	610
12:00	12:15	780	17:15	17:30	730
			17:30	17:45	740
			17:45	18:00	850



Distribución de Peatones, ALFONSO PEREIRA Y AMAZONAS

13.3 IRM actualizado

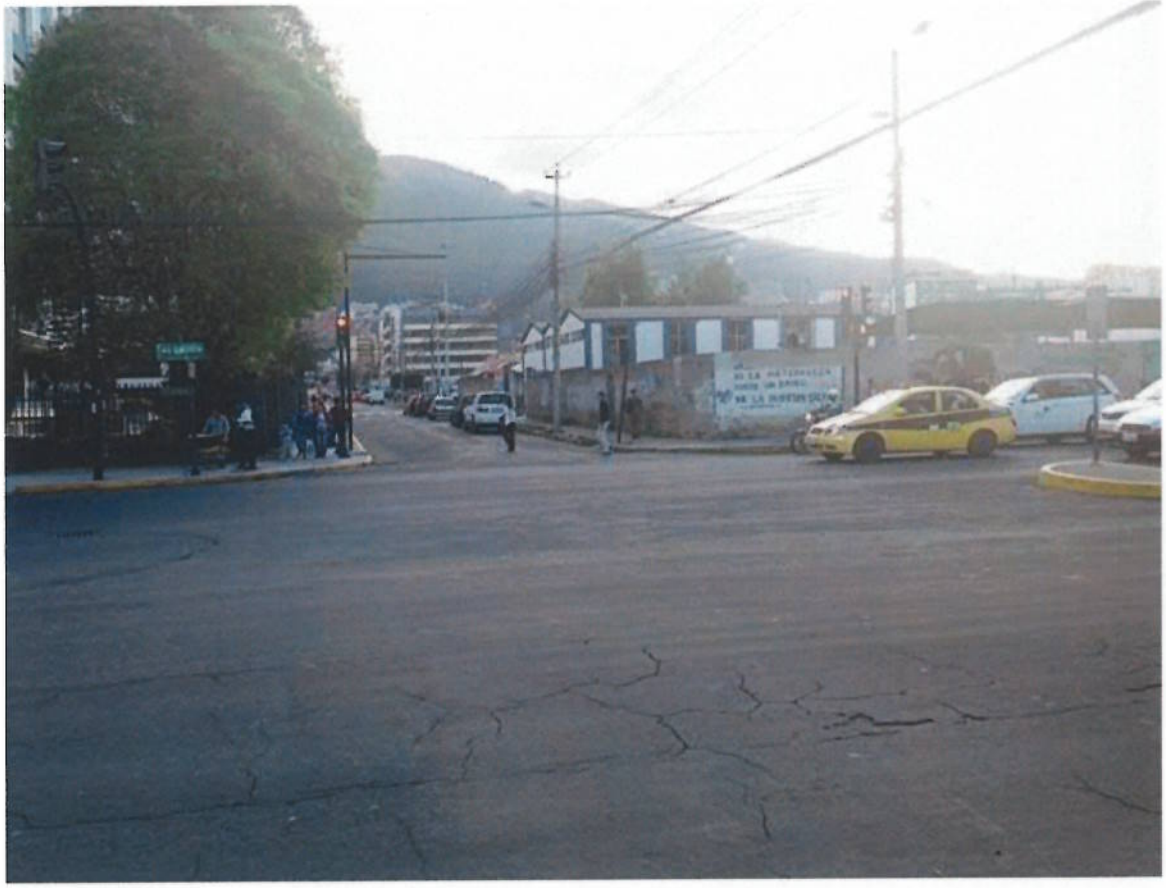
13.4 Planos arquitectónicos definitivos

13.5 Plano de medidas de mitigación y señalización y propuesta de reformas geométricas

13.6 Carta de compromiso de cumplimiento de las medidas de mitigación

13.7 Registro Fotográfico

Av. Rio Amazonas y Villalengua (vista de Sur a Norte).



Av. Rio Amazonas y Villalengua (vista de Oeste a Este).

Av. Rio Amazonas y Villalengua (vista de Norte a Sur).

Av. Rio Amazonas y Villalengua (vista de Norte a Sur).

Av. Rio Amazonas y Villalengua (vista de Sur a Norte).

Av. Rio Amazonas y Villalengua (vista de Sur a Norte).

Villalengua y Jorge Drom (oficinas PetroEcuador).

Villalengua y Av. Rio Amazonas (vista de Este a Oeste).

A. Pereira y Jorge Drom (oficinas vista de Oeste a Este).

Jorge Drom y A. Pereira (vista de Sur a Norte).

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Report File: C:\...\CON PROYECTO 2015.pdf

Scenario 4: Con Proyecto 2015
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.137	61.7	E
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	WBL	1.115	61.3	E
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	9.788	2,018.9	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.518	13.1	B
5	INGRESO EDIFICIO	Two-way stop	HCM2010	EBR	0.002	0.0	A
6	SALIDA EDIFICIO	Two-way stop	HCM2010	SBR	0.245	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value; for all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
#1: AV AMAZONAS Y PEREIRA

Control Type:	Signalized	Delay (sec / veh):	61.7
Analysis Method:	HCM2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.137

Intersection Setup

Name	AMAZONAS N-S			AMAZONAS N-S								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.00			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	AMAZONAS N-S			AMAZONAS N-S								
Base Volume Input [veh/h]	0	1678	76	0	2480	0	75	165	401	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.10	1.10	1.00	1.10	1.00	1.10	1.10	1.10	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1846	84	0	2728	0	83	182	441	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	462	21	0	682	0	21	46	110	0	0	0
Total Analysis Volume [veh/h]	0	1846	84	0	2728	0	83	182	441	0	0	0
Presence of On-Street Parking			no				no		no			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	941			941			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	0	0	1	0	0	2	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	60	0	0	60	0	0	40	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		no			no			no				
Maximum Recall		no			no			no				
Pedestrian Recall		no			no			no				
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	C	C	C	C	C	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	56	56	56	36	36	
g / C, Green / Cycle	0.56	0.56	0.56	0.36	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.40	0.39	0.60	0.16	0.54	
s, saturation flow rate [veh/h]	3192	1639	4567	1651	817	
c, Capacity [veh/h]	1788	918	2557	594	294	
d1, Uniform Delay [s]	16.22	15.94	22.00	24.40	32.00	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.54	4.45	38.75	2.41	242.02	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.72	0.70	1.07	0.45	1.50	
d, Delay for Lane Group [s/veh]	18.75	20.39	60.75	26.81	274.02	
Lane Group LOS	B	C	F	C	F	
Critical Lane Group	no	no	yes	no	yes	
50th-Percentile Queue Length [veh]	10.69	11.03	27.27	5.10	26.61	
50th-Percentile Queue Length [m]	81.49	84.01	207.77	38.88	202.79	
95th-Percentile Queue Length [veh]	16.06	16.47	37.73	8.81	43.18	
95th-Percentile Queue Length [m]	122.35	125.51	287.51	67.11	329.06	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	19.25	20.39	0.00	60.75	0.00	26.81	26.81	274.02	0.00	0.00	0.00
Movement LOS		B	C		F		C	C	F			
d_A, Approach Delay [s/veh]	19.30			60.75			181.23			0.00		
Approach LOS	B			E			F			A		
d_I, Intersection Delay [s/veh]	61.69											
Intersection LOS	E											
Intersection V/C	1.137											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#2: AV AMAZONAS Y JUAN VILLALENGUA

Control Type:	Signalized	Delay (sec / veh):	61.3
Analysis Method:	HCM2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.115

Intersection Setup

Name	AMAZONAS S-N				AMAZONAS N-S								
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.00	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28				48.28			48.00			48.28		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	yes				yes			yes			yes		

Volumes

Name	AMAZONAS S-N				AMAZONAS N-S								
Base Volume Input [veh/h]	130	56	1559	0	0	2480	124	0	0	0	607	157	155
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.10	1.10	1.10	1.00	1.00	1.10	1.10	1.00	1.00	1.00	1.10	1.10	1.10
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	143	62	1715	0	0	2728	136	0	0	0	668	173	171
Peak Hour Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	16	429	0	0	682	34	0	0	0	167	43	43
Total Analysis Volume [veh/h]	143	62	1715	0	0	2728	136	0	0	0	668	173	171
Presence of On-Street Parking	no						no				no		no
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Perm	Prote	Overl	Perm	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	1	0	0	1	0	0	0	0	0	2	0
Auxiliary Signal Groups			1										
Lead / Lag	-	Lag	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	0	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	40	60	0	0	60	0	0	0	0	0	40	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	0	10	0	0	0	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		no	no			no						no	
Maximum Recall		no	no			no						no	
Pedestrian Recall		no	no			no						no	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	L	C	C	C		C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00		2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	36	56	56	56		36	36
g / C, Green / Cycle	0.36	0.56	0.56	0.56		0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.22	0.38	0.60	0.58		0.52	0.25
s, saturation flow rate [veh/h]	929	4567	3192	1635		1293	1403
c, Capacity [veh/h]	195	2557	1788	916		537	505
d1, Uniform Delay [s]	45.84	15.50	22.00	22.00		34.15	27.14
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	79.20	1.42	42.15	41.38		124.33	7.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.05	0.67	1.07	1.04		1.24	0.68
d, Delay for Lane Group [s/veh]	125.04	16.92	64.15	63.38		158.48	34.39
Lane Group LOS	F	B	F	F		F	C
Critical Lane Group	no	no	yes	no		yes	no
50th-Percentile Queue Length [veh]	9.13	8.88	29.43	29.96		31.94	7.81
50th-Percentile Queue Length [m]	69.56	67.70	224.27	228.31		243.40	59.48
95th-Percentile Queue Length [veh]	14.53	13.77	40.42	40.30		47.14	12.39
95th-Percentile Queue Length [m]	110.70	104.95	308.02	307.08		359.19	94.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	125.0	125.0	16.92	0.00	0.00	63.92	63.38	0.00	0.00	0.00	158.48	34.39	34.39
Movement LOS	F	F	B			F	E				F	C	C
d_A, Approach Delay [s/veh]	28.47				63.89			0.00			116.30		
Approach LOS	C				E			A			F		
d_I, Intersection Delay [s/veh]	61.31												
Intersection LOS	E												
Intersection V/C	1.115												

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#3: JORGE DROM Y ALFONSO PEREIRA

Control Type:	Two-way stop	Delay (sec / veh):	2,018.9
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	9.788

Intersection Setup

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Base Volume Input [veh/h]	0	0	0	241	18	0	0	282	38	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.10	1.10	1.00	1.00	1.10	1.10	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	89	0	0	0	89	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	354	20	0	0	399	42	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	89	5	0	0	100	11	0	0	0
Total Analysis Volume [veh/h]	0	0	0	354	20	0	0	399	42	0	0	0
Pedestrian Volume [ped/h]	0			663			663			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			no	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			no	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.22	0.00	0.00	0.00	9.79	0.25	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.84	0.00	0.00	0.00	2018.90	1752.85	0.00	0.00	0.00
Movement LOS				A	A			F	F			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.83	0.42	0.00	0.00	25.31	24.93	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	6.34	3.17	0.00	0.00	192.85	189.97	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.42			1993.56			0.00		
Approach LOS	A			A			F			A		
d_I, Intersection Delay [s/veh]	1082.13											
Intersection LOS	F											

Intersection Level Of Service Report
#4: JORGE DROM Y JUAN VILLALENGUA

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

Intersection Setup

Name				JORGE DROM N-S								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name				JORGE DROM N-S								
Base Volume Input [veh/h]	0	0	0	0	50	72	0	0	0	107	235	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.10	1.10	1.00	1.00	1.00	1.10	1.10	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	133	133	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	55	79	0	0	0	251	392	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	14	20	0	0	0	63	98	0
Total Analysis Volume [veh/h]	0	0	0	0	55	79	0	0	0	251	392	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				no
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.52	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.56	13.05	0.00
Movement LOS					A	A				B	B	
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76	1.95	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.40	14.82	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			0.00			12.47		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	10.32											
Intersection LOS	B											

Intersection Level Of Service Report
#5: INGRESO EDIFICIO

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.00		48.00		48.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	no		no		yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	178	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	178	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	45	0	0
Total Analysis Volume [veh/h]	0	0	0	178	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00
Movement LOS			A	A		
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
#6: SALIDA EDIFICIO

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.245

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.00		48.00		48.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	no		no		no	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	266	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	266	0	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	67	0	0	0	0
Total Analysis Volume [veh/h]	0	266	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	no		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.25	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.78	0.00	0.00	0.00	0.00
Movement LOS		A			A	
95th-Percentile Queue Length [veh]	0.00	0.42	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	3.18	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.78		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.78					
Intersection LOS	A					

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Scenario 4: Con Proyecto 2015
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Turning Movement Volume: Summary

ID	Intersection Name	Northbound		Southbound	Eastbound			Total Volume
		Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	1846	84	2728	83	182	441	5364

ID	Intersection Name	Northbound			Southbound		Westbound			Total Volume
		U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	143	62	1715	2728	136	668	173	171	5796

ID	Intersection Name	Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	354	20	399	42	815

ID	Intersection Name	Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	55	79	251	392	777

ID	Intersection Name	Eastbound		Total Volume
		Thru	Right	
5	INGRESO EDIFICIO	0	178	178

ID	Intersection Name	Southbound	Westbound	Total Volume
		Right	Thru	
6	SALIDA EDIFICIO	266	0	266

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Scenario 4: Con Proyecto 2015
1/15/2015

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound	Eastbound			Total Volume
			Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	Final Base	1678	76	2480	75	165	401	4875
		Growth Rate	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**1846**	**84**	**2728**	**83**	**182**	**441**	**5364**

ID	Intersection Name	Volume Type	Northbound			Southbound		Westbound			Total Volume
			U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	Final Base	130	56	1559	2480	124	607	157	155	5268
		Growth Rate	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0
		Future Total	**143**	**62**	**1715**	**2728**	**136**	**668**	**173**	**171**	**5796**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	Final Base	241	18	282	38	579
		Growth Rate	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0
		Net New Trips	89	0	89	0	178
		Other	0	0	0	0	0
		Future Total	**354**	**20**	**399**	**42**	**815**

ID	Intersection Name	Volume Type	Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	Final Base	50	72	107	235	464
		Growth Rate	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	133	133	266
		Other	0	0	0	0	0
		Future Total	**55**	**79**	**251**	**392**	**777**

ID	Intersection Name	Volume Type	Eastbound		Total Volume
			Thru	Right	
5	INGRESO EDIFICIO	Final Base	0	0	0
		Growth Rate	1.00	1.00	-
		In Process	0	0	0
		Net New Trips	0	178	178
		Other	0	0	0
		Future Total	**0**	**178**	**178**

ID	Intersection Name	Volume Type	Southbound	Westbound	Total Volume
			Right	Thru	
6	SALIDA EDIFICIO	Final Base	0	0	0
		Growth Rate	1.00	1.00	-
		In Process	0	0	0
		Net New Trips	266	0	266
		Other	0	0	0
		Future Total	**266**	**0**	**266**

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Scenario 4: Con Proyecto 2015
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Fair Share Volumes

Intersection 1: AV AMAZONAS Y PEREIRA							
Zone ID: Name	Northbound		Southbound	Eastbound			Total
	Thru	Right	Thru	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	
Total Analysis Volume	1846	84	2728	83	182	441	

Intersection 2: AV AMAZONAS Y JUAN VILLALENGUA									
Zone ID: Name	Northbound			Southbound		Westbound			Total
	U-T	Left	Thru	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	
Total Analysis Volume	143	62	1715	2728	136	668	173	171	

Intersection 3: JORGE DROM Y ALFONSO PEREIRA					
Zone ID: Name	Southbound		Eastbound		Total
	Left	Thru	Thru	Right	
1: Zone	89	0	89	0	178
Total Volume	89	0	89	0	
Total Analysis Volume	354	20	399	42	

Intersection 4: JORGE DROM Y JUAN VILLALENGUA					
Zone ID: Name	Southbound		Westbound		Total
	Thru	Right	Left	Thru	
1: Zone	0	0	133	133	266
Total Volume	0	0	133	133	
Total Analysis Volume	55	79	251	392	

Intersection 5: INGRESO EDIFICIO			
Zone ID: Name	Eastbound		Total
	Thru	Right	
1: Zone	0	178	178
Total Volume	0	178	
Total Analysis Volume	0	178	

Intersection 6: SALIDA EDIFICIO			
Zone ID: Name	Southbound	Westbound	Total
	Right	Thru	
1: Zone	266	0	266
Total Volume	266	0	
Total Analysis Volume	266	0	

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Scenario 4: Con Proyecto 2015
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Fair Share % of Net New Site

Intersection 1: AV AMAZONAS Y PEREIRA							
Zone ID: Name	Northbound		Southbound	Eastbound			Total
	Thru	Right	Thru	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	NaN%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 2: AV AMAZONAS Y JUAN VILLALENGUA									
Zone ID: Name	Northbound			Southbound		Westbound			Total
	U-T	Left	Thru	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	NaN%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 3: JORGE DROM Y ALFONSO PEREIRA					
Zone ID: Name	Southbound		Eastbound		Total
	Left	Thru	Thru	Right	
1: Zone	100%	0	100%	0	100.00%
Total	100.00%	0.00%	100.00%	0.00%	

Intersection 4: JORGE DROM Y JUAN VILLALENGUA					
Zone ID: Name	Southbound		Westbound		Total
	Thru	Right	Left	Thru	
1: Zone	0	0	100%	100%	100.00%
Total	0.00%	0.00%	100.00%	100.00%	

Intersection 5: INGRESO EDIFICIO			
Zone ID: Name	Eastbound		Total
	Thru	Right	
1: Zone	0	100%	100.00%
Total	0.00%	100.00%	

Intersection 6: SALIDA EDIFICIO			
Zone ID: Name	Southbound	Westbound	Total
	Right	Thru	
1: Zone	100%	0	100.00%
Total	100.00%	0.00%	

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Scenario 4: Con Proyecto 2015
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Fair Share % of Total Analysis

Intersection 1: AV AMAZONAS Y PEREIRA							
Zone ID: Name	Northbound		Southbound	Eastbound			Total
	Thru	Right	Thru	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0.00%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 2: AV AMAZONAS Y JUAN VILLALENGUA									
Zone ID: Name	Northbound			Southbound		Westbound			Total
	U-T	Left	Thru	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0.00%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 3: JORGE DROM Y ALFONSO PEREIRA					
Zone ID: Name	Southbound		Eastbound		Total
	Left	Thru	Thru	Right	
1: Zone	20.09%	0	18.24%	0	4.70%
Total	20.09%	0.00%	18.24%	0.00%	

Intersection 4: JORGE DROM Y JUAN VILLALENGUA					
Zone ID: Name	Southbound		Westbound		Total
	Thru	Right	Left	Thru	
1: Zone	0	0	34.64%	25.33%	7.72%
Total	0.00%	0.00%	34.64%	25.33%	

Intersection 5: INGRESO EDIFICIO			
Zone ID: Name	Eastbound		Total
	Thru	Right	
1: Zone	0	50%	28.09%
Total	0.00%	50.00%	

Intersection 6: SALIDA EDIFICIO			
Zone ID: Name	Southbound	Westbound	Total
	Right	Thru	
1: Zone	50%	0	18.80%
Total	50.00%	0.00%	

Signal Warrants Report For Intersection #3: JORGE DROM Y ALFONSO PEREIRA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	W
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	W
1	374	441
2	359	423
3	352	415
4	299	353
5	284	335
6	254	300
7	236	278
8	224	265
9	180	212
10	168	198
11	168	198
12	161	190
13	146	172
14	135	159
15	135	159
16	131	154
17	75	88
18	41	49
19	37	44
20	15	18
21	11	13
22	11	13
23	7	9
24	7	9

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	374	2	441	No	No	No	Yes	No	No	No	No	Yes	Yes
2	2	359	2	423	No	No	No	Yes	No	No	No	No	Yes	Yes
3	2	352	2	415	No	No	No	Yes	No	No	No	No	Yes	No
4	2	299	2	353	No	No	No	No	No	No	No	No	Yes	No
5	2	284	2	335	No	No	No	No	No	No	No	No	Yes	No
6	2	254	2	300	No	No	No	No	No	No	No	No	No	No
7	2	236	2	278	No	No	No	No	No	No	No	No	No	No
8	2	224	2	265	No	No	No	No	No	No	No	No	No	No
9	2	180	2	212	No	No	No	No	No	No	No	No	No	No
10	2	168	2	198	No	No	No	No	No	No	No	No	No	No
11	2	168	2	198	No	No	No	No	No	No	No	No	No	No
12	2	161	2	190	No	No	No	No	No	No	No	No	No	No
13	2	146	2	172	No	No	No	No	No	No	No	No	No	No
14	2	135	2	159	No	No	No	No	No	No	No	No	No	No
15	2	135	2	159	No	No	No	No	No	No	No	No	No	No
16	2	131	2	154	No	No	No	No	No	No	No	No	No	No
17	2	75	2	88	No	No	No	No	No	No	No	No	No	No
18	2	41	2	49	No	No	No	No	No	No	No	No	No	No
19	2	37	2	44	No	No	No	No	No	No	No	No	No	No
20	2	15	2	18	No	No	No	No	No	No	No	No	No	No
21	2	11	2	13	No	No	No	No	No	No	No	No	No	No
22	2	11	2	13	No	No	No	No	No	No	No	No	No	No
23	2	7	2	9	No	No	No	No	No	No	No	No	No	No
24	2	7	2	9	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	3	0	0	0	0	5	2

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	1993.6
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	244:12
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	441
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	815
Number of Approaches on Intersection	2
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection #4: JORGE DROM Y JUAN VILLALENGUA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	E
1	134	643
2	129	617
3	126	604
4	107	514
5	102	489
6	91	437
7	84	405
8	80	386
9	64	309
10	60	289
11	60	289
12	58	276
13	52	251
14	48	231
15	48	231
16	47	225
17	27	129
18	15	71
19	13	64
20	5	26
21	4	19
22	4	19
23	3	13
24	3	13

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	134	2	643	No	No	No	No	No	No	No	No	Yes	Yes
2	2	129	2	617	No	No	No	No	No	No	No	No	Yes	No
3	2	126	2	604	No	No	No	No	No	No	No	No	Yes	No
4	2	107	2	514	No	No	No	No	No	No	No	No	No	No
5	2	102	2	489	No	No	No	No	No	No	No	No	No	No
6	2	91	2	437	No	No	No	No	No	No	No	No	No	No
7	2	84	2	405	No	No	No	No	No	No	No	No	No	No
8	2	80	2	386	No	No	No	No	No	No	No	No	No	No
9	2	64	2	309	No	No	No	No	No	No	No	No	No	No
10	2	60	2	289	No	No	No	No	No	No	No	No	No	No
11	2	60	2	289	No	No	No	No	No	No	No	No	No	No
12	2	58	2	276	No	No	No	No	No	No	No	No	No	No
13	2	52	2	251	No	No	No	No	No	No	No	No	No	No
14	2	48	2	231	No	No	No	No	No	No	No	No	No	No
15	2	48	2	231	No	No	No	No	No	No	No	No	No	No
16	2	47	2	225	No	No	No	No	No	No	No	No	No	No
17	2	27	2	129	No	No	No	No	No	No	No	No	No	No
18	2	15	2	71	No	No	No	No	No	No	No	No	No	No
19	2	13	2	64	No	No	No	No	No	No	No	No	No	No
20	2	5	2	26	No	No	No	No	No	No	No	No	No	No
21	2	4	2	19	No	No	No	No	No	No	No	No	No	No
22	2	4	2	19	No	No	No	No	No	No	No	No	No	No
23	2	3	2	13	No	No	No	No	No	No	No	No	No	No
24	2	3	2	13	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	3	1

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.5
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	2:13
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	643
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	777
Number of Approaches on Intersection	2
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection #6: SALIDA EDIFICIO

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E
Minor Approaches	N
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	E	N
1	0	266
2	0	255
3	0	250
4	0	213
5	0	202
6	0	181
7	0	168
8	0	160
9	0	128
10	0	120
11	0	120
12	0	114
13	0	104
14	0	96
15	0	96
16	0	93
17	0	53
18	0	29
19	0	27
20	0	11
21	0	8
22	0	8
23	0	5
24	0	5

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	0	2	266	No	No	No	No	No	No	No	No	No	No
2	2	0	2	255	No	No	No	No	No	No	No	No	No	No
3	2	0	2	250	No	No	No	No	No	No	No	No	No	No
4	2	0	2	213	No	No	No	No	No	No	No	No	No	No
5	2	0	2	202	No	No	No	No	No	No	No	No	No	No
6	2	0	2	181	No	No	No	No	No	No	No	No	No	No
7	2	0	2	168	No	No	No	No	No	No	No	No	No	No
8	2	0	2	160	No	No	No	No	No	No	No	No	No	No
9	2	0	2	128	No	No	No	No	No	No	No	No	No	No
10	2	0	2	120	No	No	No	No	No	No	No	No	No	No
11	2	0	2	120	No	No	No	No	No	No	No	No	No	No
12	2	0	2	114	No	No	No	No	No	No	No	No	No	No
13	2	0	2	104	No	No	No	No	No	No	No	No	No	No
14	2	0	2	96	No	No	No	No	No	No	No	No	No	No
15	2	0	2	96	No	No	No	No	No	No	No	No	No	No
16	2	0	2	93	No	No	No	No	No	No	No	No	No	No
17	2	0	2	53	No	No	No	No	No	No	No	No	No	No
18	2	0	2	29	No	No	No	No	No	No	No	No	No	No
19	2	0	2	27	No	No	No	No	No	No	No	No	No	No
20	2	0	2	11	No	No	No	No	No	No	No	No	No	No
21	2	0	2	8	No	No	No	No	No	No	No	No	No	No
22	2	0	2	8	No	No	No	No	No	No	No	No	No	No
23	2	0	2	5	No	No	No	No	No	No	No	No	No	No
24	2	0	2	5	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:38
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	266
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	266
Number of Approaches on Intersection	2
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

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Scenario 4: Con Proyecto 2015
1/15/2015

Trip generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total trips	% of Total Trip
1: Zone				1.000	444.000	40.00	60.00	178	266	444	100.00
					Added Trips Total			**178**	**266**	**444**	**100.00**

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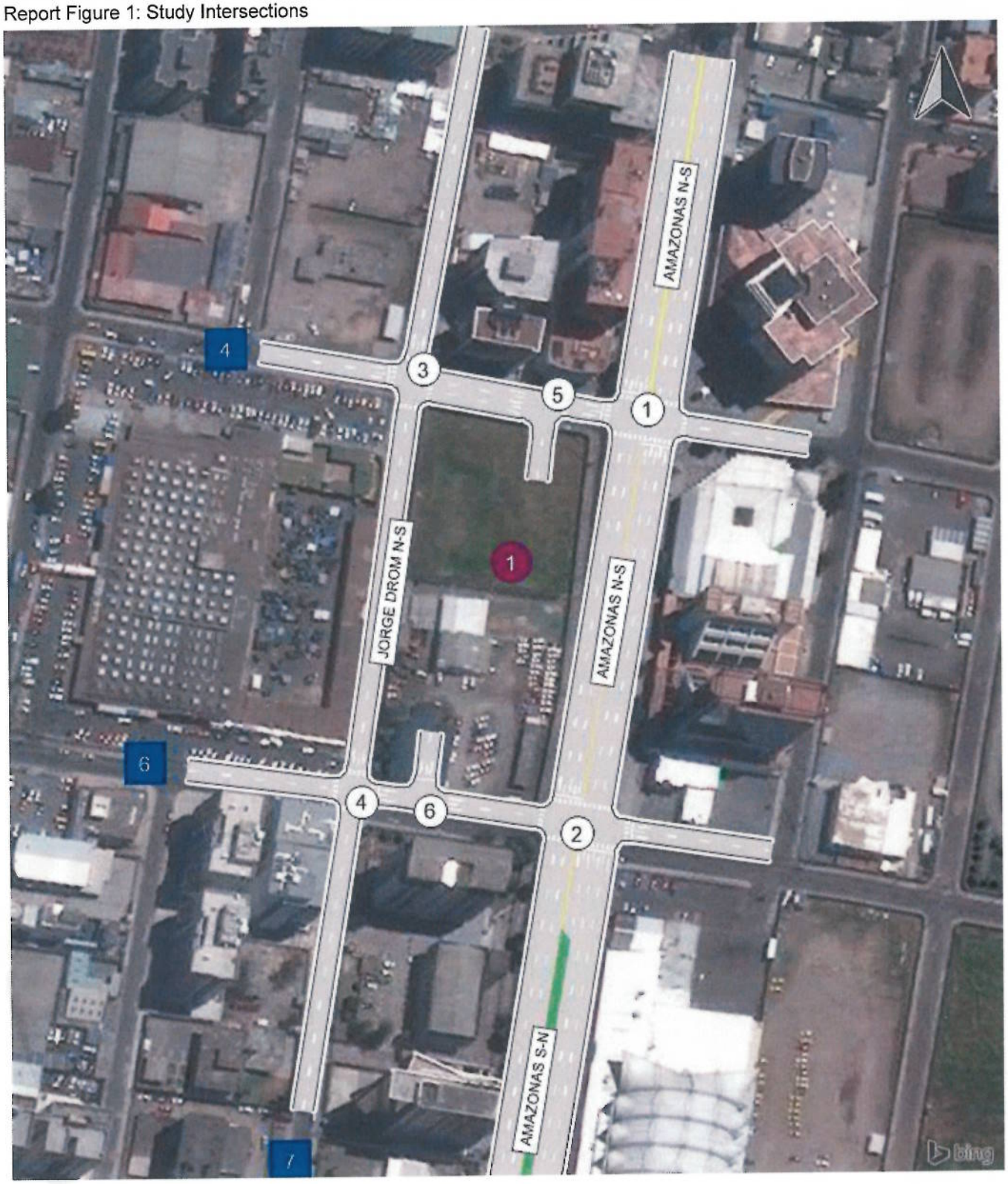
Scenario 4: Con Proyecto 2015
1/15/2015

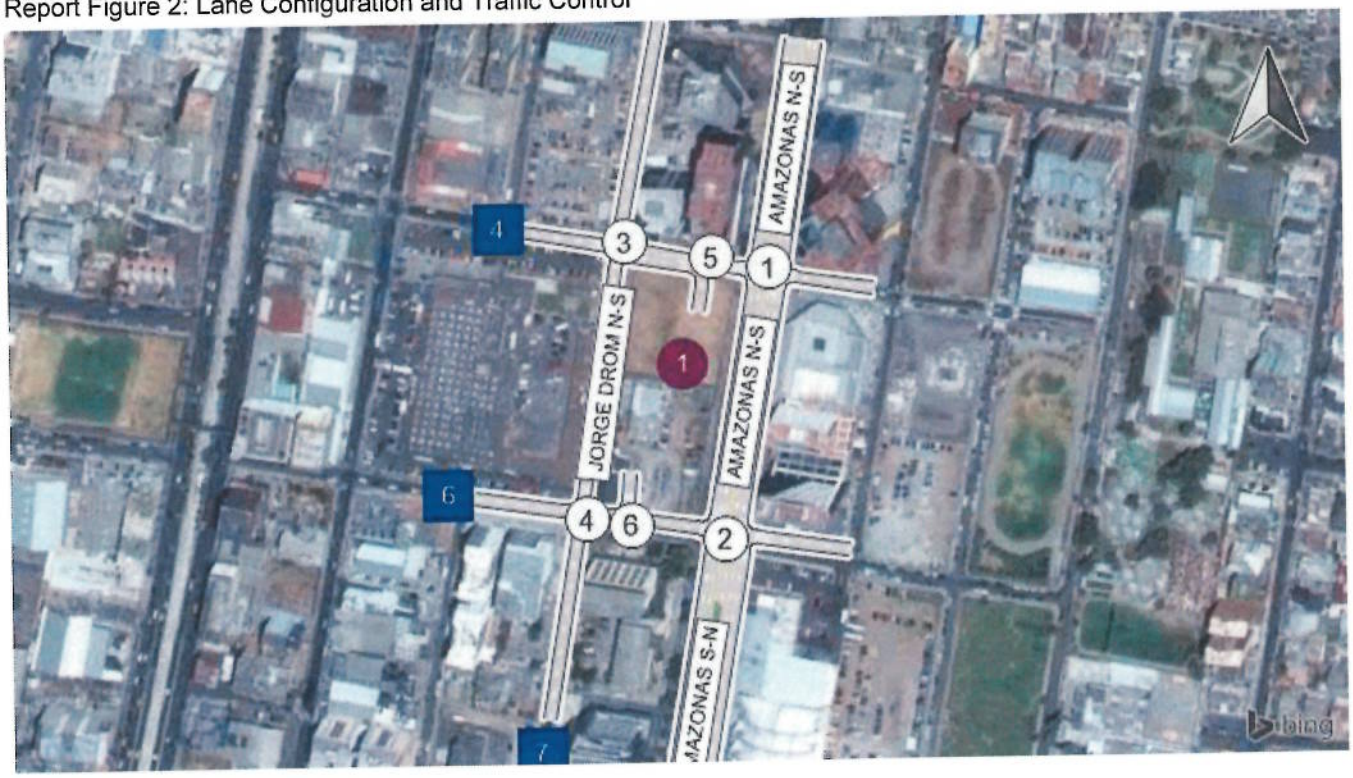
Trip distribution summary

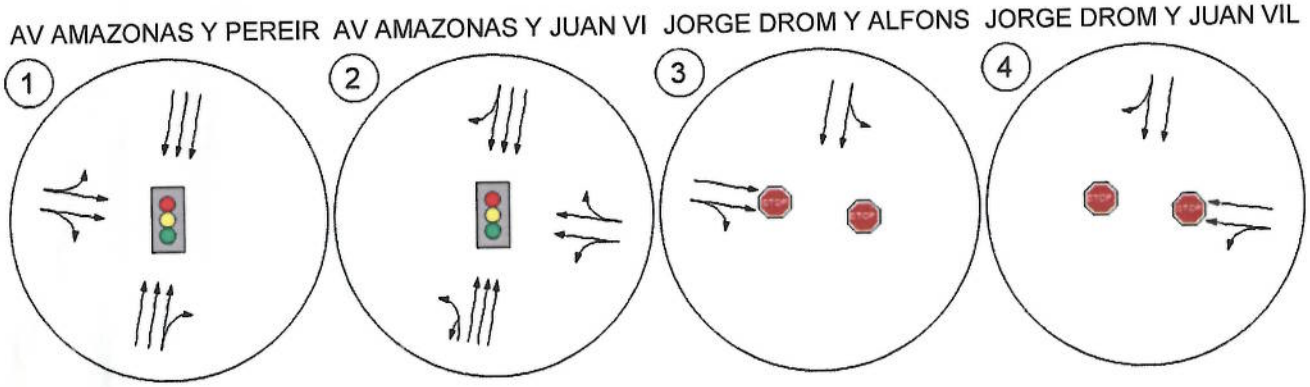
Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
4: Gate	50.00	89	0.00	0
5: Gate	50.00	89	0.00	0
6: Gate	0.00	0	50.00	133
7: Gate	0.00	0	50.00	133
Total	**100.00**	**178**	**100.00**	**266**

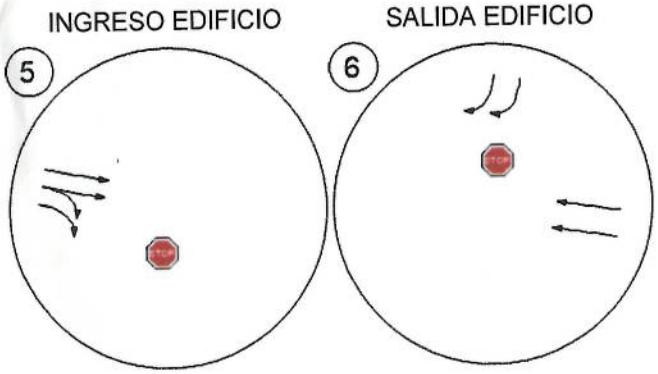
Report Figure 1: Study Intersections



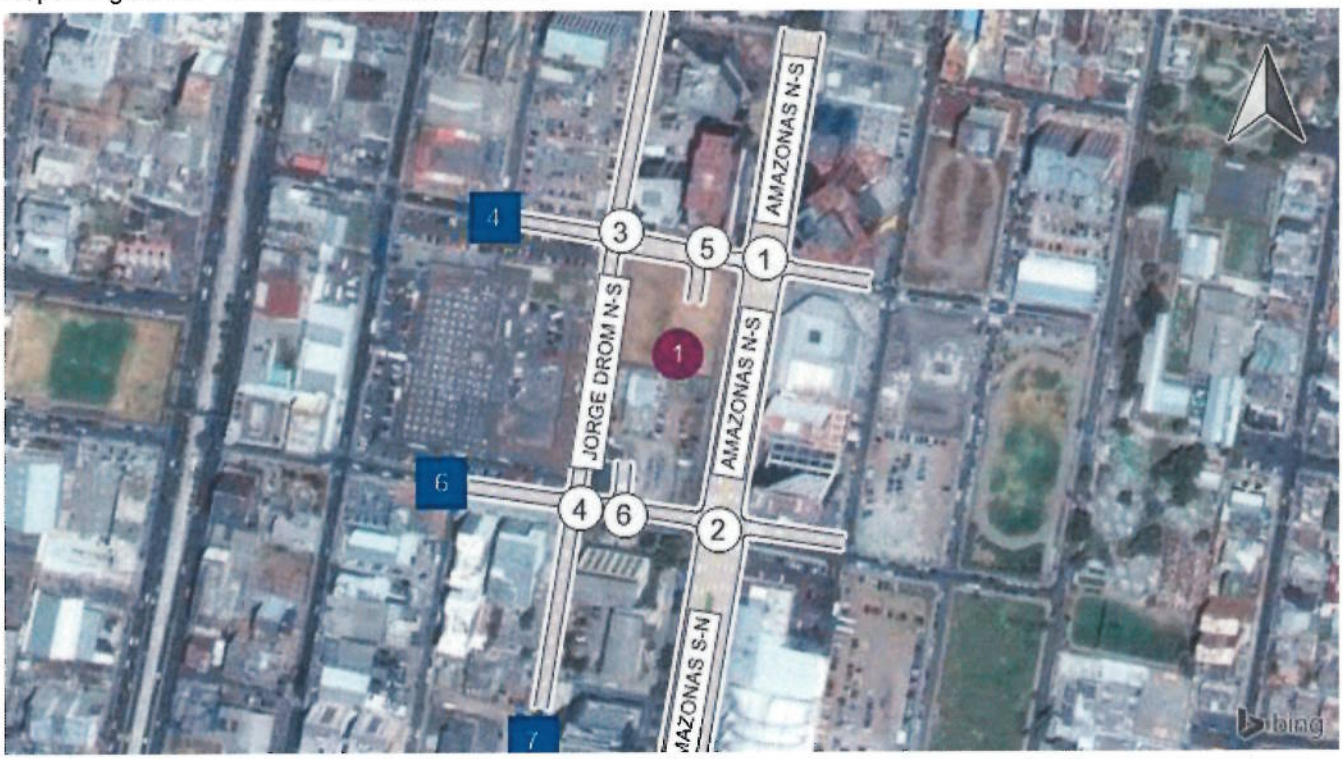
Report Figure 2: Lane Configuration and Traffic Control

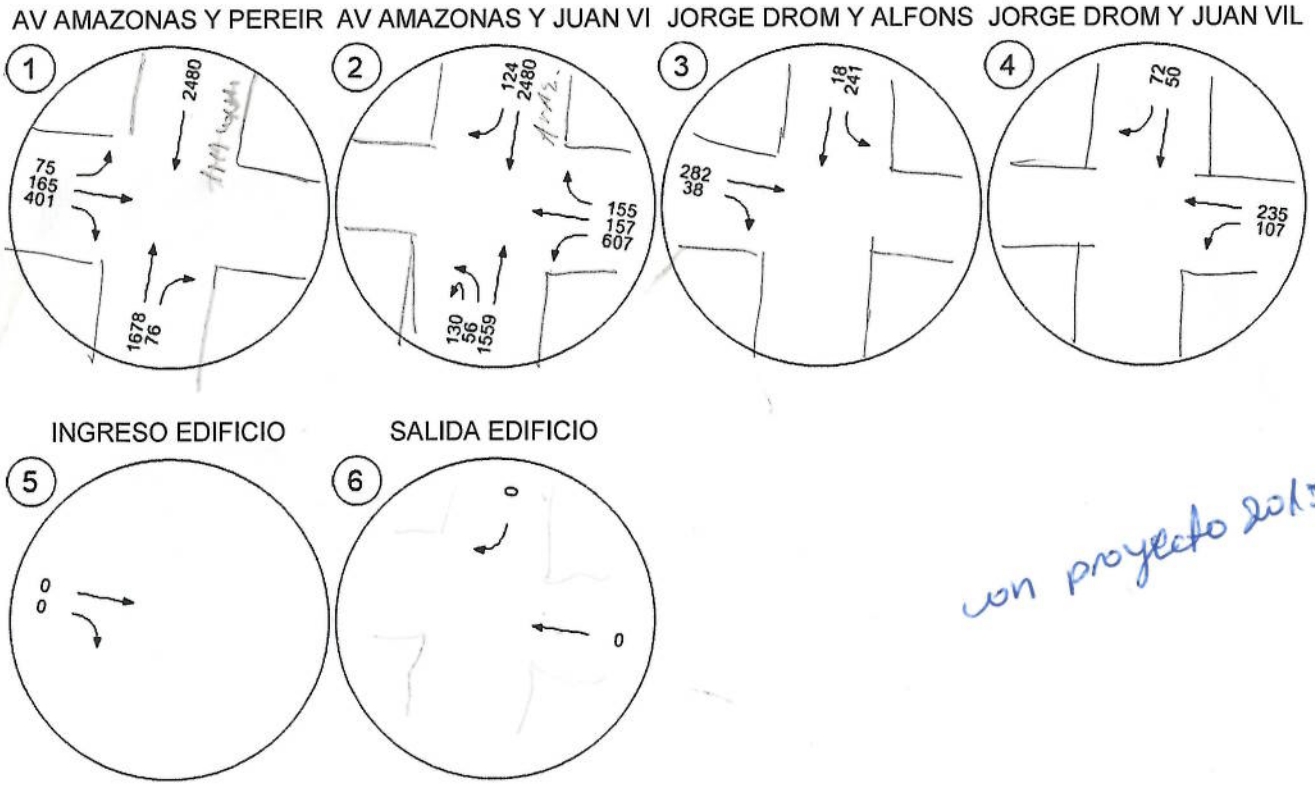






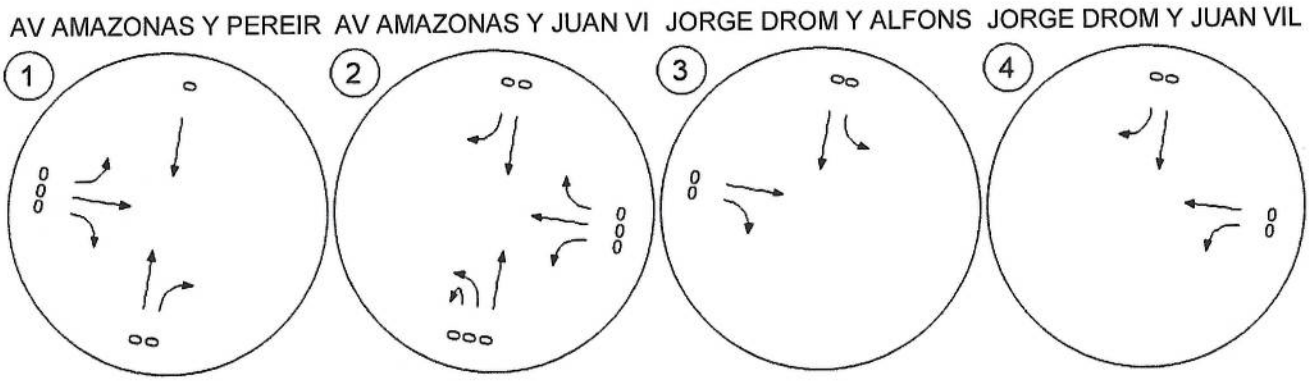
Report Figure 3a: Traffic Volume - Base Volume

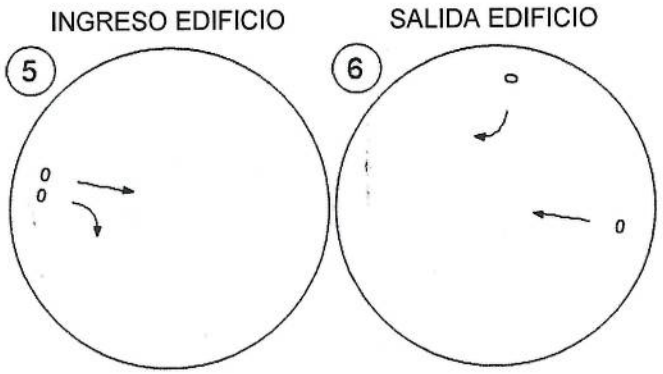




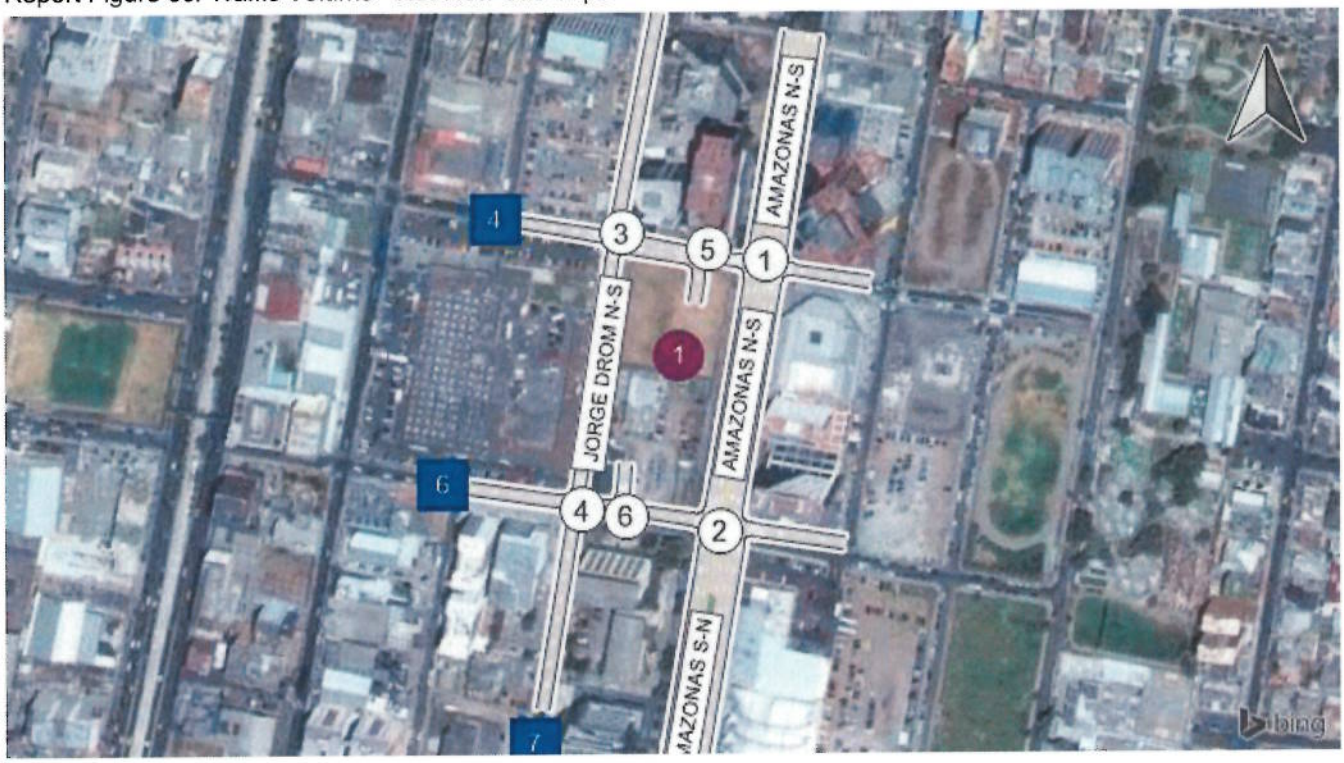
con proyecto 2015

Report Figure 3b: Traffic Volume - In-Process Volume

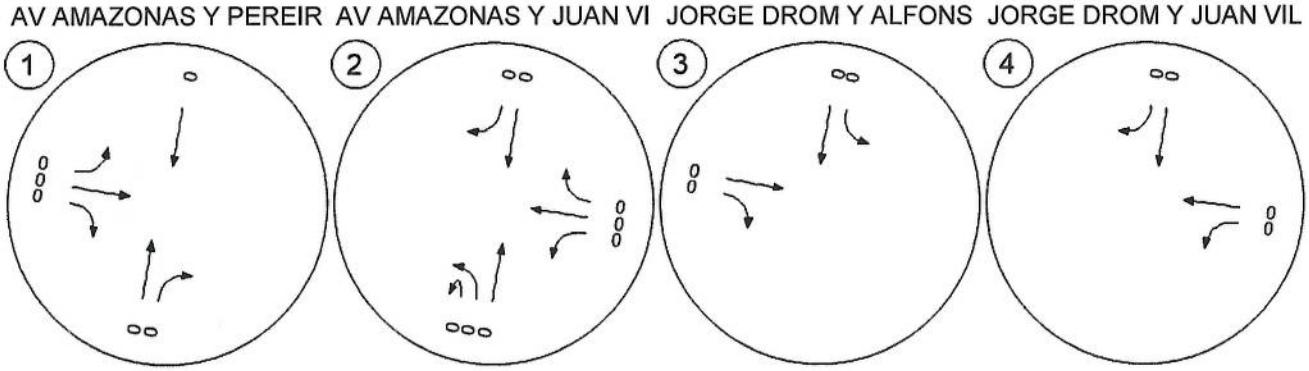


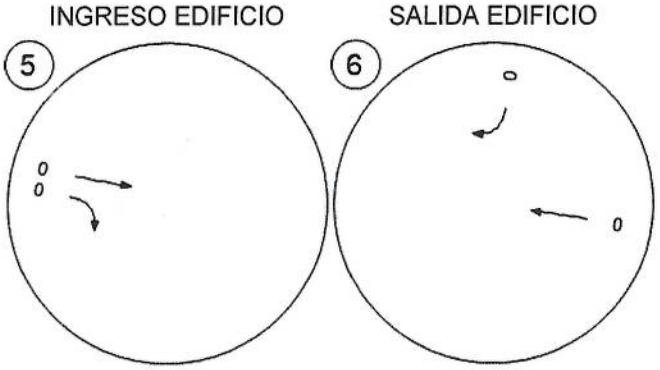


Report Figure 3c: Traffic Volume - Net New Site Trips

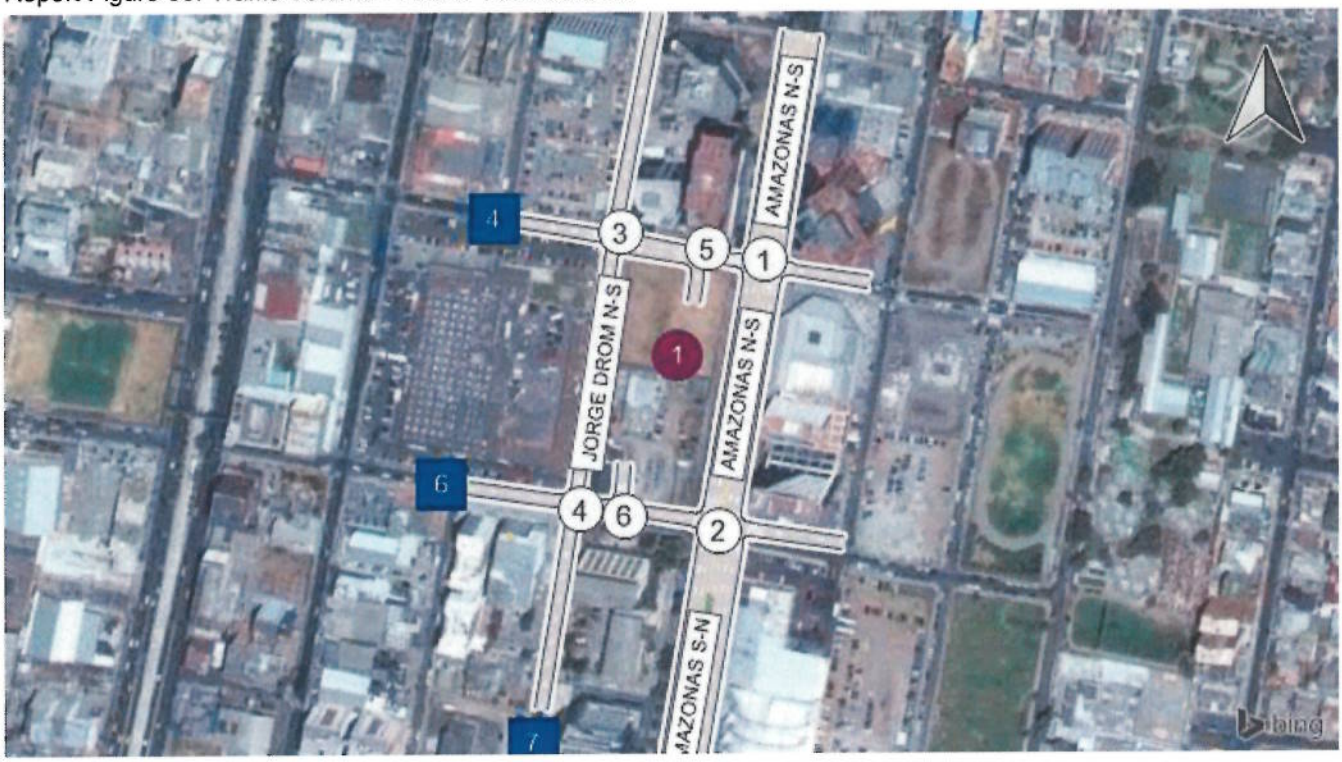


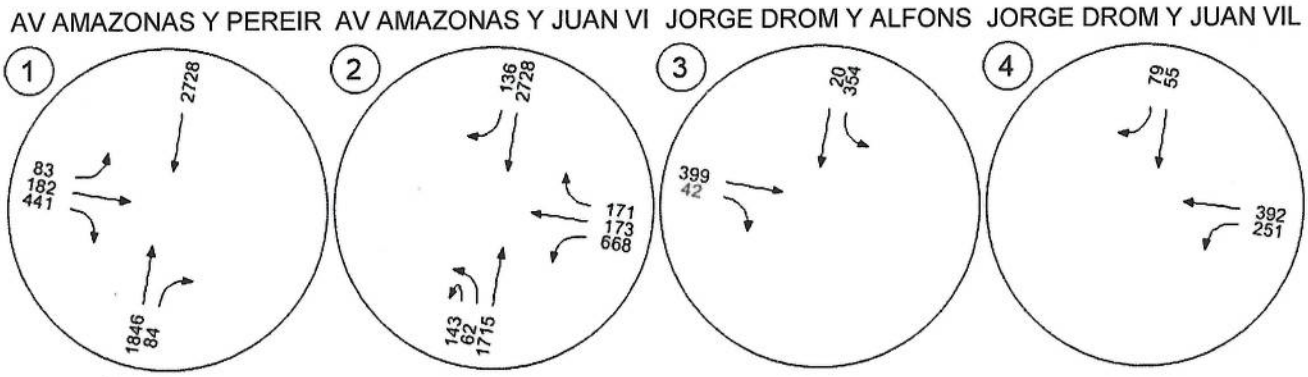
Report Figure 3d: Traffic Volume - Other Volume

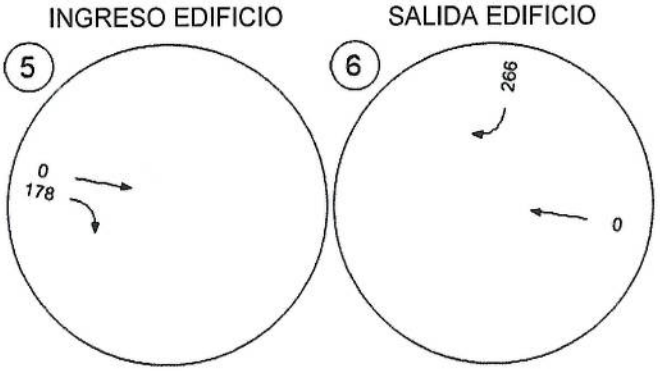




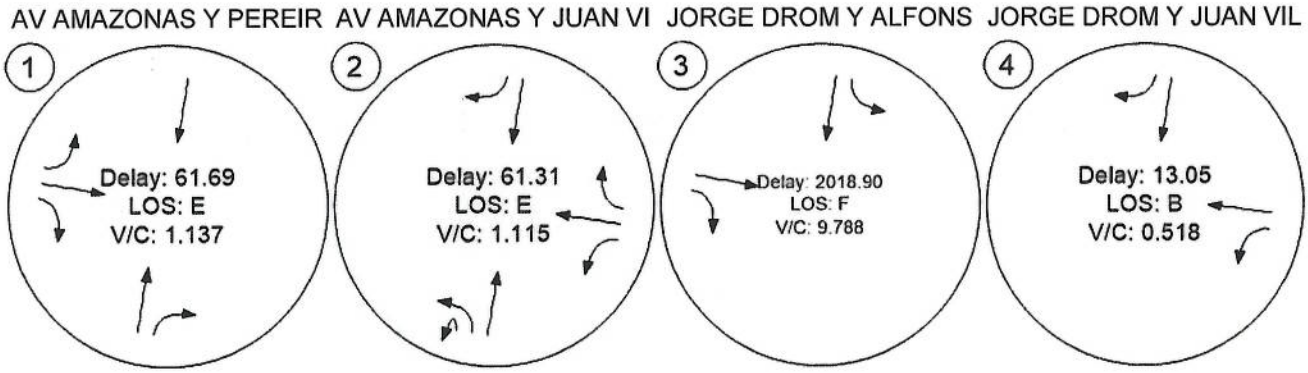
Report Figure 3e: Traffic Volume - Future Total Volume

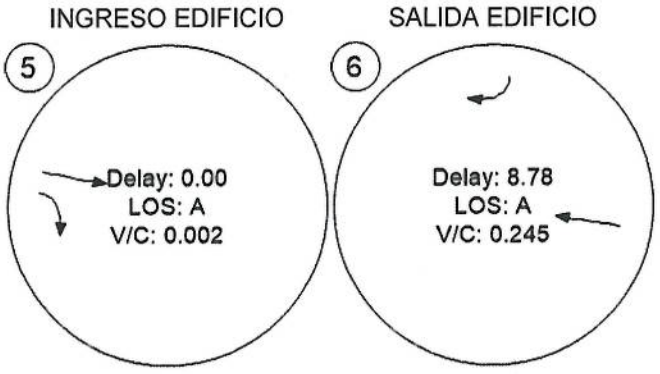




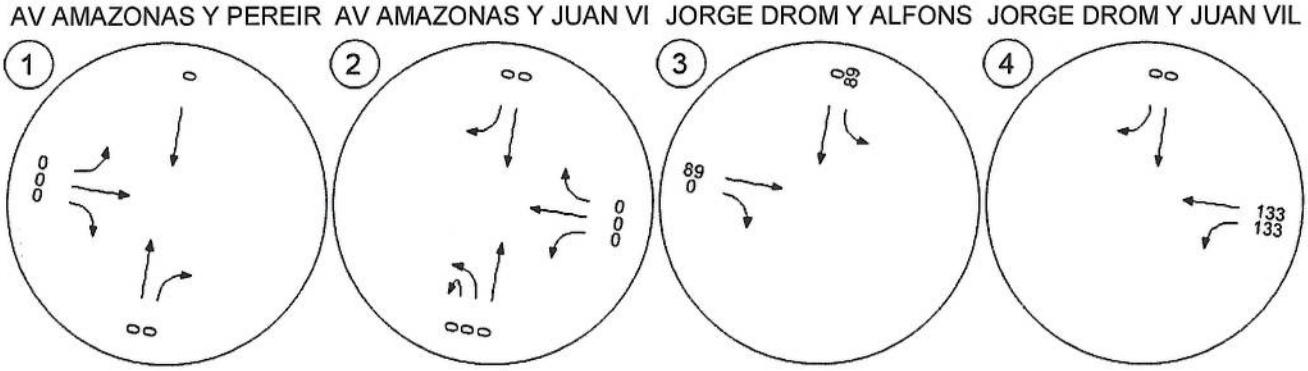


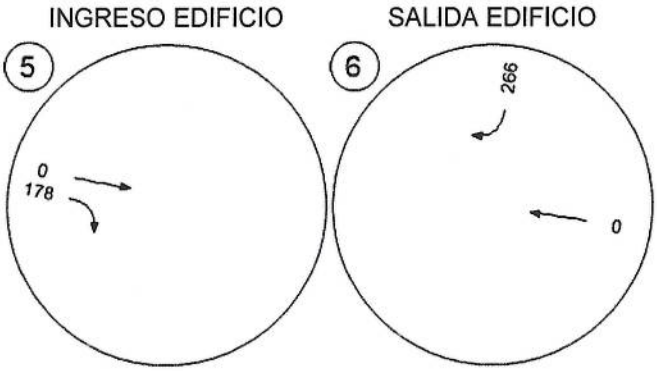
Report Figure 4: Traffic Conditions



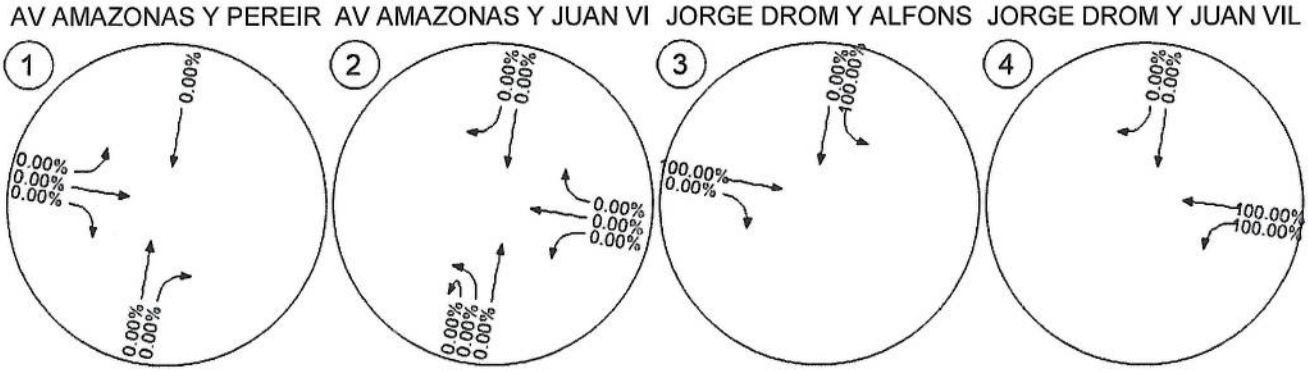


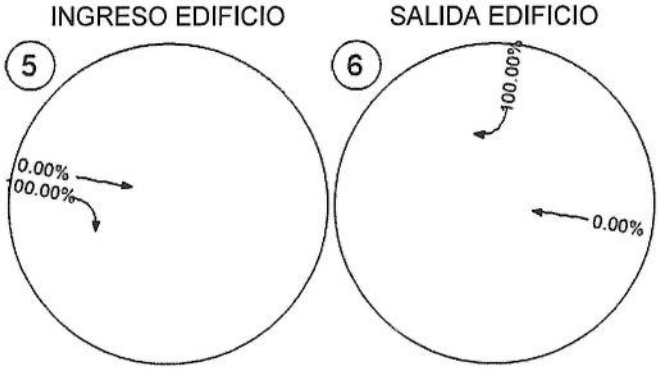
Report Figure 5: Fair Share - Fair Share Volumes - Zone 1



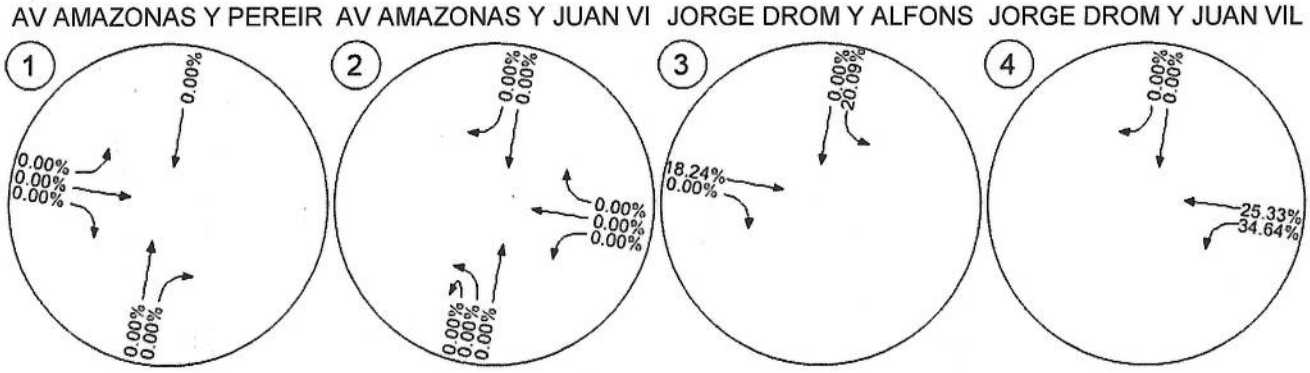


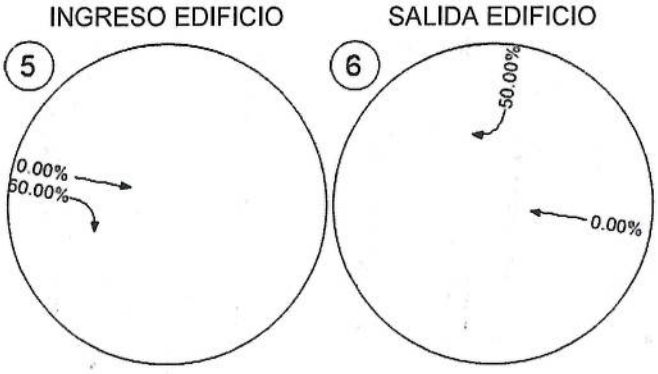
Report Figure 5: Fair Share - Fair Share % of Net New Site - Zone 1





Report Figure 5: Fair Share - Fair Share % of Total Analysis - Zone 1





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Scenario 5: Con Proyecto 2020
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.344	115.1	F
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	NBU	1.317	121.8	F
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	1.984	110.4	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.599	14.2	B
5	INGRESO EDIFICIO	Two-way stop	HCM2010	EBR	0.002	0.0	A
6	SALIDA EDIFICIO	Two-way stop	HCM2010	SBR	0.245	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value; for all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
#1: AV AMAZONAS Y PEREIRA

Control Type:	Signalized	Delay (sec / veh):	115.1
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.344

Intersection Setup

Name	AMAZONAS N-S			AMAZONAS N-S								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.00			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	AMAZONAS N-S			AMAZONAS N-S								
Base Volume Input [veh/h]	0	1678	76	0	2480	0	75	165	401	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.30	1.30	1.00	1.30	1.00	1.30	1.30	1.30	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2181	99	0	3224	0	98	215	521	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	545	25	0	806	0	25	54	130	0	0	0
Total Analysis Volume [veh/h]	0	2181	99	0	3224	0	98	215	521	0	0	0
Presence of On-Street Parking			no				no		no			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	941			941			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	0	0	1	0	0	2	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	60	0	0	60	0	0	40	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		no			no			no				
Maximum Recall		no			no			no				
Pedestrian Recall		no			no			no				
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	C	C	C	C	C	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	56	56	56	36	36	
g / C, Green / Cycle	0.56	0.56	0.56	0.36	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.48	0.46	0.71	0.19	0.64	
s, saturation flow rate [veh/h]	3192	1639	4567	1651	817	
c, Capacity [veh/h]	1788	918	2557	594	294	
d1, Uniform Delay [s]	18.48	18.05	22.00	25.27	32.00	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	5.30	8.51	120.62	3.32	360.91	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.85	0.83	1.26	0.53	1.77	
d, Delay for Lane Group [s/veh]	23.78	26.57	142.62	28.59	392.91	
Lane Group LOS	C	C	F	C	F	
Critical Lane Group	no	no	yes	no	yes	
50th-Percentile Queue Length [veh]	14.87	15.40	46.65	6.30	36.32	
50th-Percentile Queue Length [m]	113.27	117.38	355.49	48.03	276.78	
95th-Percentile Queue Length [veh]	21.19	21.84	68.43	10.42	59.98	
95th-Percentile Queue Length [m]	161.46	166.43	521.43	79.41	457.07	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	24.63	26.57	0.00	142.62	0.00	28.59	28.59	392.91	0.00	0.00	0.00
Movement LOS		C	C		F		C	C	F			
d_A, Approach Delay [s/veh]	24.71			142.62			256.18			0.00		
Approach LOS	C			F			F			A		
d_I, Intersection Delay [s/veh]	115.14											
Intersection LOS	F											
Intersection V/C	1.344											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#2: AV AMAZONAS Y JUAN VILLALENGUA

Control Type:	Signalized	Delay (sec / veh):	121.8
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.317

Intersection Setup

Name	AMAZONAS S-N				AMAZONAS N-S								
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.00	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28				48.28			48.00			48.28		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	yes				yes			yes			yes		

Volumes

Name	AMAZONAS S-N				AMAZONAS N-S								
Base Volume Input [veh/h]	130	56	1559	0	0	2480	124	0	0	0	607	157	155
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.30	1.30	1.30	1.00	1.00	1.30	1.30	1.00	1.00	1.00	1.30	1.30	1.30
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	169	73	2027	0	0	3224	161	0	0	0	789	204	202
Peak Hour Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	18	507	0	0	806	40	0	0	0	197	51	51
Total Analysis Volume [veh/h]	169	73	2027	0	0	3224	161	0	0	0	789	204	202
Presence of On-Street Parking	no						no				no		no
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Perm	Prote	Overl	Perm	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	1	0	0	1	0	0	0	0	0	2	0
Auxiliary Signal Groups			1										
Lead / Lag	-	Lag	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	0	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	40	60	0	0	60	0	0	0	0	0	40	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	0	10	0	0	0	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		no	no			no						no	
Maximum Recall		no	no			no						no	
Pedestrian Recall		no	no			no						no	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	L	C	C	C		C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00		2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	36	56	56	56		36	36
g / C, Green / Cycle	0.36	0.56	0.56	0.56		0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.28	0.44	0.71	0.69		0.61	0.29
s, saturation flow rate [veh/h]	878	4567	3192	1635		1293	1402
c, Capacity [veh/h]	142	2557	1788	916		537	505
d1, Uniform Delay [s]	48.05	17.41	22.00	22.00		34.15	28.82
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	347.49	2.62	122.77	114.01		220.60	12.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.71	0.79	1.26	1.23		1.47	0.80
d, Delay for Lane Group [s/veh]	395.54	20.02	144.77	136.01		254.75	41.61
Lane Group LOS	F	C	F	F		F	D
Critical Lane Group	no	no	yes	no		yes	no
50th-Percentile Queue Length [veh]	17.19	11.96	49.45	48.44		46.32	10.30
50th-Percentile Queue Length [m]	130.96	91.17	376.78	369.10		352.93	78.51
95th-Percentile Queue Length [veh]	30.27	17.64	72.25	69.89		71.05	15.57
95th-Percentile Queue Length [m]	230.65	134.40	550.52	532.56		541.42	118.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	395.5	395.5	20.02	0.00	0.00	142.14	136.01	0.00	0.00	0.00	254.75	41.61	41.61
Movement LOS	F	F	C			F	F				F	D	D
d_A, Approach Delay [s/veh]	60.07				141.85			0.00			182.34		
Approach LOS	E				F			A			F		
d_I, Intersection Delay [s/veh]	121.82												
Intersection LOS	F												
Intersection V/C	1.317												

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#3: JORGE DROM Y ALFONSO PEREIRA

Control Type:	Two-way stop	Delay (sec / veh):	110.4
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.984

Intersection Setup

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Base Volume Input [veh/h]	0	0	0	241	18	0	0	282	38	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.30	1.30	1.00	1.00	1.30	1.30	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	89	0	0	0	89	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	402	23	0	0	456	49	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	101	6	0	0	114	12	0	0	0
Total Analysis Volume [veh/h]	0	0	0	402	23	0	0	456	49	0	0	0
Pedestrian Volume [ped/h]	0			663			0			0		

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane							no					
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							no					
Number of Storage Spaces in Median	0			0			0			0		

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.25	0.00	0.00	0.00	1.98	0.05	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.95	0.00	0.00	0.00	110.40	69.32	0.00	0.00	0.00
Movement LOS				A	A			F	F			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.98	0.49	0.00	0.00	9.95	8.65	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	7.48	3.74	0.00	0.00	75.81	65.89	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.52			106.42			0.00		
Approach LOS	A			A			F			A		
d_I, Intersection Delay [s/veh]	61.22											
Intersection LOS	F											

Intersection Level Of Service Report
#4: JORGE DROM Y JUAN VILLALENGUA

Control Type:	Two-way stop	Delay (sec / veh):	14.2
Analysis Method:	HCM2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.599

Intersection Setup

Name				JORGE DROM N-S								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name				JORGE DROM N-S								
Base Volume Input [veh/h]	0	0	0	0	50	72	0	0	0	107	235	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.30	1.30	1.00	1.00	1.00	1.30	1.30	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	133	133	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	65	94	0	0	0	272	439	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	16	24	0	0	0	68	110	0
Total Analysis Volume [veh/h]	0	0	0	0	65	94	0	0	0	272	439	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				no
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.60	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.36	14.19	0.00
Movement LOS					A	A				B	B	
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.17	2.42	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.51	18.44	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			0.00			13.49		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	11.03											
Intersection LOS	B											

Intersection Level Of Service Report
#5: INGRESO EDIFICIO

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.00		48.00		48.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	no		no		yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	178	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	178	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	45	0	0
Total Analysis Volume [veh/h]	0	0	0	178	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00
Movement LOS			A	A		
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
#6: SALIDA EDIFICIO

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.245

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.00		48.00		48.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	no		no		no	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	266	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	266	0	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	67	0	0	0	0
Total Analysis Volume [veh/h]	0	266	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	no		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.25	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.78	0.00	0.00	0.00	0.00
Movement LOS		A			A	
95th-Percentile Queue Length [veh]	0.00	0.42	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	3.18	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.78		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.78					
Intersection LOS	A					

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Scenario 5: Con Proyecto 2020
1/15/2015

Turning Movement Volume: Summary

ID	Intersection Name	Northbound		Southbound	Eastbound			Total Volume
		Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	2181	99	3224	98	215	521	6338

ID	Intersection Name	Northbound			Southbound		Westbound			Total Volume
		U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	169	73	2027	3224	161	789	204	202	6849

ID	Intersection Name	Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	402	23	456	49	930

ID	Intersection Name	Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	65	94	272	439	870

ID	Intersection Name	Eastbound		Total Volume
		Thru	Right	
5	INGRESO EDIFICIO	0	178	178

ID	Intersection Name	Southbound	Westbound	Total Volume
		Right	Thru	
6	SALIDA EDIFICIO	266	0	266

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Scenario 5: Con Proyecto 2020
1/15/2015

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound	Eastbound			Total Volume
			Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	Final Base	1678	76	2480	75	165	401	4875
		Growth Rate	1.30	1.30	1.30	1.30	1.30	1.30	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**2181**	**99**	**3224**	**98**	**215**	**521**	**6338**

ID	Intersection Name	Volume Type	Northbound			Southbound		Westbound			Total Volume
			U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	Final Base	130	56	1559	2480	124	607	157	155	5268
		Growth Rate	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	-
		In Process	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0
		Future Total	**169**	**73**	**2027**	**3224**	**161**	**789**	**204**	**202**	**6849**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	Final Base	241	18	282	38	579
		Growth Rate	1.30	1.30	1.30	1.30	-
		In Process	0	0	0	0	0
		Net New Trips	89	0	89	0	178
		Other	0	0	0	0	0
		Future Total	**402**	**23**	**456**	**49**	**930**

ID	Intersection Name	Volume Type	Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	Final Base	50	72	107	235	464
		Growth Rate	1.30	1.30	1.30	1.30	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	133	133	266
		Other	0	0	0	0	0
		Future Total	**65**	**94**	**272**	**439**	**870**

ID	Intersection Name	Volume Type	Eastbound		Total Volume
			Thru	Right	
5	INGRESO EDIFICIO	Final Base	0	0	0
		Growth Rate	1.00	1.00	-
		In Process	0	0	0
		Net New Trips	0	178	178
		Other	0	0	0
		Future Total	**0**	**178**	**178**

ID	Intersection Name	Volume Type	Southbound	Westbound	Total Volume
			Right	Thru	
6	SALIDA EDIFICIO	Final Base	0	0	0
		Growth Rate	1.00	1.00	-
		In Process	0	0	0
		Net New Trips	266	0	266
		Other	0	0	0
		Future Total	**266**	**0**	**266**

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Scenario 5: Con Proyecto 2020
1/15/2015

Fair Share Volumes

Intersection 1: AV AMAZONAS Y PEREIRA							
Zone ID: Name	Northbound		Southbound	Eastbound			Total
	Thru	Right	Thru	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	
Total Analysis Volume	2181	99	3224	98	215	521	

Intersection 2: AV AMAZONAS Y JUAN VILLALENGUA									
Zone ID: Name	Northbound			Southbound		Westbound			Total
	U-T	Left	Thru	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	
Total Analysis Volume	169	73	2027	3224	161	789	204	202	

Intersection 3: JORGE DROM Y ALFONSO PEREIRA					
Zone ID: Name	Southbound		Eastbound		Total
	Left	Thru	Thru	Right	
1: Zone	89	0	89	0	178
Total Volume	89	0	89	0	
Total Analysis Volume	402	23	456	49	

Intersection 4: JORGE DROM Y JUAN VILLALENGUA					
Zone ID: Name	Southbound		Westbound		Total
	Thru	Right	Left	Thru	
1: Zone	0	0	133	133	266
Total Volume	0	0	133	133	
Total Analysis Volume	65	94	272	439	

Intersection 5: INGRESO EDIFICIO			
Zone ID: Name	Eastbound		Total
	Thru	Right	
1: Zone	0	178	178
Total Volume	0	178	
Total Analysis Volume	0	178	

Intersection 6: SALIDA EDIFICIO			
Zone ID: Name	Southbound	Westbound	Total
	Right	Thru	
1: Zone	266	0	266
Total Volume	266	0	
Total Analysis Volume	266	0	

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Scenario 5: Con Proyecto 2020
1/15/2015

Fair Share % of Net New Site

Intersection 1: AV AMAZONAS Y PEREIRA							
Zone ID: Name	Northbound		Southbound	Eastbound			Total
	Thru	Right	Thru	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	NaN%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 2: AV AMAZONAS Y JUAN VILLALENGUA									
Zone ID: Name	Northbound			Southbound		Westbound			Total
	U-T	Left	Thru	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	NaN%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 3: JORGE DROM Y ALFONSO PEREIRA					
Zone ID: Name	Southbound		Eastbound		Total
	Left	Thru	Thru	Right	
1: Zone	100%	0	100%	0	100.00%
Total	100.00%	0.00%	100.00%	0.00%	

Intersection 4: JORGE DROM Y JUAN VILLALENGUA					
Zone ID: Name	Southbound		Westbound		Total
	Thru	Right	Left	Thru	
1: Zone	0	0	100%	100%	100.00%
Total	0.00%	0.00%	100.00%	100.00%	

Intersection 5: INGRESO EDIFICIO			
Zone ID: Name	Eastbound		Total
	Thru	Right	
1: Zone	0	100%	100.00%
Total	0.00%	100.00%	

Intersection 6: SALIDA EDIFICIO			
Zone ID: Name	Southbound	Westbound	Total
	Right	Thru	
1: Zone	100%	0	100.00%
Total	100.00%	0.00%	

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Scenario 5: Con Proyecto 2020
1/15/2015

Fair Share % of Total Analysis

Intersection 1: AV AMAZONAS Y PEREIRA							
Zone ID: Name	Northbound		Southbound	Eastbound			Total
	Thru	Right	Thru	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0.00%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 2: AV AMAZONAS Y JUAN VILLALENGUA									
Zone ID: Name	Northbound			Southbound		Westbound			Total
	U-T	Left	Thru	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0.00%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 3: JORGE DROM Y ALFONSO PEREIRA					
Zone ID: Name	Southbound		Eastbound		Total
	Left	Thru	Thru	Right	
1: Zone	18.13%	0	16.33%	0	3.71%
Total	18.13%	0.00%	16.33%	0.00%	

Intersection 4: JORGE DROM Y JUAN VILLALENGUA					
Zone ID: Name	Southbound		Westbound		Total
	Thru	Right	Left	Thru	
1: Zone	0	0	32.84%	23.25%	6.45%
Total	0.00%	0.00%	32.84%	23.25%	

Intersection 5: INGRESO EDIFICIO			
Zone ID: Name	Eastbound		Total
	Thru	Right	
1: Zone	0	50%	28.09%
Total	0.00%	50.00%	

Intersection 6: SALIDA EDIFICIO			
Zone ID: Name	Southbound	Westbound	Total
	Right	Thru	
1: Zone	50%	0	18.80%
Total	50.00%	0.00%	

Signal Warrants Report For Intersection #3: JORGE DROM Y ALFONSO PEREIRA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	W
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	W
1	425	505
2	408	485
3	400	475
4	340	404
5	323	384
6	289	343
7	268	318
8	255	303
9	204	242
10	191	227
11	191	227
12	183	217
13	166	197
14	153	182
15	153	182
16	149	177
17	85	101
18	47	56
19	43	51
20	17	20
21	13	15
22	13	15
23	9	10
24	9	10

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	425	2	505	No	No	Yes	Yes	No	No	No	No	Yes	Yes
2	2	408	2	485	No	No	No	Yes	No	No	No	No	Yes	Yes
3	2	400	2	475	No	No	No	Yes	No	No	No	No	Yes	Yes
4	2	340	2	404	No	No	No	Yes	No	No	No	No	Yes	No
5	2	323	2	384	No	No	No	No	No	No	No	No	Yes	No
6	2	289	2	343	No	No	No	No	No	No	No	No	Yes	No
7	2	268	2	318	No	No	No	No	No	No	No	No	No	No
8	2	255	2	303	No	No	No	No	No	No	No	No	No	No
9	2	204	2	242	No	No	No	No	No	No	No	No	No	No
10	2	191	2	227	No	No	No	No	No	No	No	No	No	No
11	2	191	2	227	No	No	No	No	No	No	No	No	No	No
12	2	183	2	217	No	No	No	No	No	No	No	No	No	No
13	2	166	2	197	No	No	No	No	No	No	No	No	No	No
14	2	153	2	182	No	No	No	No	No	No	No	No	No	No
15	2	153	2	182	No	No	No	No	No	No	No	No	No	No
16	2	149	2	177	No	No	No	No	No	No	No	No	No	No
17	2	85	2	101	No	No	No	No	No	No	No	No	No	No
18	2	47	2	56	No	No	No	No	No	No	No	No	No	No
19	2	43	2	51	No	No	No	No	No	No	No	No	No	No
20	2	17	2	20	No	No	No	No	No	No	No	No	No	No
21	2	13	2	15	No	No	No	No	No	No	No	No	No	No
22	2	13	2	15	No	No	No	No	No	No	No	No	No	No
23	2	9	2	10	No	No	No	No	No	No	No	No	No	No
24	2	9	2	10	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	1	4	0	0	0	0	6	3

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	106.4
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	14:55
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	505
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	930
Number of Approaches on Intersection	2
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection #4: JORGE DROM Y JUAN VILLALENGUA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	E
1	159	711
2	153	683
3	149	668
4	127	569
5	121	540
6	108	483
7	100	448
8	95	427
9	76	341
10	72	320
11	72	320
12	68	306
13	62	277
14	57	256
15	57	256
16	56	249
17	32	142
18	17	78
19	16	71
20	6	28
21	5	21
22	5	21
23	3	14
24	3	14

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	159	2	711	No	No	No	No	No	No	No	No	Yes	Yes
2	2	153	2	683	No	No	No	No	No	No	No	No	Yes	Yes
3	2	149	2	668	No	No	No	No	No	No	No	No	Yes	Yes
4	2	127	2	569	No	No	No	No	No	No	No	No	Yes	No
5	2	121	2	540	No	No	No	No	No	No	No	No	Yes	No
6	2	108	2	483	No	No	No	No	No	No	No	No	No	No
7	2	100	2	448	No	No	No	No	No	No	No	No	No	No
8	2	95	2	427	No	No	No	No	No	No	No	No	No	No
9	2	76	2	341	No	No	No	No	No	No	No	No	No	No
10	2	72	2	320	No	No	No	No	No	No	No	No	No	No
11	2	72	2	320	No	No	No	No	No	No	No	No	No	No
12	2	68	2	306	No	No	No	No	No	No	No	No	No	No
13	2	62	2	277	No	No	No	No	No	No	No	No	No	No
14	2	57	2	256	No	No	No	No	No	No	No	No	No	No
15	2	57	2	256	No	No	No	No	No	No	No	No	No	No
16	2	56	2	249	No	No	No	No	No	No	No	No	No	No
17	2	32	2	142	No	No	No	No	No	No	No	No	No	No
18	2	17	2	78	No	No	No	No	No	No	No	No	No	No
19	2	16	2	71	No	No	No	No	No	No	No	No	No	No
20	2	6	2	28	No	No	No	No	No	No	No	No	No	No
21	2	5	2	21	No	No	No	No	No	No	No	No	No	No
22	2	5	2	21	No	No	No	No	No	No	No	No	No	No
23	2	3	2	14	No	No	No	No	No	No	No	No	No	No
24	2	3	2	14	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	5	3

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	13.5
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	2:39
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	711
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	870
Number of Approaches on Intersection	2
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection #6: SALIDA EDIFICIO

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E
Minor Approaches	N
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	E	N
1	0	266
2	0	255
3	0	250
4	0	213
5	0	202
6	0	181
7	0	168
8	0	160
9	0	128
10	0	120
11	0	120
12	0	114
13	0	104
14	0	96
15	0	96
16	0	93
17	0	53
18	0	29
19	0	27
20	0	11
21	0	8
22	0	8
23	0	5
24	0	5

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	0	2	266	No	No	No	No	No	No	No	No	No	No
2	2	0	2	255	No	No	No	No	No	No	No	No	No	No
3	2	0	2	250	No	No	No	No	No	No	No	No	No	No
4	2	0	2	213	No	No	No	No	No	No	No	No	No	No
5	2	0	2	202	No	No	No	No	No	No	No	No	No	No
6	2	0	2	181	No	No	No	No	No	No	No	No	No	No
7	2	0	2	168	No	No	No	No	No	No	No	No	No	No
8	2	0	2	160	No	No	No	No	No	No	No	No	No	No
9	2	0	2	128	No	No	No	No	No	No	No	No	No	No
10	2	0	2	120	No	No	No	No	No	No	No	No	No	No
11	2	0	2	120	No	No	No	No	No	No	No	No	No	No
12	2	0	2	114	No	No	No	No	No	No	No	No	No	No
13	2	0	2	104	No	No	No	No	No	No	No	No	No	No
14	2	0	2	96	No	No	No	No	No	No	No	No	No	No
15	2	0	2	96	No	No	No	No	No	No	No	No	No	No
16	2	0	2	93	No	No	No	No	No	No	No	No	No	No
17	2	0	2	53	No	No	No	No	No	No	No	No	No	No
18	2	0	2	29	No	No	No	No	No	No	No	No	No	No
19	2	0	2	27	No	No	No	No	No	No	No	No	No	No
20	2	0	2	11	No	No	No	No	No	No	No	No	No	No
21	2	0	2	8	No	No	No	No	No	No	No	No	No	No
22	2	0	2	8	No	No	No	No	No	No	No	No	No	No
23	2	0	2	5	No	No	No	No	No	No	No	No	No	No
24	2	0	2	5	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:38
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	266
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	266
Number of Approaches on Intersection	2
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

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Scenario 5: Con Proyecto 2020
1/15/2015

Trip generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total trips	% of Total Trip
1: Zone				1.000	444.000	40.00	60.00	178	266	444	100.00
					Added Trips Total			**178**	**266**	**444**	**100.00**

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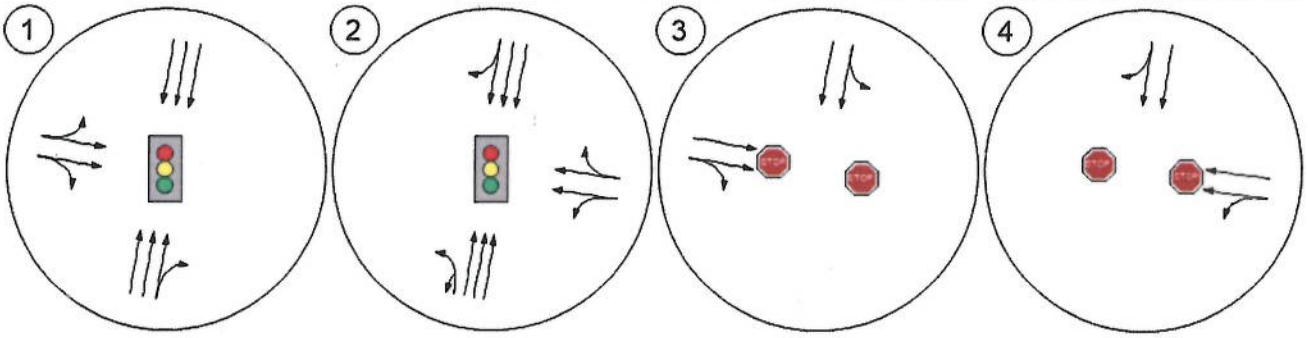
Scenario 5: Con Proyecto 2020
1/15/2015

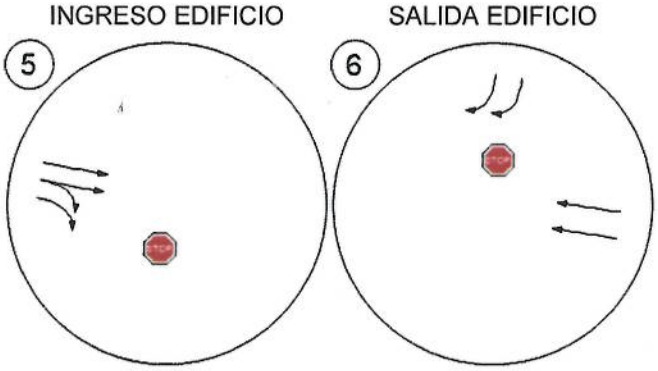
Trip distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
4: Gate	50.00	89	0.00	0
5: Gate	50.00	89	0.00	0
6: Gate	0.00	0	50.00	133
7: Gate	0.00	0	50.00	133
Total	**100.00**	**178**	**100.00**	**266**

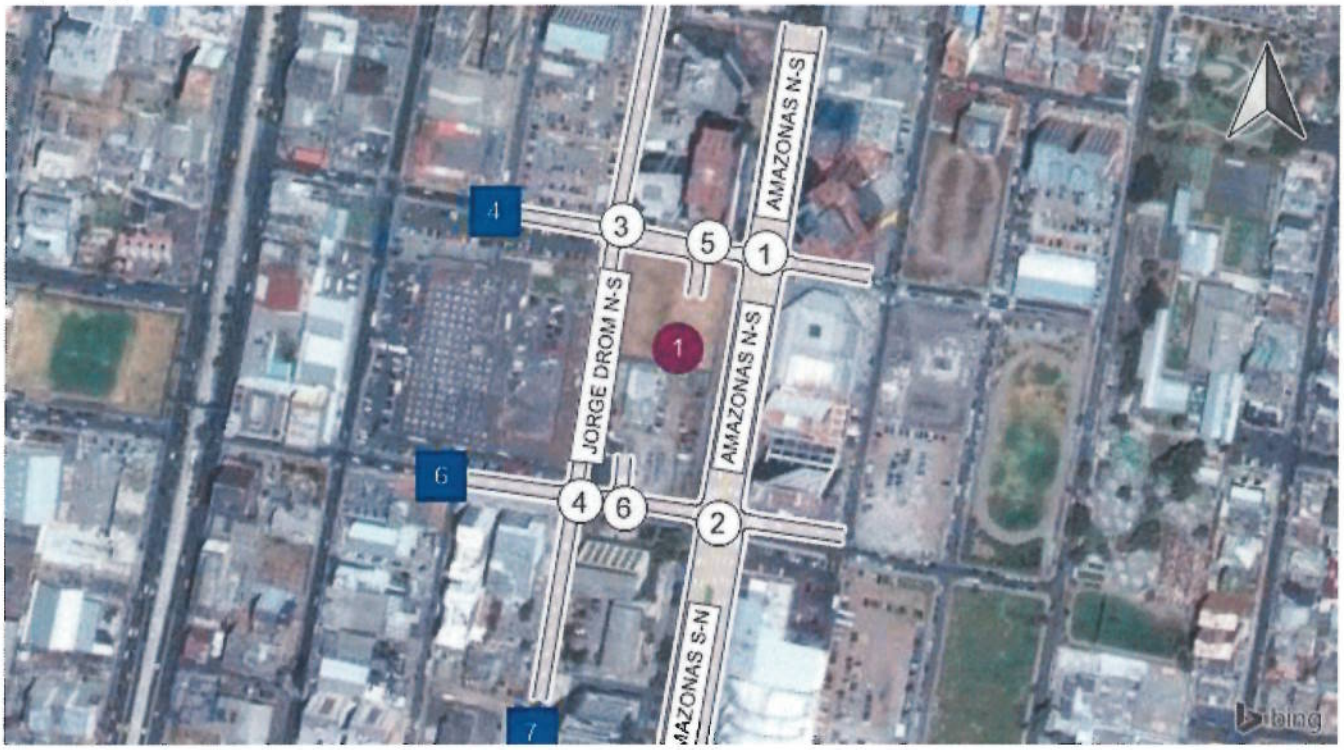
Report Figure 1: Study Intersections

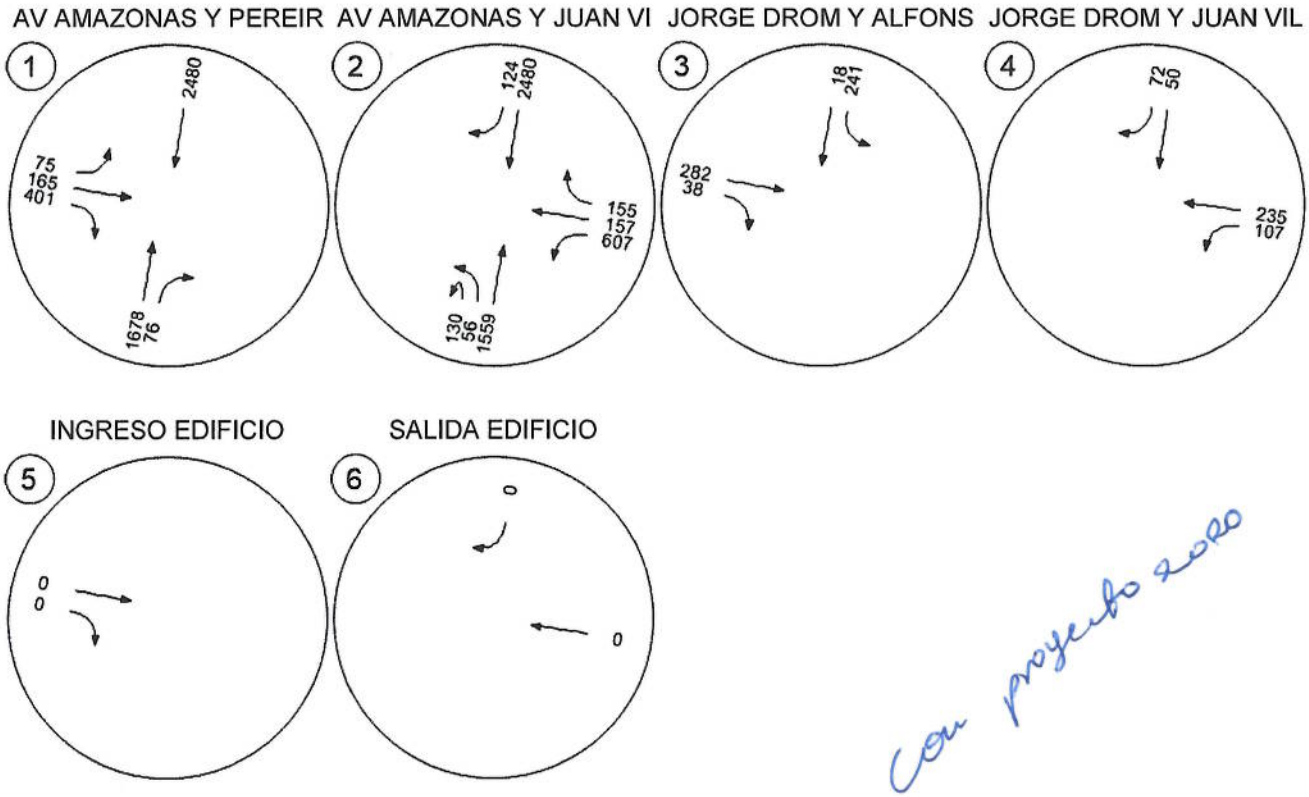
Report Figure 2: Lane Configuration and Traffic Control





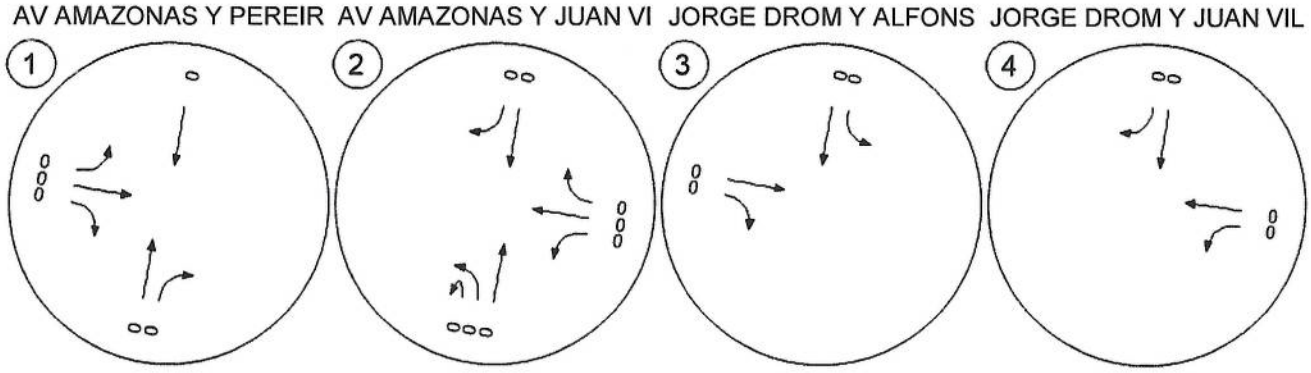
Report Figure 3a: Traffic Volume - Base Volume

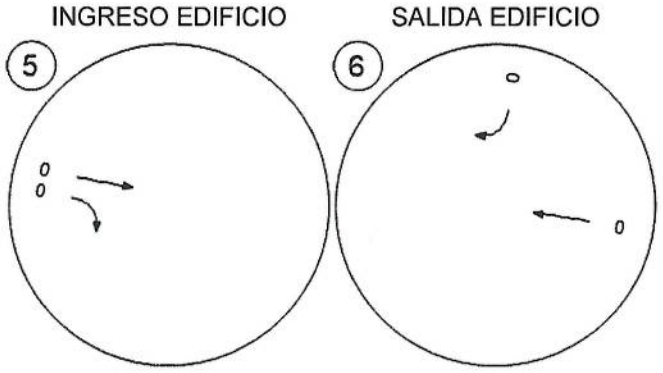




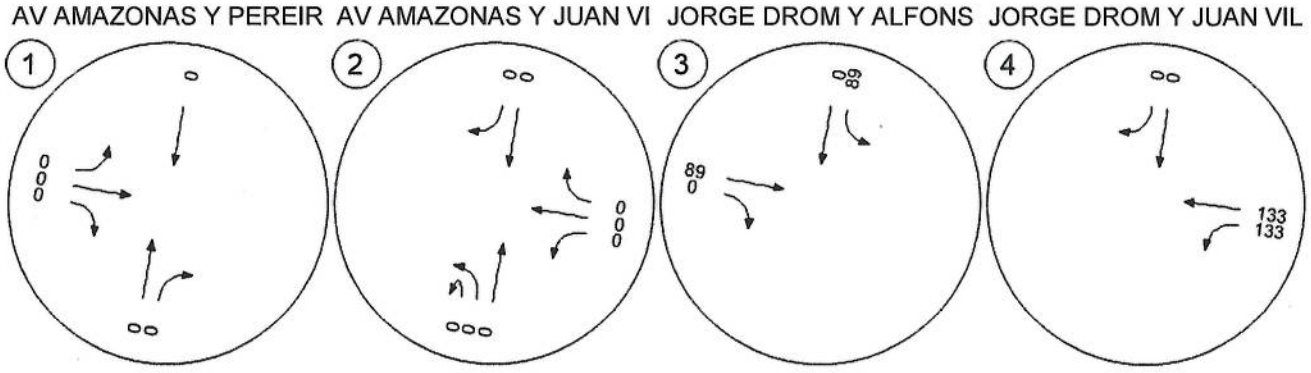
Con proyecto 2040

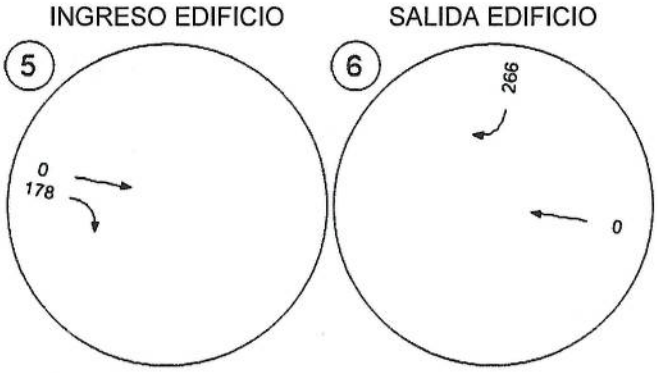
Report Figure 3b: Traffic Volume - In-Process Volume



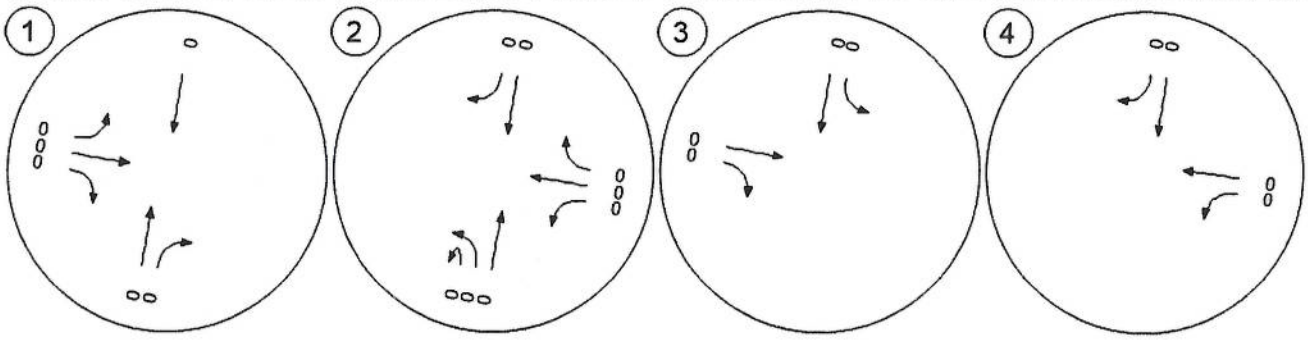


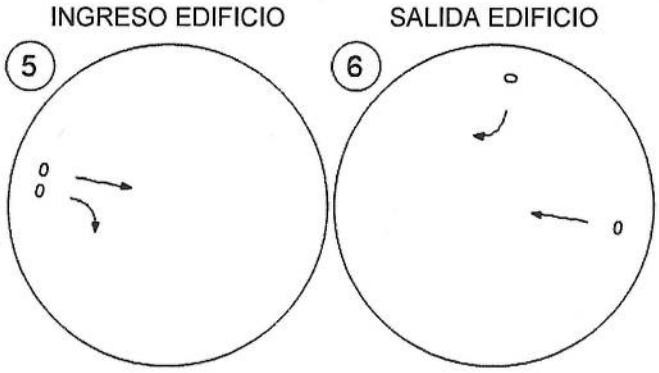
Report Figure 3c: Traffic Volume - Net New Site Trips



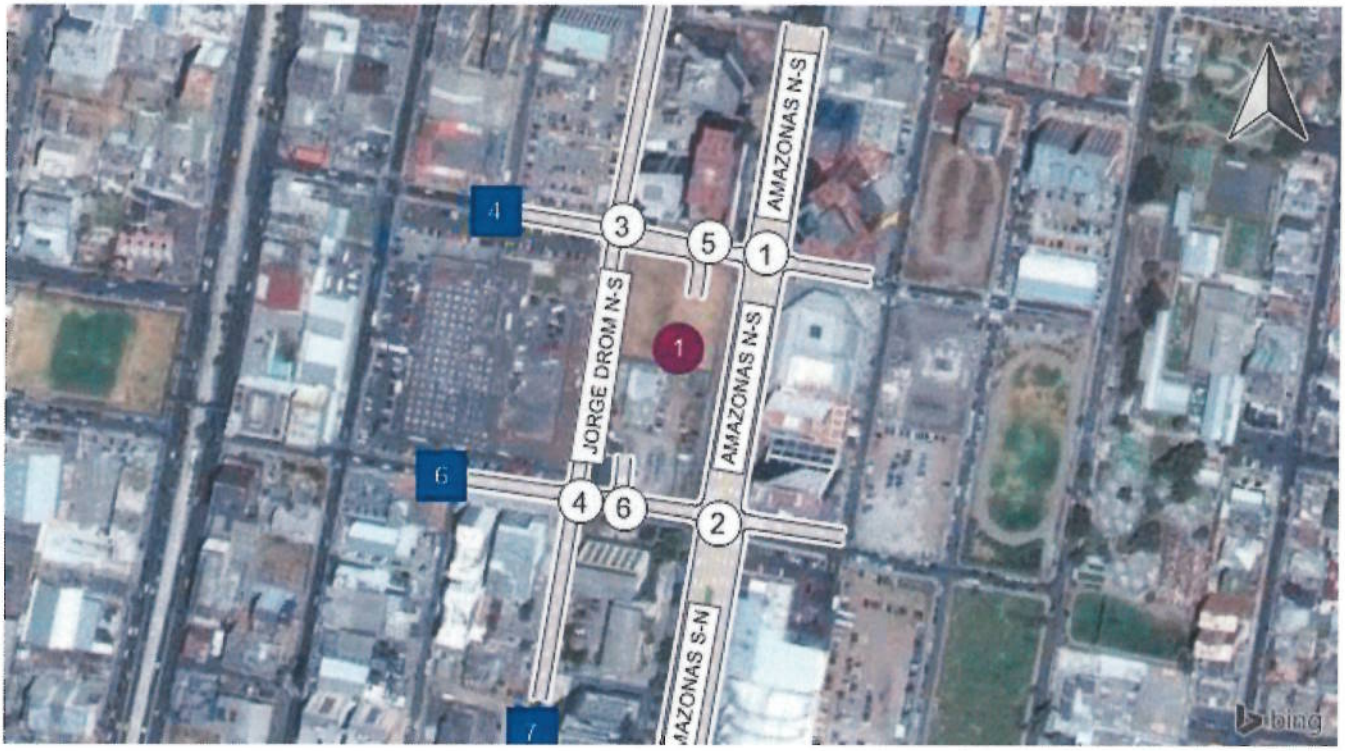


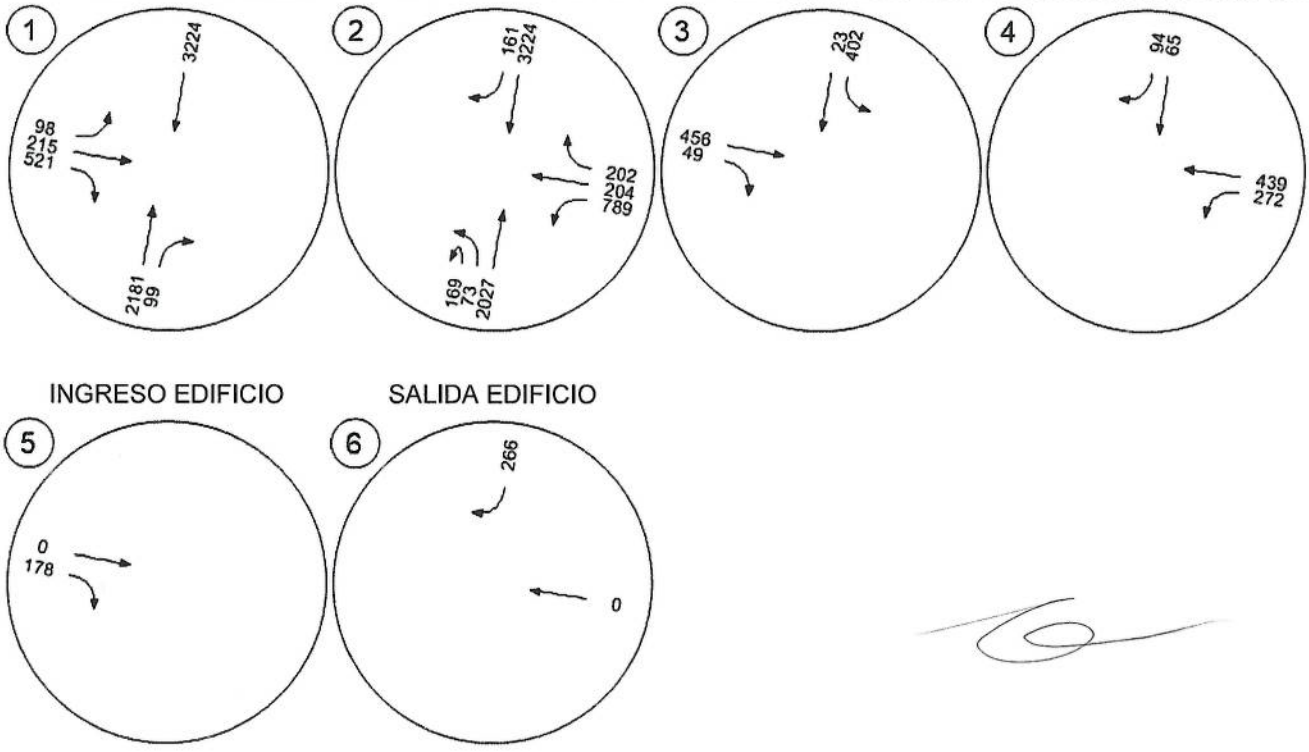
Report Figure 3d: Traffic Volume - Other Volume



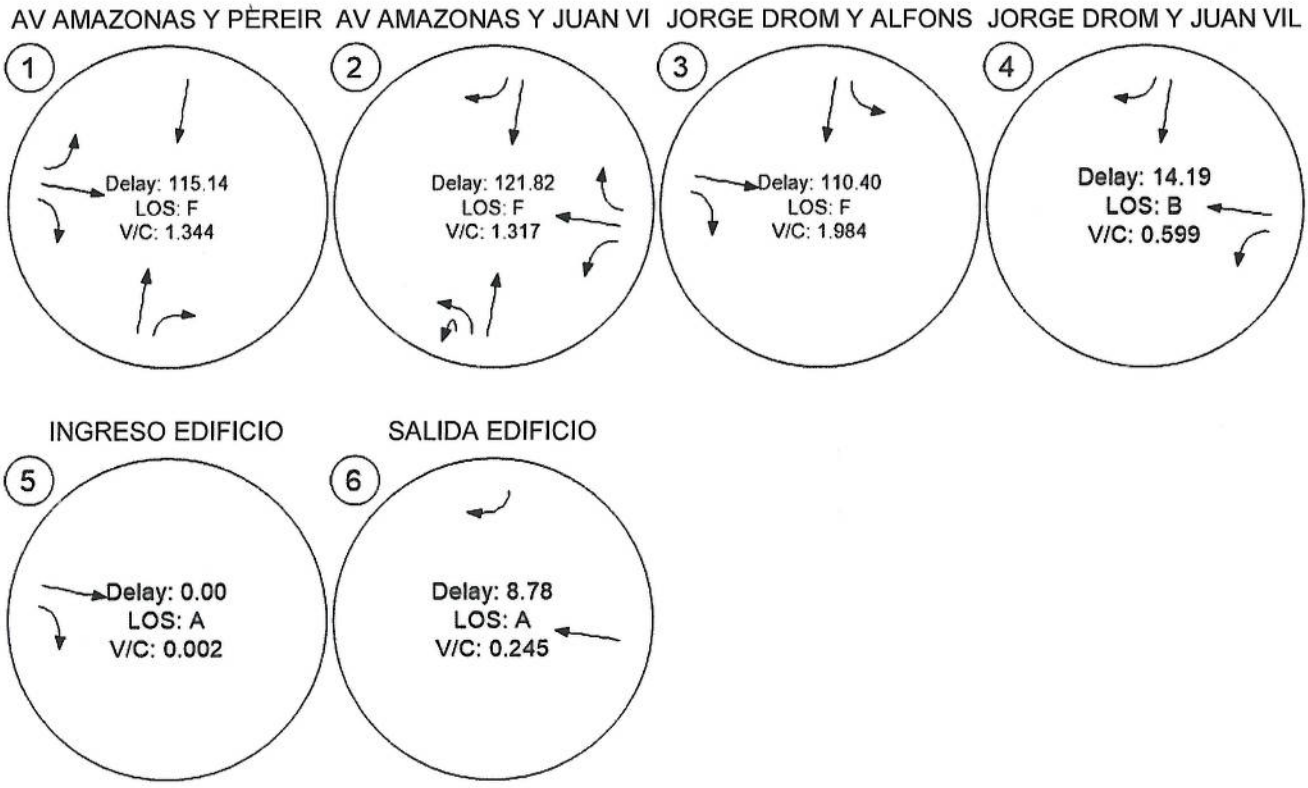


Report Figure 3e: Traffic Volume - Future Total Volume

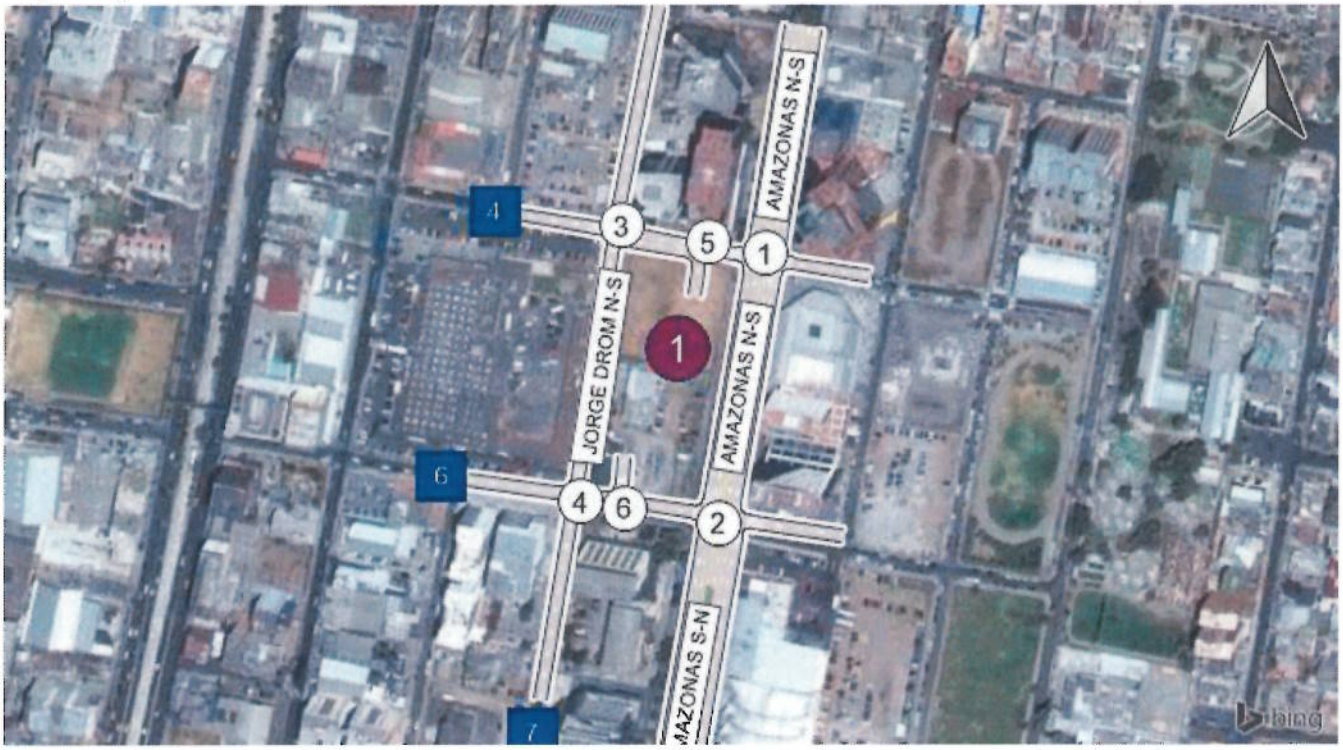


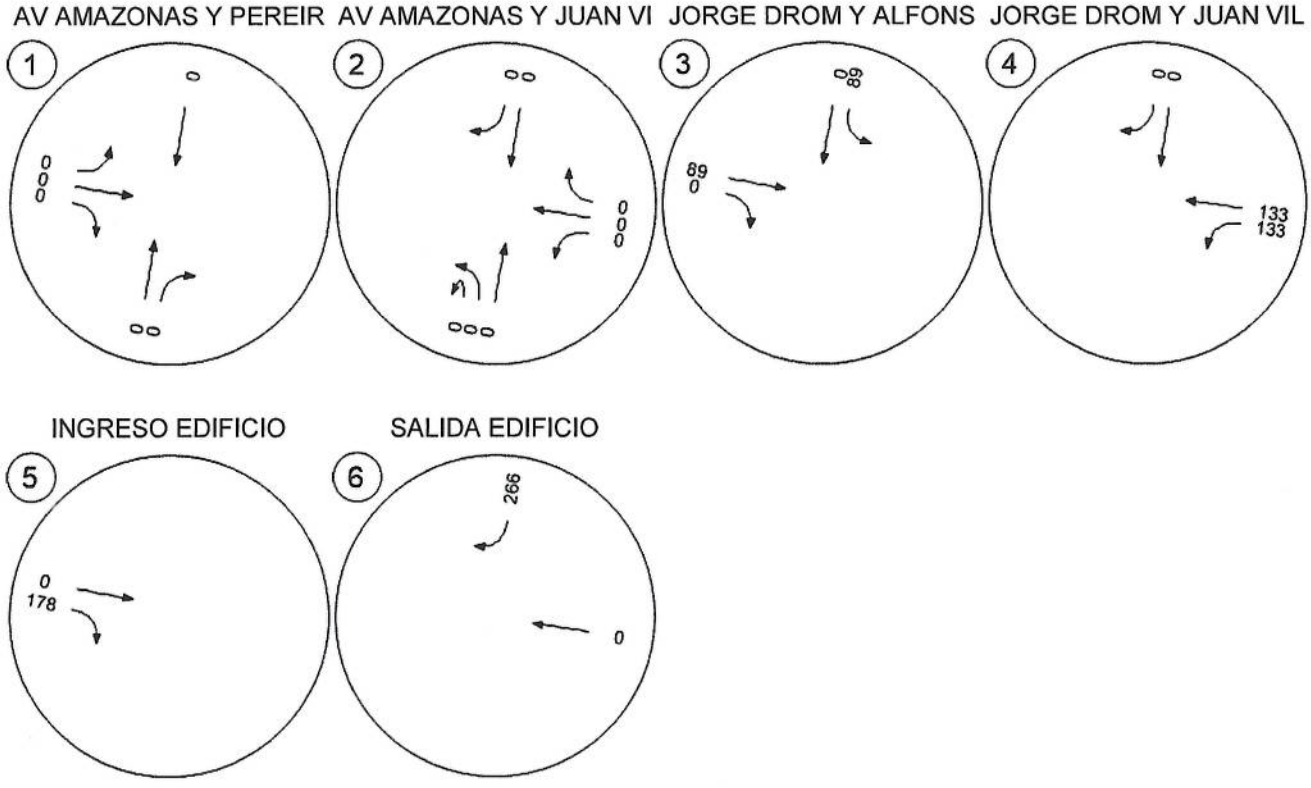


Report Figure 4: Traffic Conditions



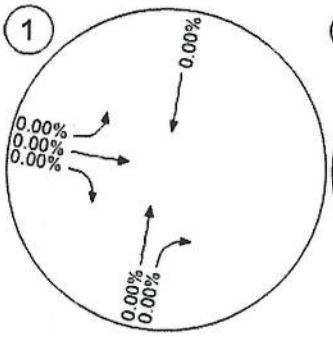
Report Figure 5: Fair Share - Fair Share Volumes - Zone 1



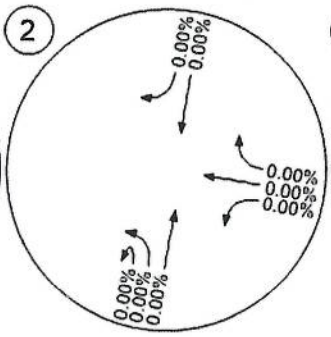


Report Figure 5: Fair Share - Fair Share % of Net New Site - Zone 1

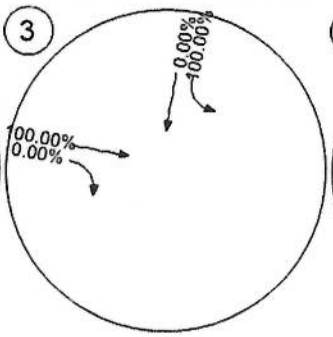
AV AMAZONAS Y PEREIR



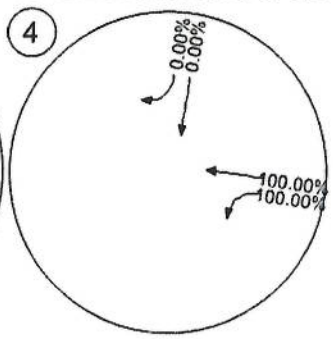
AV AMAZONAS Y JUAN VI



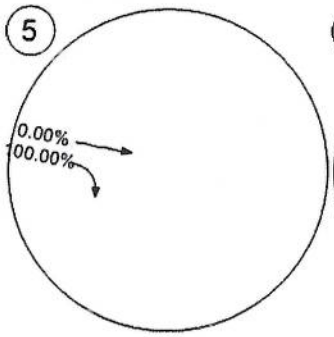
JORGE DROM Y ALFONS



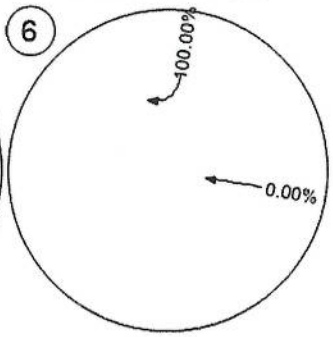
JORGE DROM Y JUAN VIL



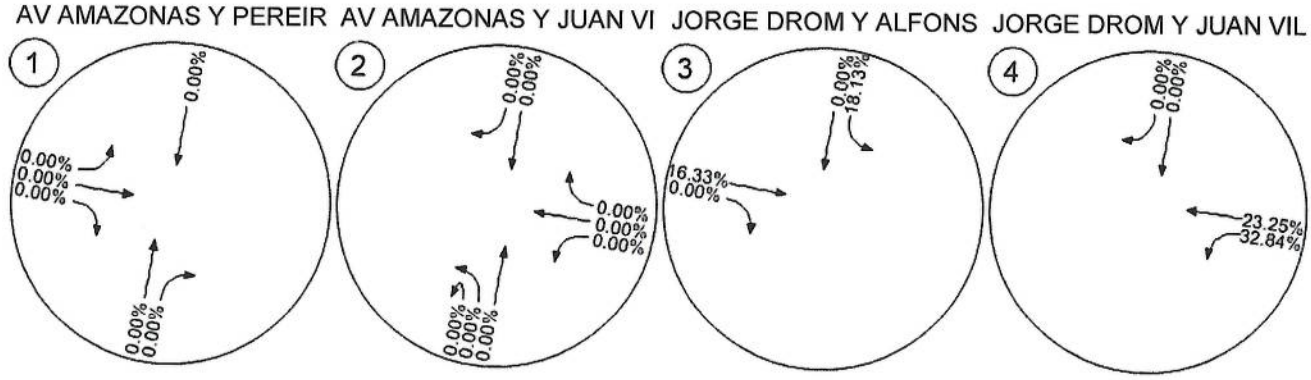
INGRESO EDIFICIO

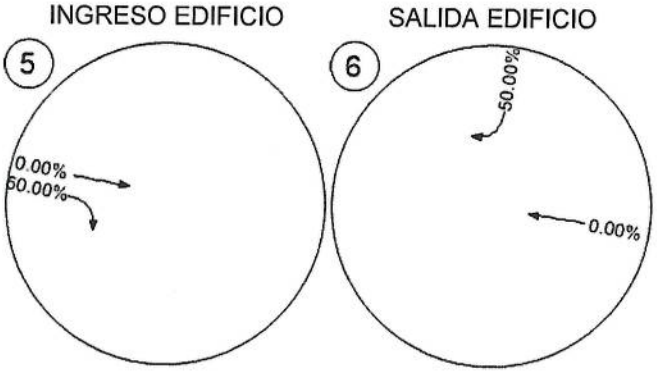


SALIDA EDIFICIO



Report Figure 5: Fair Share - Fair Share % of Total Analysis - Zone 1





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Scenario 6: Con Proyecto 2025
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.615	214.4	F
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	NBU	1.520	201.6	F
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	2.666	242.3	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.683	15.7	C
5	INGRESO EDIFICIO	Two-way stop	HCM2010	EBR	0.002	0.0	A
6	SALIDA EDIFICIO	Two-way stop	HCM2010	SBR	0.245	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value; for all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
#1: AV AMAZONAS Y PEREIRA

Control Type:	Signalized	Delay (sec / veh):	214.4
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.615

Intersection Setup

Name	AMAZONAS N-S			AMAZONAS N-S								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.00			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	AMAZONAS N-S			AMAZONAS N-S								
Base Volume Input [veh/h]	0	1678	76	0	2480	0	75	165	401	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.50	1.50	1.00	1.50	1.00	1.50	1.50	1.50	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2517	114	0	3720	0	113	248	602	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	629	29	0	930	0	28	62	151	0	0	0
Total Analysis Volume [veh/h]	0	2517	114	0	3720	0	113	248	602	0	0	0
Presence of On-Street Parking			no				no		no			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	941			941			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	0	0	1	0	0	2	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	60	0	0	60	0	0	30	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		no			no			no				
Maximum Recall		no			no			no				
Pedestrian Recall		no			no			no				
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	C	C	C	C	C	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	56	56	56	26	26	
g / C, Green / Cycle	0.56	0.56	0.56	0.26	0.26	
(v / s)_i Volume / Saturation Flow Rate	0.55	0.54	0.81	0.22	0.80	
s, saturation flow rate [veh/h]	3192	1639	4567	1651	752	
c, Capacity [veh/h]	1788	918	2557	429	195	
d1, Uniform Delay [s]	21.49	20.82	22.00	35.04	37.00	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	17.29	20.72	206.81	17.79	949.32	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.98	0.96	1.45	0.84	3.08	
d, Delay for Lane Group [s/veh]	38.77	41.54	228.81	52.83	986.32	
Lane Group LOS	D	D	F	D	F	
Critical Lane Group	no	no	yes	no	yes	
50th-Percentile Queue Length [veh]	22.47	22.90	67.06	10.29	56.22	
50th-Percentile Queue Length [m]	171.22	174.48	511.02	78.40	428.37	
95th-Percentile Queue Length [veh]	30.24	30.75	102.84	15.55	92.48	
95th-Percentile Queue Length [m]	230.46	234.28	783.63	118.49	704.72	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	39.61	41.54	0.00	228.81	0.00	52.83	52.83	986.32	0.00	0.00	0.00
Movement LOS		D	D		F		D	D	F			
d_A, Approach Delay [s/veh]	39.70			228.81			636.38			0.00		
Approach LOS	D			F			F			A		
d_I, Intersection Delay [s/veh]	214.44											
Intersection LOS	F											
Intersection V/C	1.615											

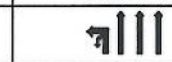
Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#2: AV AMAZONAS Y JUAN VILLALENGUA

Control Type:	Signalized	Delay (sec / veh):	201.6
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.520

Intersection Setup

Name	AMAZONAS S-N				AMAZONAS N-S								
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.00	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28				48.28			48.00			48.28		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	yes				yes			yes			yes		

Volumes

Name	AMAZONAS S-N				AMAZONAS N-S								
Base Volume Input [veh/h]	130	56	1559	0	0	2480	124	0	0	0	607	157	155
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.50	1.50	1.50	1.00	1.00	1.50	1.50	1.00	1.00	1.00	1.50	1.50	1.50
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	195	84	2339	0	0	3720	186	0	0	0	911	236	233
Peak Hour Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	21	585	0	0	930	47	0	0	0	228	59	58
Total Analysis Volume [veh/h]	195	84	2339	0	0	3720	186	0	0	0	911	236	233
Presence of On-Street Parking	no						no				no		no
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Perm	Prote	Overl	Perm	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	1	0	0	1	0	0	0	0	0	2	0
Auxiliary Signal Groups			1										
Lead / Lag	-	Lag	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	0	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	40	60	0	0	60	0	0	0	0	0	40	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	0	10	0	0	0	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		no	no			no						no	
Maximum Recall		no	no			no						no	
Pedestrian Recall		no	no			no						no	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	L	C	C	C		C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00		2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	36	56	56	56		36	36
g / C, Green / Cycle	0.36	0.56	0.56	0.56		0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.34	0.51	0.82	0.80		0.70	0.33
s, saturation flow rate [veh/h]	828	4567	3192	1635		1293	1403
c, Capacity [veh/h]	87	2557	1788	916		537	505
d1, Uniform Delay [s]	49.84	19.84	22.00	22.00		34.15	30.77
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	1016.91	6.46	208.71	196.22		320.68	25.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	3.20	0.91	1.46	1.42		1.69	0.93
d, Delay for Lane Group [s/veh]	1066.75	26.30	230.71	218.22		354.83	56.54
Lane Group LOS	F	C	F	F		F	E
Critical Lane Group	no	no	yes	no		yes	no
50th-Percentile Queue Length [veh]	26.84	16.45	70.78	69.35		61.26	14.11
50th-Percentile Queue Length [m]	204.52	125.37	539.37	528.43		466.79	107.51
95th-Percentile Queue Length [veh]	48.12	23.11	108.23	105.05		96.28	20.27
95th-Percentile Queue Length [m]	366.68	176.06	824.75	800.52		733.63	154.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1066.	1066.	26.30	0.00	0.00	226.96	218.22	0.00	0.00	0.00	354.83	56.54	56.54
Movement LOS	F	F	C			F	F				F	E	E
d_A, Approach Delay [s/veh]	137.18				226.55			0.00			253.46		
Approach LOS	F				F			A			F		
d_I, Intersection Delay [s/veh]	201.64												
Intersection LOS	F												
Intersection V/C	1.520												

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#3: JORGE DROM Y ALFONSO PEREIRA

Control Type:	Two-way stop	Delay (sec / veh):	242.3
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.666

Intersection Setup

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Base Volume Input [veh/h]	0	0	0	241	18	0	0	282	38	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.50	1.50	1.00	1.00	1.50	1.50	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	89	0	0	0	89	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	451	27	0	0	512	57	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	113	7	0	0	128	14	0	0	0
Total Analysis Volume [veh/h]	0	0	0	451	27	0	0	512	57	0	0	0
Pedestrian Volume [ped/h]	0			663			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			no	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			no	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.28	0.00	0.00	0.00	2.67	0.05	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	8.07	0.00	0.00	0.00	242.30	170.10	0.00	0.00	0.00
Movement LOS				A	A			F	F			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	1.15	0.57	0.00	0.00	15.97	14.31	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	8.73	4.36	0.00	0.00	121.65	109.08	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.61			235.07			0.00		
Approach LOS	A			A			F			A		
d_I, Intersection Delay [s/veh]	.					131.22						
Intersection LOS	F											

Intersection Level Of Service Report
#4: JORGE DROM Y JUAN VILLALENGUA

Control Type:	Two-way stop	Delay (sec / veh):	15.7
Analysis Method:	HCM2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.683

Intersection Setup

Name				JORGE DROM N-S								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name				JORGE DROM N-S								
Base Volume Input [veh/h]	0	0	0	0	50	72	0	0	0	107	235	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.50	1.50	1.00	1.00	1.00	1.50	1.50	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	133	133	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	75	108	0	0	0	294	486	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	19	27	0	0	0	74	122	0
Total Analysis Volume [veh/h]	0	0	0	0	75	108	0	0	0	294	486	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				no
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.68	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.37	15.67	0.00
Movement LOS					A	A				B	C	
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.67	3.02	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.35	22.98	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			0.00			14.80		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	11.99											
Intersection LOS	C											

Intersection Level Of Service Report
#5: INGRESO EDIFICIO

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.00		48.00		48.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	no		no		yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	178	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	178	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	45	0	0
Total Analysis Volume [veh/h]	0	0	0	178	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00
Movement LOS			A	A		
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
#6: SALIDA EDIFICIO

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.245

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.00		48.00		48.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	no		no		no	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	266	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	266	0	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	67	0	0	0	0
Total Analysis Volume [veh/h]	0	266	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	no		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.25	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.78	0.00	0.00	0.00	0.00
Movement LOS		A			A	
95th-Percentile Queue Length [veh]	0.00	0.42	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	3.18	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.78		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.78					
Intersection LOS	A					

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Scenario 6: Con Proyecto 2025
1/15/2015

Turning Movement Volume: Summary

ID	Intersection Name	Northbound		Southbound	Eastbound			Total Volume
		Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	2517	114	3720	113	248	602	7314

ID	Intersection Name	Northbound			Southbound		Westbound			Total Volume
		U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	195	84	2339	3720	186	911	236	233	7904

ID	Intersection Name	Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	451	27	512	57	1047

ID	Intersection Name	Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	75	108	294	486	963

ID	Intersection Name	Eastbound		Total Volume
		Thru	Right	
5	INGRESO EDIFICIO	0	178	178

ID	Intersection Name	Southbound	Westbound	Total Volume
		Right	Thru	
6	SALIDA EDIFICIO	266	0	266

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Scenario 6: Con Proyecto 2025
1/15/2015

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound	Eastbound			Total Volume
			Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	Final Base	1678	76	2480	75	165	401	4875
		Growth Rate	1.50	1.50	1.50	1.50	1.50	1.50	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**2517**	**114**	**3720**	**113**	**248**	**602**	**7314**

ID	Intersection Name	Volume Type	Northbound			Southbound		Westbound			Total Volume
			U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	Final Base	130	56	1559	2480	124	607	157	155	5268
		Growth Rate	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	-
		In Process	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0
		Future Total	**195**	**84**	**2339**	**3720**	**186**	**911**	**236**	**233**	**7904**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	Final Base	241	18	282	38	579
		Growth Rate	1.50	1.50	1.50	1.50	-
		In Process	0	0	0	0	0
		Net New Trips	89	0	89	0	178
		Other	0	0	0	0	0
		Future Total	**451**	**27**	**512**	**57**	**1047**

ID	Intersection Name	Volume Type	Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	Final Base	50	72	107	235	464
		Growth Rate	1.50	1.50	1.50	1.50	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	133	133	266
		Other	0	0	0	0	0
		Future Total	**75**	**108**	**294**	**486**	**963**

ID	Intersection Name	Volume Type	Eastbound		Total Volume
			Thru	Right	
5	INGRESO EDIFICIO	Final Base	0	0	0
		Growth Rate	1.00	1.00	-
		In Process	0	0	0
		Net New Trips	0	178	178
		Other	0	0	0
		Future Total	**0**	**178**	**178**

ID	Intersection Name	Volume Type	Southbound	Westbound	Total Volume
			Right	Thru	
6	SALIDA EDIFICIO	Final Base	0	0	0
		Growth Rate	1.00	1.00	-
		In Process	0	0	0
		Net New Trips	266	0	266
		Other	0	0	0
		Future Total	**266**	**0**	**266**

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Scenario 6: Con Proyecto 2025
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Fair Share Volumes

Intersection 1: AV AMAZONAS Y PEREIRA							
Zone ID: Name	Northbound		Southbound	Eastbound			Total
	Thru	Right	Thru	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	
Total Analysis Volume	2517	114	3720	113	248	602	

Intersection 2: AV AMAZONAS Y JUAN VILLALENGUA									
Zone ID: Name	Northbound			Southbound		Westbound			Total
	U-T	Left	Thru	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	
Total Analysis Volume	195	84	2339	3720	186	911	236	233	

Intersection 3: JORGE DROM Y ALFONSO PEREIRA					
Zone ID: Name	Southbound		Eastbound		Total
	Left	Thru	Thru	Right	
1: Zone	89	0	89	0	178
Total Volume	89	0	89	0	
Total Analysis Volume	451	27	512	57	

Intersection 4: JORGE DROM Y JUAN VILLALENGUA					
Zone ID: Name	Southbound		Westbound		Total
	Thru	Right	Left	Thru	
1: Zone	0	0	133	133	266
Total Volume	0	0	133	133	
Total Analysis Volume	75	108	294	486	

Intersection 5: INGRESO EDIFICIO			
Zone ID: Name	Eastbound		Total
	Thru	Right	
1: Zone	0	178	178
Total Volume	0	178	
Total Analysis Volume	0	178	

Intersection 6: SALIDA EDIFICIO			
Zone ID: Name	Southbound	Westbound	Total
	Right	Thru	
1: Zone	266	0	266
Total Volume	266	0	
Total Analysis Volume	266	0	

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Scenario 6: Con Proyecto 2025
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Fair Share % of Net New Site

Intersection 1: AV AMAZONAS Y PEREIRA							
Zone ID: Name	Northbound		Southbound	Eastbound			Total
	Thru	Right	Thru	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	NaN%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 2: AV AMAZONAS Y JUAN VILLALENGUA									
Zone ID: Name	Northbound			Southbound		Westbound			Total
	U-T	Left	Thru	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	NaN%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 3: JORGE DROM Y ALFONSO PEREIRA					
Zone ID: Name	Southbound		Eastbound		Total
	Left	Thru	Thru	Right	
1: Zone	100%	0	100%	0	100.00%
Total	100.00%	0.00%	100.00%	0.00%	

Intersection 4: JORGE DROM Y JUAN VILLALENGUA					
Zone ID: Name	Southbound		Westbound		Total
	Thru	Right	Left	Thru	
1: Zone	0	0	100%	100%	100.00%
Total	0.00%	0.00%	100.00%	100.00%	

Intersection 5: INGRESO EDIFICIO			
Zone ID: Name	Eastbound		Total
	Thru	Right	
1: Zone	0	100%	100.00%
Total	0.00%	100.00%	

Intersection 6: SALIDA EDIFICIO			
Zone ID: Name	Southbound	Westbound	Total
	Right	Thru	
1: Zone	100%	0	100.00%
Total	100.00%	0.00%	

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Scenario 6: Con Proyecto 2025
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Fair Share % of Total Analysis

Intersection 1: AV AMAZONAS Y PEREIRA							
Zone ID: Name	Northbound		Southbound	Eastbound			Total
	Thru	Right	Thru	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0.00%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 2: AV AMAZONAS Y JUAN VILLALENGUA									
Zone ID: Name	Northbound			Southbound		Westbound			Total
	U-T	Left	Thru	Thru	Right	Left	Thru	Right	
1: Zone	0	0	0	0	0	0	0	0	0.00%
Total	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Intersection 3: JORGE DROM Y ALFONSO PEREIRA					
Zone ID: Name	Southbound		Eastbound		Total
	Left	Thru	Thru	Right	
1: Zone	16.48%	0	14.81%	0	2.99%
Total	16.48%	0.00%	14.81%	0.00%	

Intersection 4: JORGE DROM Y JUAN VILLALENGUA					
Zone ID: Name	Southbound		Westbound		Total
	Thru	Right	Left	Thru	
1: Zone	0	0	31.15%	21.49%	5.47%
Total	0.00%	0.00%	31.15%	21.49%	

Intersection 5: INGRESO EDIFICIO			
Zone ID: Name	Eastbound		Total
	Thru	Right	
1: Zone	0	50%	28.09%
Total	0.00%	50.00%	

Intersection 6: SALIDA EDIFICIO			
Zone ID: Name	Southbound	Westbound	Total
	Right	Thru	
1: Zone	50%	0	18.80%
Total	50.00%	0.00%	

Signal Warrants Report For Intersection #3: JORGE DROM Y ALFONSO PEREIRA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	W
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	W
1	478	569
2	459	546
3	449	535
4	382	455
5	363	432
6	325	387
7	301	358
8	287	341
9	229	273
10	215	256
11	215	256
12	206	245
13	186	222
14	172	205
15	172	205
16	167	199
17	96	114
18	53	63
19	48	57
20	19	23
21	14	17
22	14	17
23	10	11
24	10	11

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	478	2	569	No	No	Yes	Yes	No	No	No	No	Yes	Yes
2	2	459	2	546	No	No	Yes	Yes	No	No	No	No	Yes	Yes
3	2	449	2	535	No	No	Yes	Yes	No	No	No	No	Yes	Yes
4	2	382	2	455	No	No	No	Yes	No	No	No	No	Yes	Yes
5	2	363	2	432	No	No	No	Yes	No	No	No	No	Yes	Yes
6	2	325	2	387	No	No	No	No	No	No	No	No	Yes	No
7	2	301	2	358	No	No	No	No	No	No	No	No	Yes	No
8	2	287	2	341	No	No	No	No	No	No	No	No	Yes	No
9	2	229	2	273	No	No	No	No	No	No	No	No	No	No
10	2	215	2	256	No	No	No	No	No	No	No	No	No	No
11	2	215	2	256	No	No	No	No	No	No	No	No	No	No
12	2	206	2	245	No	No	No	No	No	No	No	No	No	No
13	2	186	2	222	No	No	No	No	No	No	No	No	No	No
14	2	172	2	205	No	No	No	No	No	No	No	No	No	No
15	2	172	2	205	No	No	No	No	No	No	No	No	No	No
16	2	167	2	199	No	No	No	No	No	No	No	No	No	No
17	2	96	2	114	No	No	No	No	No	No	No	No	No	No
18	2	53	2	63	No	No	No	No	No	No	No	No	No	No
19	2	48	2	57	No	No	No	No	No	No	No	No	No	No
20	2	19	2	23	No	No	No	No	No	No	No	No	No	No
21	2	14	2	17	No	No	No	No	No	No	No	No	No	No
22	2	14	2	17	No	No	No	No	No	No	No	No	No	No
23	2	10	2	11	No	No	No	No	No	No	No	No	No	No
24	2	10	2	11	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	3	5	0	0	0	0	8	5

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	235.1
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	37:09
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	569
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1047
Number of Approaches on Intersection	2
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection #4: JORGE DROM Y JUAN VILLALENGUA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	E
1	183	780
2	176	749
3	172	733
4	146	624
5	139	593
6	124	530
7	115	491
8	110	468
9	88	374
10	82	351
11	82	351
12	79	335
13	71	304
14	66	281
15	66	281
16	64	273
17	37	156
18	20	86
19	18	78
20	7	31
21	5	23
22	5	23
23	4	16
24	4	16

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	183	2	780	No	No	No	No	No	No	No	No	Yes	Yes
2	2	176	2	749	No	No	No	No	No	No	No	No	Yes	Yes
3	2	172	2	733	No	No	No	No	No	No	No	No	Yes	Yes
4	2	146	2	624	No	No	No	No	No	No	No	No	Yes	No
5	2	139	2	593	No	No	No	No	No	No	No	No	Yes	No
6	2	124	2	530	No	No	No	No	No	No	No	No	Yes	No
7	2	115	2	491	No	No	No	No	No	No	No	No	No	No
8	2	110	2	468	No	No	No	No	No	No	No	No	No	No
9	2	88	2	374	No	No	No	No	No	No	No	No	No	No
10	2	82	2	351	No	No	No	No	No	No	No	No	No	No
11	2	82	2	351	No	No	No	No	No	No	No	No	No	No
12	2	79	2	335	No	No	No	No	No	No	No	No	No	No
13	2	71	2	304	No	No	No	No	No	No	No	No	No	No
14	2	66	2	281	No	No	No	No	No	No	No	No	No	No
15	2	66	2	281	No	No	No	No	No	No	No	No	No	No
16	2	64	2	273	No	No	No	No	No	No	No	No	No	No
17	2	37	2	156	No	No	No	No	No	No	No	No	No	No
18	2	20	2	86	No	No	No	No	No	No	No	No	No	No
19	2	18	2	78	No	No	No	No	No	No	No	No	No	No
20	2	7	2	31	No	No	No	No	No	No	No	No	No	No
21	2	5	2	23	No	No	No	No	No	No	No	No	No	No
22	2	5	2	23	No	No	No	No	No	No	No	No	No	No
23	2	4	2	16	No	No	No	No	No	No	No	No	No	No
24	2	4	2	16	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	6	3

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	14.8
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	3:12
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	780
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	963
Number of Approaches on Intersection	2
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection #6: SALIDA EDIFICIO

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E
Minor Approaches	N
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	E	N
1	0	266
2	0	255
3	0	250
4	0	213
5	0	202
6	0	181
7	0	168
8	0	160
9	0	128
10	0	120
11	0	120
12	0	114
13	0	104
14	0	96
15	0	96
16	0	93
17	0	53
18	0	29
19	0	27
20	0	11
21	0	8
22	0	8
23	0	5
24	0	5

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	0	2	266	No	No	No	No	No	No	No	No	No	No
2	2	0	2	255	No	No	No	No	No	No	No	No	No	No
3	2	0	2	250	No	No	No	No	No	No	No	No	No	No
4	2	0	2	213	No	No	No	No	No	No	No	No	No	No
5	2	0	2	202	No	No	No	No	No	No	No	No	No	No
6	2	0	2	181	No	No	No	No	No	No	No	No	No	No
7	2	0	2	168	No	No	No	No	No	No	No	No	No	No
8	2	0	2	160	No	No	No	No	No	No	No	No	No	No
9	2	0	2	128	No	No	No	No	No	No	No	No	No	No
10	2	0	2	120	No	No	No	No	No	No	No	No	No	No
11	2	0	2	120	No	No	No	No	No	No	No	No	No	No
12	2	0	2	114	No	No	No	No	No	No	No	No	No	No
13	2	0	2	104	No	No	No	No	No	No	No	No	No	No
14	2	0	2	96	No	No	No	No	No	No	No	No	No	No
15	2	0	2	96	No	No	No	No	No	No	No	No	No	No
16	2	0	2	93	No	No	No	No	No	No	No	No	No	No
17	2	0	2	53	No	No	No	No	No	No	No	No	No	No
18	2	0	2	29	No	No	No	No	No	No	No	No	No	No
19	2	0	2	27	No	No	No	No	No	No	No	No	No	No
20	2	0	2	11	No	No	No	No	No	No	No	No	No	No
21	2	0	2	8	No	No	No	No	No	No	No	No	No	No
22	2	0	2	8	No	No	No	No	No	No	No	No	No	No
23	2	0	2	5	No	No	No	No	No	No	No	No	No	No
24	2	0	2	5	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:38
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	266
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	266
Number of Approaches on Intersection	2
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

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Scenario 6: Con Proyecto 2025
1/15/2015

Trip generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total trips	% of Total Trip
1: Zone				1.000	444.000	40.00	60.00	178	266	444	100.00
					Added Trips Total			**178**	**266**	**444**	**100.00**

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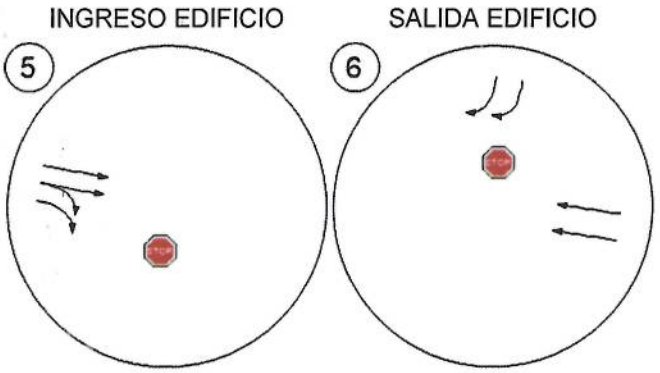
Scenario 6: Con Proyecto 2025
1/15/2015

Trip distribution summary

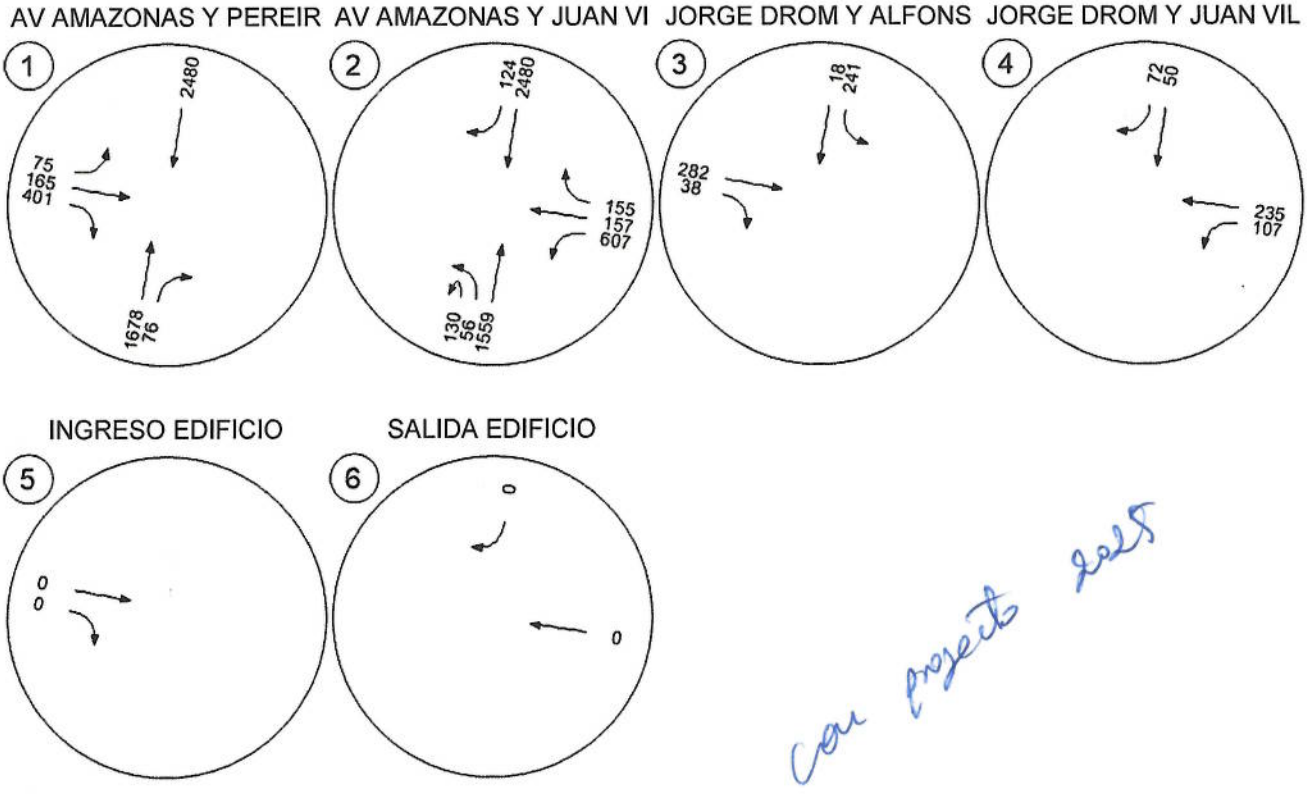
Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
4: Gate	50.00	89	0.00	0
5: Gate	50.00	89	0.00	0
6: Gate	0.00	0	50.00	133
7: Gate	0.00	0	50.00	133
Total	**100.00**	**178**	**100.00**	**266**

Report Figure 1: Study Intersections

Report Figure 2: Lane Configuration and Traffic Control

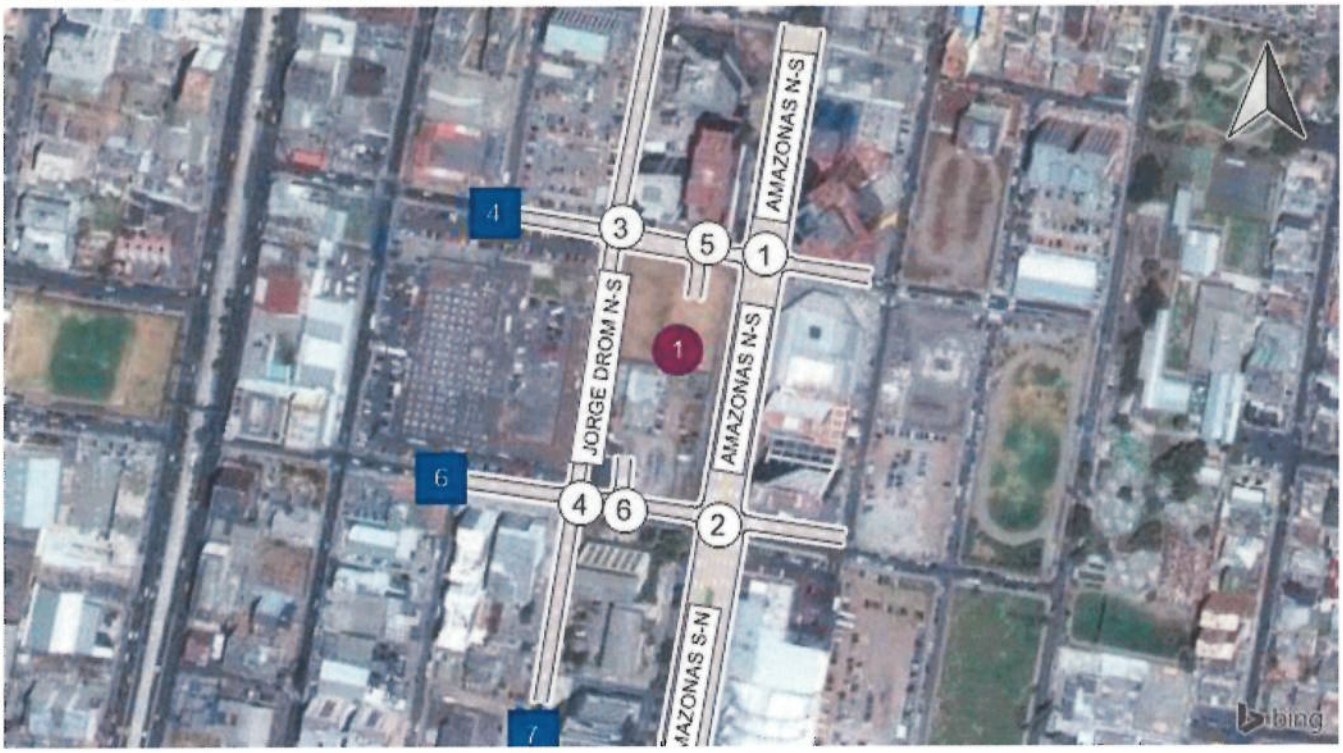


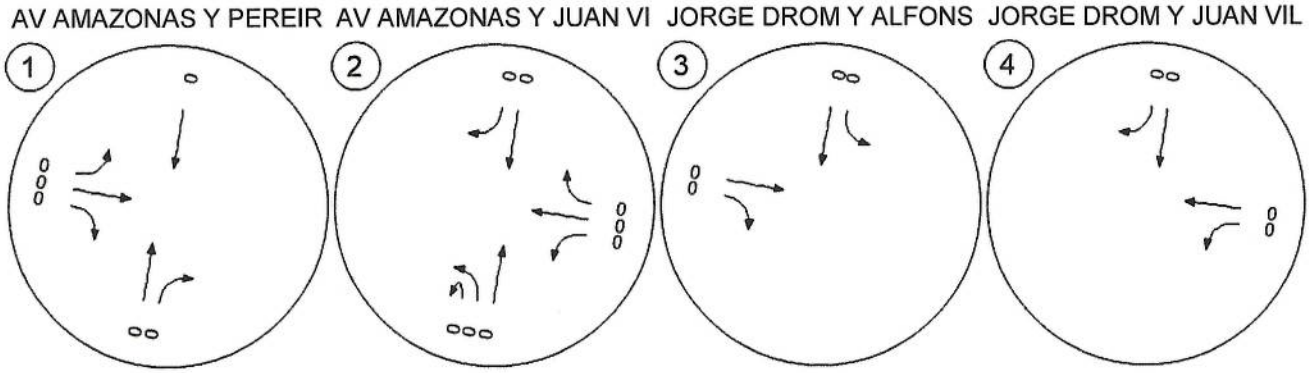
Report Figure 3a: Traffic Volume - Base Volume

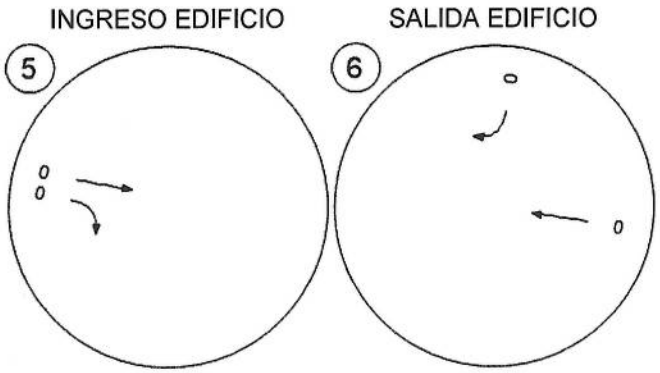


con proyecto 2025

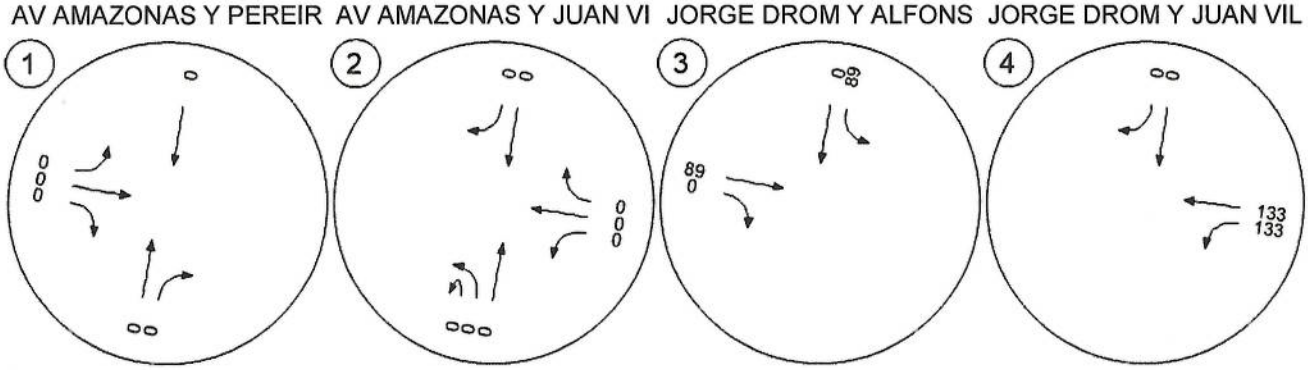
Report Figure 3b: Traffic Volume - In-Process Volume

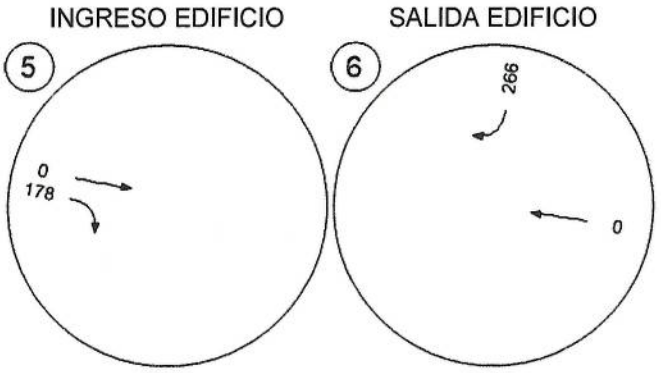




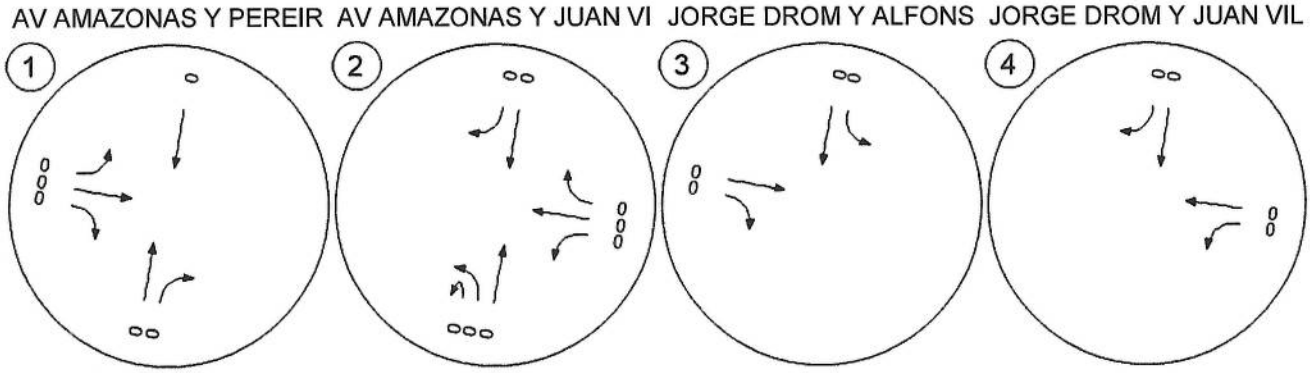


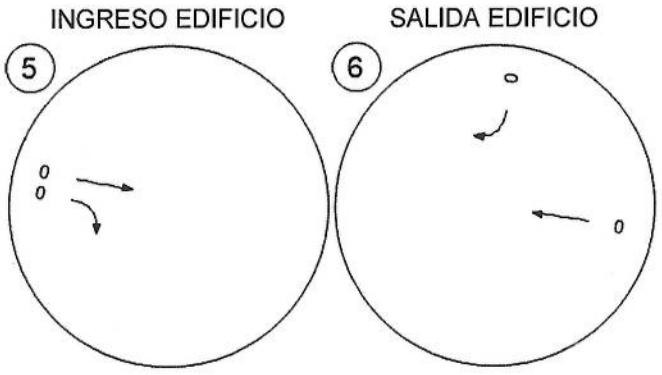
Report Figure 3c: Traffic Volume - Net New Site Trips



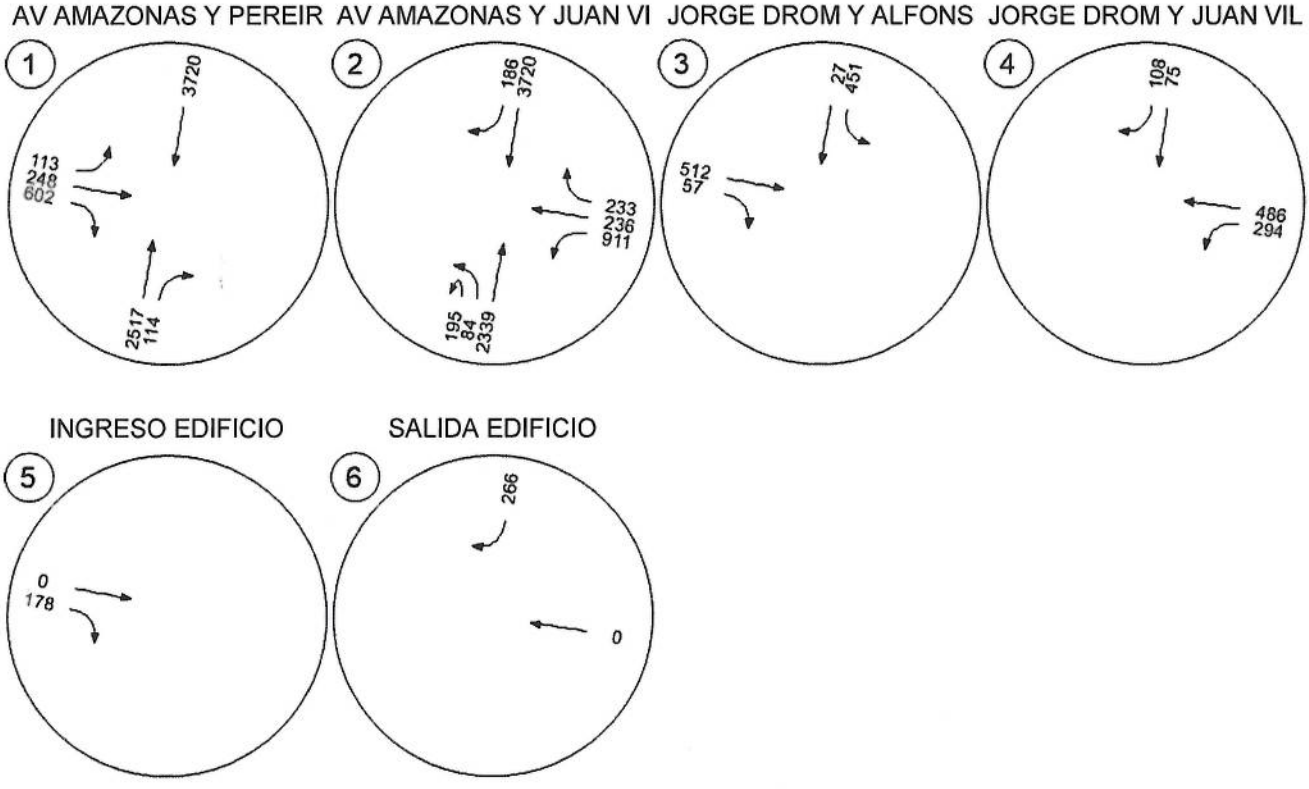


Report Figure 3d: Traffic Volume - Other Volume

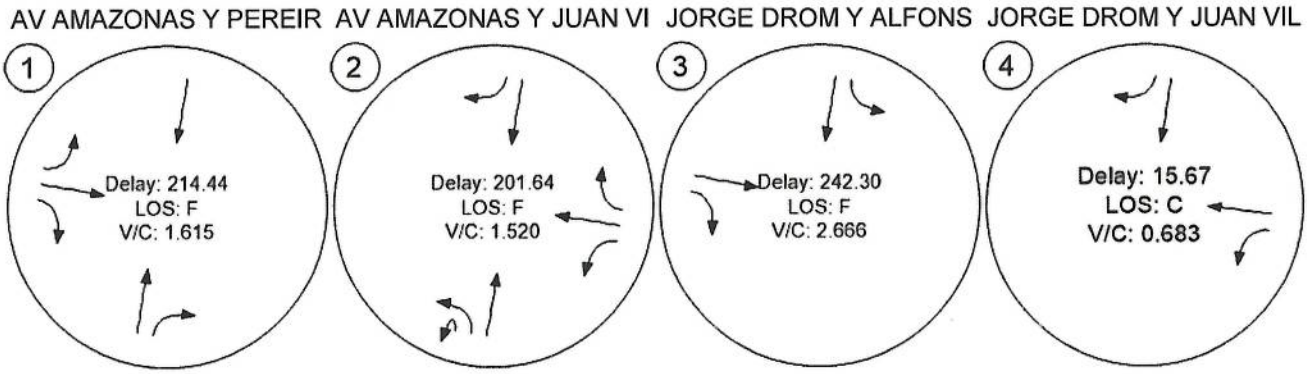


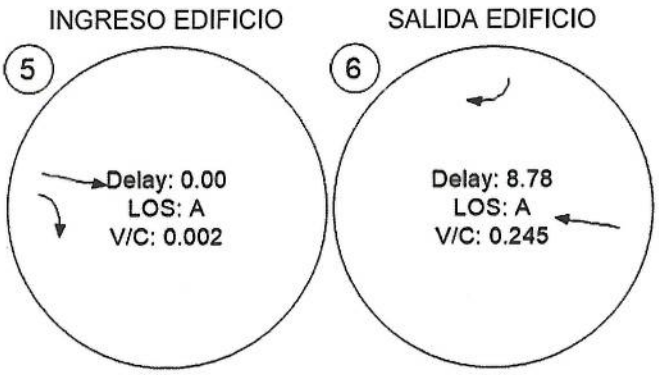


Report Figure 3e: Traffic Volume - Future Total Volume

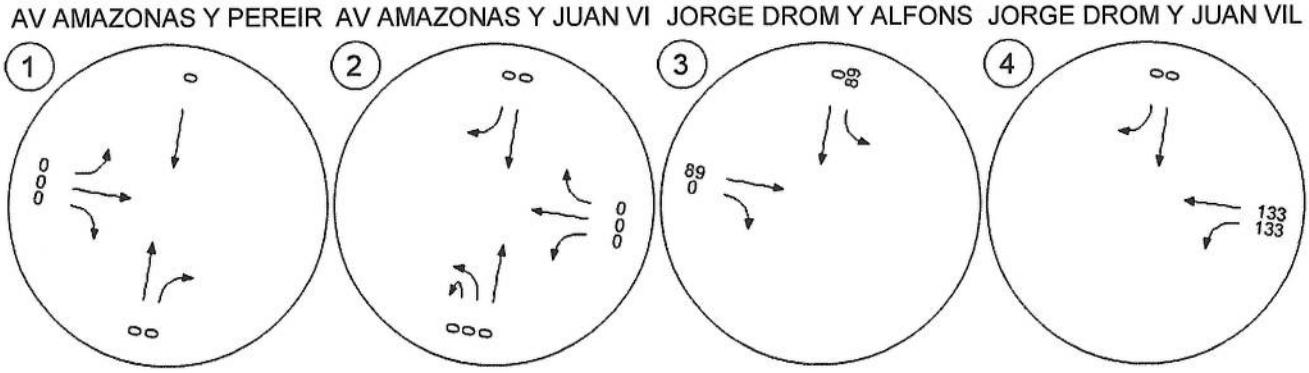


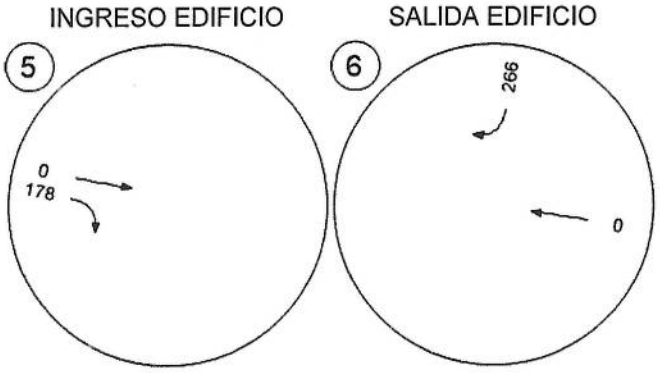
Report Figure 4: Traffic Conditions



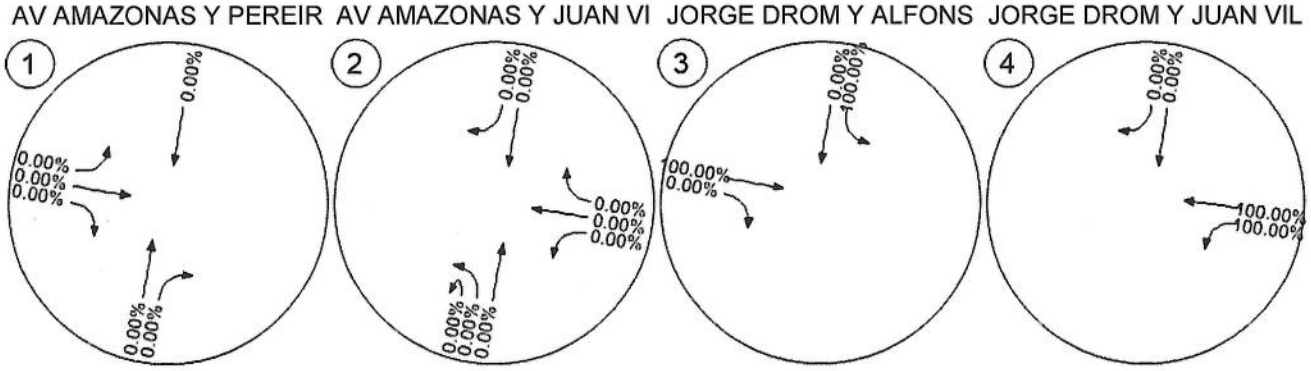


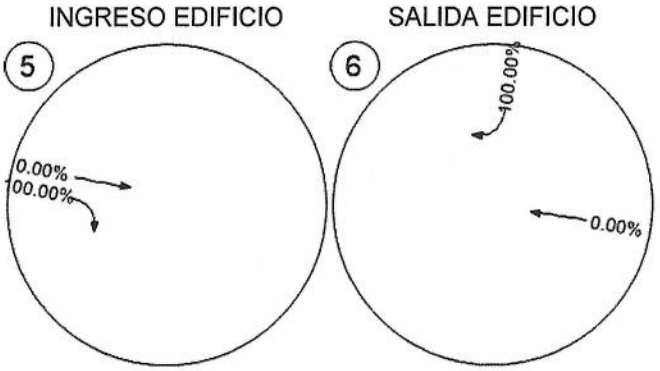
Report Figure 5: Fair Share - Fair Share Volumes - Zone 1



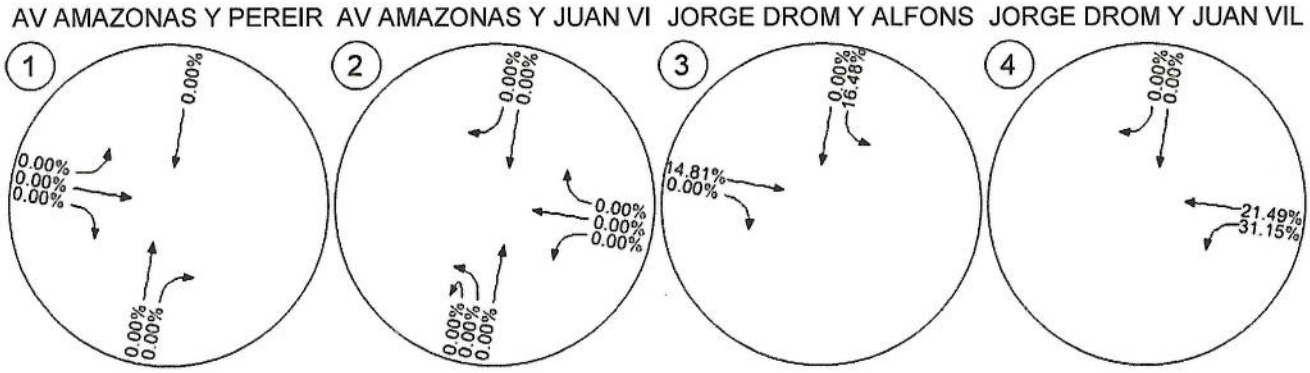


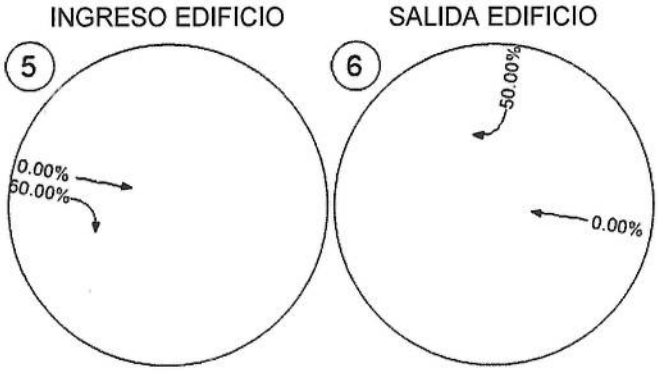
Report Figure 5: Fair Share - Fair Share % of Net New Site - Zone 1





Report Figure 5: Fair Share - Fair Share % of Total Analysis - Zone 1





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Scenario 1: Sin Proyecto 2015
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.137	61.7	E
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	WBL	1.115	61.3	E
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	5.543	1,022.0	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.342	11.2	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value; for all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
#1: AV AMAZONAS Y PEREIRA

Control Type:	Signalized	Delay (sec / veh):	61.7
Analysis Method:	HCM2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.137

Intersection Setup

Name	AMAZONAS N-S			AMAZONAS N-S								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	AMAZONAS N-S			AMAZONAS N-S								
Base Volume Input [veh/h]	0	1678	76	0	2480	0	75	165	401	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.10	1.10	1.00	1.10	1.00	1.10	1.10	1.10	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1846	84	0	2728	0	83	182	441	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	462	21	0	682	0	21	46	110	0	0	0
Total Analysis Volume [veh/h]	0	1846	84	0	2728	0	83	182	441	0	0	0
Presence of On-Street Parking			no				no		no			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	941			941			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	0	0	1	0	0	2	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	60	0	0	60	0	0	40	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		no			no			no				
Maximum Recall		no			no			no				
Pedestrian Recall		no			no			no				
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	C	C	C	C	C	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	56	56	56	36	36	
g / C, Green / Cycle	0.56	0.56	0.56	0.36	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.40	0.39	0.60	0.16	0.54	
s, saturation flow rate [veh/h]	3192	1639	4567	1651	817	
c, Capacity [veh/h]	1788	918	2557	594	294	
d1, Uniform Delay [s]	16.22	15.94	22.00	24.40	32.00	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.54	4.45	38.75	2.41	242.02	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.72	0.70	1.07	0.45	1.50	
d, Delay for Lane Group [s/veh]	18.75	20.39	60.75	26.81	274.02	
Lane Group LOS	B	C	F	C	F	
Critical Lane Group	no	no	yes	no	yes	
50th-Percentile Queue Length [veh]	10.69	11.03	27.27	5.10	26.61	
50th-Percentile Queue Length [m]	81.49	84.01	207.77	38.86	202.76	
95th-Percentile Queue Length [veh]	16.06	16.47	37.73	8.80	43.18	
95th-Percentile Queue Length [m]	122.35	125.51	287.51	67.09	329.02	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	19.25	20.39	0.00	60.75	0.00	26.81	26.81	274.02	0.00	0.00	0.00
Movement LOS		B	C		F		C	C	F			
d_A, Approach Delay [s/veh]	19.30			60.75			181.23			0.00		
Approach LOS	B			E			F			A		
d_I, Intersection Delay [s/veh]	61.69											
Intersection LOS	E											
Intersection V/C	1.137											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#2: AV AMAZONAS Y JUAN VILLALENGUA

Control Type:	Signalized	Delay (sec / veh):	61.3
Analysis Method:	HCM2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.115

Intersection Setup

Name	AMAZONAS S-N				AMAZONAS N-S			JUAN VILLALENGUA E-O					
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.00	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28				48.28			48.28			48.28		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	yes				yes			yes			yes		

Volumes

Name	AMAZONAS S-N				AMAZONAS N-S			JUAN VILLALENGUA E-O					
Base Volume Input [veh/h]	130	56	1559	0	0	2480	124	0	0	0	607	157	155
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.10	1.10	1.10	1.00	1.00	1.10	1.10	1.00	1.00	1.00	1.10	1.10	1.10
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	143	62	1715	0	0	2728	136	0	0	0	668	173	171
Peak Hour Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	16	429	0	0	682	34	0	0	0	167	43	43
Total Analysis Volume [veh/h]	143	62	1715	0	0	2728	136	0	0	0	668	173	171
Presence of On-Street Parking	no						no				no		no
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Perm	Prote	Overl	Perm	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	1	0	0	1	0	0	0	0	0	2	0
Auxiliary Signal Groups			1										
Lead / Lag	-	Lag	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	0	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	40	60	0	0	60	0	0	0	0	0	40	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	0	10	0	0	0	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		no	no			no						no	
Maximum Recall		no	no			no						no	
Pedestrian Recall		no	no			no						no	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	L	C	C	C		C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00		2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	36	56	56	56		36	36
g / C, Green / Cycle	0.36	0.56	0.56	0.56		0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.22	0.38	0.60	0.58		0.52	0.25
s, saturation flow rate [veh/h]	929	4567	3192	1635		1293	1403
c, Capacity [veh/h]	195	2557	1788	916		537	505
d1, Uniform Delay [s]	45.84	15.50	22.00	22.00		34.15	27.14
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	79.20	1.42	42.15	41.38		124.33	7.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.05	0.67	1.07	1.04		1.24	0.68
d, Delay for Lane Group [s/veh]	125.04	16.92	64.15	63.38		158.48	34.39
Lane Group LOS	F	B	F	F		F	C
Critical Lane Group	no	no	yes	no		yes	no
50th-Percentile Queue Length [veh]	9.13	8.88	29.43	29.96		31.94	7.81
50th-Percentile Queue Length [m]	69.56	67.70	224.27	228.31		243.40	59.48
95th-Percentile Queue Length [veh]	14.53	13.77	40.42	40.30		47.14	12.39
95th-Percentile Queue Length [m]	110.70	104.95	308.02	307.08		359.19	94.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	125.0	125.0	16.92	0.00	0.00	63.92	63.38	0.00	0.00	0.00	158.48	34.39	34.39
Movement LOS	F	F	B			F	E				F	C	C
d_A, Approach Delay [s/veh]	28.47				63.89			0.00			116.30		
Approach LOS	C				E			A			F		
d_I, Intersection Delay [s/veh]	61.31												
Intersection LOS	E												
Intersection V/C	1.115												

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#3: JORGE DROM Y ALFONSO PEREIRA

Control Type:	Two-way stop	Delay (sec / veh):	1,022.0
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	5.543

Intersection Setup

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Base Volume Input [veh/h]	0	0	0	241	18	0	0	282	38	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.10	1.10	1.00	1.00	1.10	1.10	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	265	20	0	0	310	42	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	66	5	0	0	78	11	0	0	0
Total Analysis Volume [veh/h]	0	0	0	265	20	0	0	310	42	0	0	0
Pedestrian Volume [ped/h]	0			663			663			0		

Intersection Settings

Priority Scheme	Free			Free			Stop			Stop		
Flared Lane							no					
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance							no					
Number of Storage Spaces in Median	0			0			0			0		

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.16	0.00	0.00	0.00	5.54	0.25	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.65	0.00	0.00	0.00	1022.00	847.83	0.00	0.00	0.00
Movement LOS				A	A			F	F			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.58	0.29	0.00	0.00	18.02	17.47	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	4.45	2.22	0.00	0.00	137.31	133.15	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.11			1001.21			0.00		
Approach LOS	A			A			F			A		
d_I, Intersection Delay [s/veh]	556.44											
Intersection LOS	F											

Intersection Level Of Service Report
#4: JORGE DROM Y JUAN VILLALENGUA

Control Type:	Two-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.342

Intersection Setup

Name				JORGE DROM N-S						JUAN VILLALENGUA E-O		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name				JORGE DROM N-S						JUAN VILLALENGUA E-O		
Base Volume Input [veh/h]	0	0	0	0	50	72	0	0	0	107	235	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.10	1.10	1.00	1.00	1.00	1.10	1.10	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	55	79	0	0	0	118	259	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	14	20	0	0	0	30	65	0
Total Analysis Volume [veh/h]	0	0	0	0	55	79	0	0	0	118	259	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				no
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.34	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.31	11.24	0.00
Movement LOS					A	A				B	B	
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.92	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.60	7.04	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			0.00			10.95		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	8.08											
Intersection LOS	B											

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Scenario 1: Sin Proyecto 2015
1/15/2015

Turning Movement Volume: Summary

ID	Intersection Name	Northbound		Southbound	Eastbound			Total Volume
		Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	1846	84	2728	83	182	441	5364

ID	Intersection Name	Northbound			Southbound		Westbound			Total Volume
		U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	143	62	1715	2728	136	668	173	171	5796

ID	Intersection Name	Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	265	20	310	42	637

ID	Intersection Name	Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	55	79	118	259	511

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Scenario 1: Sin Proyecto 2015
1/15/2015

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound	Eastbound			Total Volume
			Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	Final Base	1678	76	2480	75	165	401	4875
		Growth Rate	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**1846**	**84**	**2728**	**83**	**182**	**441**	**5364**

ID	Intersection Name	Volume Type	Northbound			Southbound		Westbound			Total Volume
			U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	Final Base	130	56	1559	2480	124	607	157	155	5268
		Growth Rate	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0
		Future Total	**143**	**62**	**1715**	**2728**	**136**	**668**	**173**	**171**	**5796**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	Final Base	241	18	282	38	579
		Growth Rate	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**265**	**20**	**310**	**42**	**637**

ID	Intersection Name	Volume Type	Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	Final Base	50	72	107	235	464
		Growth Rate	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**55**	**79**	**118**	**259**	**511**

Signal Warrants Report For Intersection #3: JORGE DROM Y ALFONSO PEREIRA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	W
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	W
1	285	352
2	274	338
3	268	331
4	228	282
5	217	268
6	194	239
7	180	222
8	171	211
9	137	169
10	128	158
11	128	158
12	123	151
13	111	137
14	103	127
15	103	127
16	100	123
17	57	70
18	31	39
19	29	35
20	11	14
21	9	11
22	9	11
23	6	7
24	6	7

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	285	2	352	No	No	No	No	No	No	No	No	Yes	No
2	2	274	2	338	No	No	No	No	No	No	No	No	No	No
3	2	268	2	331	No	No	No	No	No	No	No	No	No	No
4	2	228	2	282	No	No	No	No	No	No	No	No	No	No
5	2	217	2	268	No	No	No	No	No	No	No	No	No	No
6	2	194	2	239	No	No	No	No	No	No	No	No	No	No
7	2	180	2	222	No	No	No	No	No	No	No	No	No	No
8	2	171	2	211	No	No	No	No	No	No	No	No	No	No
9	2	137	2	169	No	No	No	No	No	No	No	No	No	No
10	2	128	2	158	No	No	No	No	No	No	No	No	No	No
11	2	128	2	158	No	No	No	No	No	No	No	No	No	No
12	2	123	2	151	No	No	No	No	No	No	No	No	No	No
13	2	111	2	137	No	No	No	No	No	No	No	No	No	No
14	2	103	2	127	No	No	No	No	No	No	No	No	No	No
15	2	103	2	127	No	No	No	No	No	No	No	No	No	No
16	2	100	2	123	No	No	No	No	No	No	No	No	No	No
17	2	57	2	70	No	No	No	No	No	No	No	No	No	No
18	2	31	2	39	No	No	No	No	No	No	No	No	No	No
19	2	29	2	35	No	No	No	No	No	No	No	No	No	No
20	2	11	2	14	No	No	No	No	No	No	No	No	No	No
21	2	9	2	11	No	No	No	No	No	No	No	No	No	No
22	2	9	2	11	No	No	No	No	No	No	No	No	No	No
23	2	6	2	7	No	No	No	No	No	No	No	No	No	No
24	2	6	2	7	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	1	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	1001.2
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	97:53
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	352
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	637
Number of Approaches on Intersection	2
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection #4: JORGE DROM Y JUAN VILLALENGUA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	E
1	134	377
2	129	362
3	126	354
4	107	302
5	102	287
6	91	256
7	84	238
8	80	226
9	64	181
10	60	170
11	60	170
12	58	162
13	52	147
14	48	136
15	48	136
16	47	132
17	27	75
18	15	41
19	13	38
20	5	15
21	4	11
22	4	11
23	3	8
24	3	8

Warrant Analysis by Hour

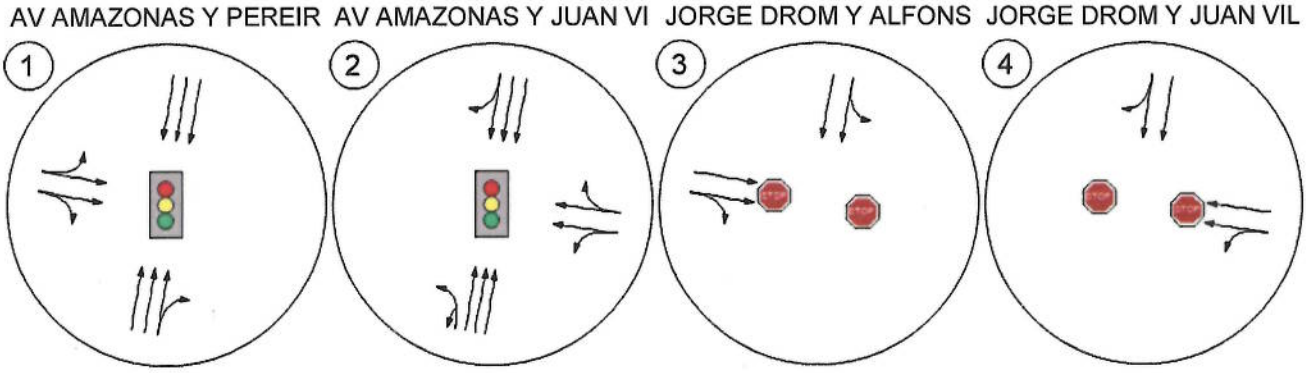
Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	134	2	377	No	No	No	No	No	No	No	No	No	No
2	2	129	2	362	No	No	No	No	No	No	No	No	No	No
3	2	126	2	354	No	No	No	No	No	No	No	No	No	No
4	2	107	2	302	No	No	No	No	No	No	No	No	No	No
5	2	102	2	287	No	No	No	No	No	No	No	No	No	No
6	2	91	2	256	No	No	No	No	No	No	No	No	No	No
7	2	84	2	238	No	No	No	No	No	No	No	No	No	No
8	2	80	2	226	No	No	No	No	No	No	No	No	No	No
9	2	64	2	181	No	No	No	No	No	No	No	No	No	No
10	2	60	2	170	No	No	No	No	No	No	No	No	No	No
11	2	60	2	170	No	No	No	No	No	No	No	No	No	No
12	2	58	2	162	No	No	No	No	No	No	No	No	No	No
13	2	52	2	147	No	No	No	No	No	No	No	No	No	No
14	2	48	2	136	No	No	No	No	No	No	No	No	No	No
15	2	48	2	136	No	No	No	No	No	No	No	No	No	No
16	2	47	2	132	No	No	No	No	No	No	No	No	No	No
17	2	27	2	75	No	No	No	No	No	No	No	No	No	No
18	2	15	2	41	No	No	No	No	No	No	No	No	No	No
19	2	13	2	38	No	No	No	No	No	No	No	No	No	No
20	2	5	2	15	No	No	No	No	No	No	No	No	No	No
21	2	4	2	11	No	No	No	No	No	No	No	No	No	No
22	2	4	2	11	No	No	No	No	No	No	No	No	No	No
23	2	3	2	8	No	No	No	No	No	No	No	No	No	No
24	2	3	2	8	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

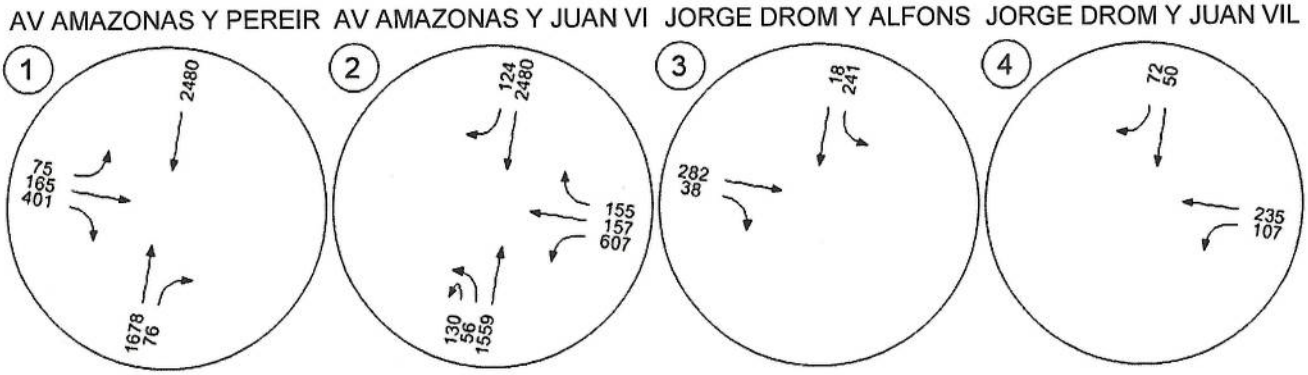
Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.9
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:08
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	377
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	511
Number of Approaches on Intersection	2
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Report Figure 1: Study Intersections

Report Figure 2: Lane Configuration and Traffic Control

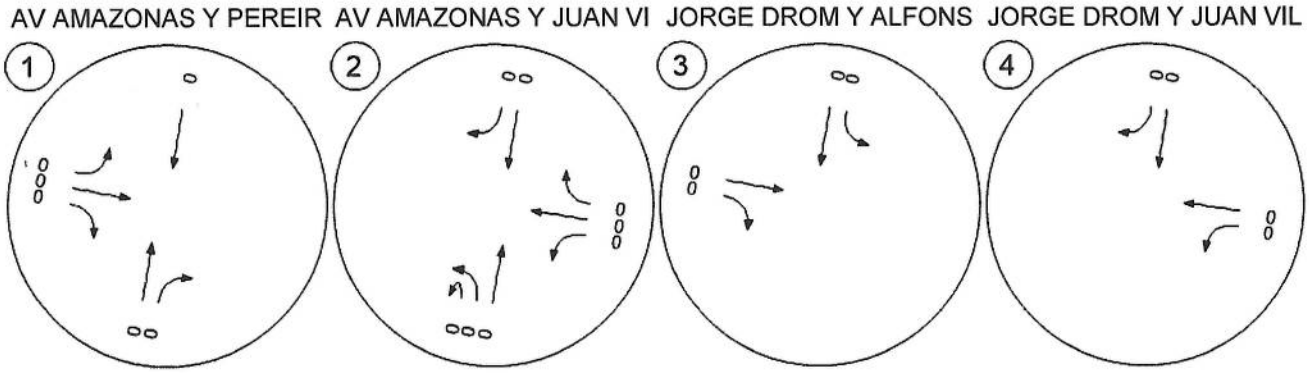


Report Figure 3a: Traffic Volume - Base Volume

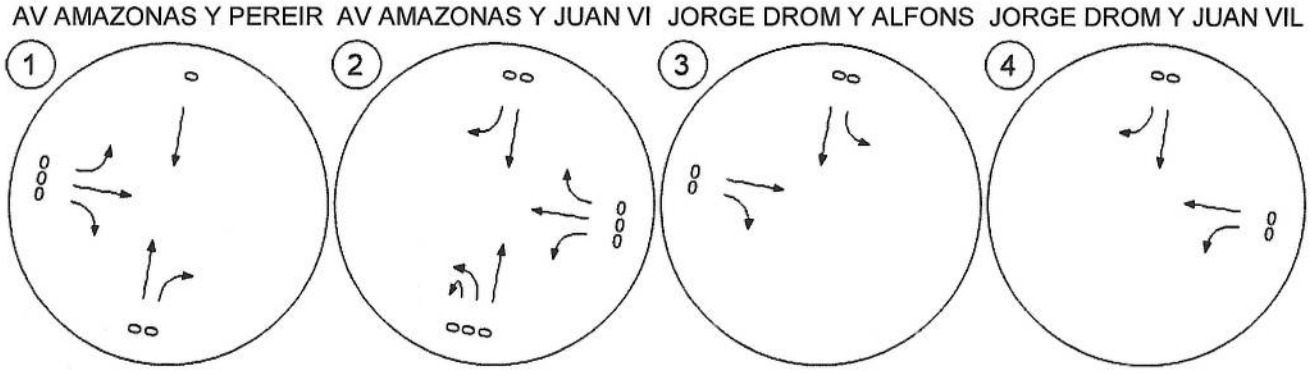


Sin proyecto 2015

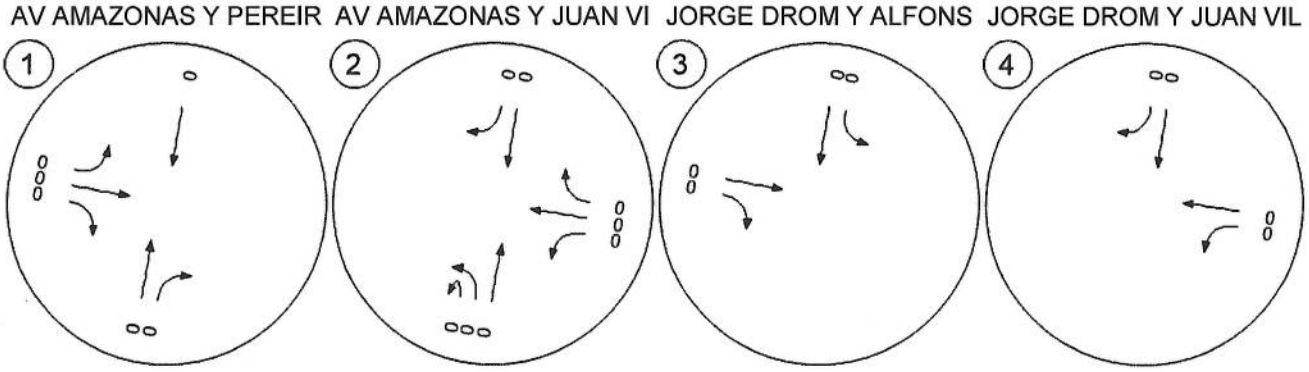
Report Figure 3b: Traffic Volume - In-Process Volume



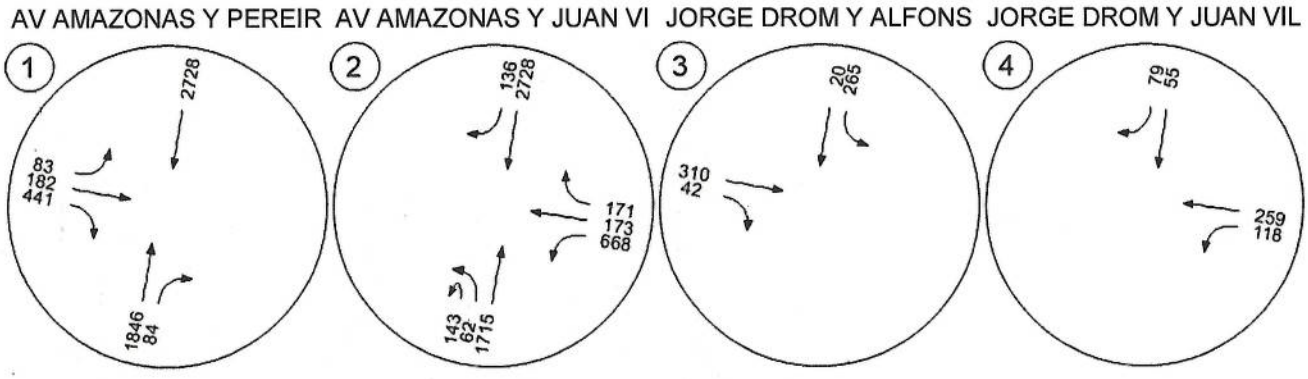
Report Figure 3c: Traffic Volume - Net New Site Trips



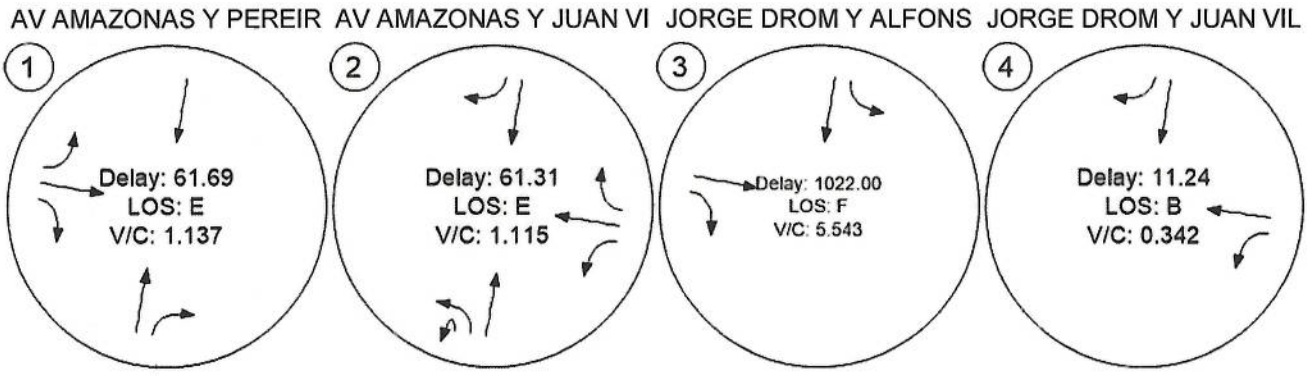
Report Figure 3d: Traffic Volume - Other Volume



Report Figure 3e: Traffic Volume - Future Total Volume



Report Figure 4: Traffic Conditions



Vistro File: G:\...\EDIFICIO NORTE JUDICATURAV6.vistro
Report File: C:\...\SIN PROYECTO 2020.pdf

Scenario 2: Sin Proyecto 2020
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.318	175.9	F
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	WBL	0.000	502.4	F
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	7.806	1,565.5	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.417	11.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value; for all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
#1: AV AMAZONAS Y PEREIRA

Control Type:	Signalized	Delay (sec / veh):	175.9
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.318

Intersection Setup

Name	AMAZONAS N-S			AMAZONAS N-S								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	AMAZONAS N-S			AMAZONAS N-S								
Base Volume Input [veh/h]	0	1678	76	0	2480	0	75	165	401	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.30	1.30	1.00	1.30	1.00	1.30	1.30	1.30	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2181	99	0	3224	0	98	215	521	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	545	25	0	806	0	25	54	130	0	0	0
Total Analysis Volume [veh/h]	0	2181	99	0	3224	0	98	215	521	0	0	0
Presence of On-Street Parking			no				no		no			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	941			941			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	0	0	1	0	0	2	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	75	0	0	75	0	0	15	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		no			no			no				
Maximum Recall		no			no			no				
Pedestrian Recall		no			no			no				
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	C	C	C	C	C	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	71	71	71	11	11	
g / C, Green / Cycle	0.79	0.79	0.79	0.12	0.12	
(v / s)_i Volume / Saturation Flow Rate	0.48	0.46	0.71	0.19	0.61	
s, saturation flow rate [veh/h]	3192	1639	4567	1651	851	
c, Capacity [veh/h]	2518	1293	3603	202	104	
d1, Uniform Delay [s]	3.83	3.74	6.82	39.50	39.50	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.08	1.97	3.93	271.14	1825.08	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.60	0.59	0.89	1.55	5.01	
d, Delay for Lane Group [s/veh]	4.91	5.71	10.75	310.64	1864.58	
Lane Group LOS	A	A	B	F	F	
Critical Lane Group	no	no	yes	no	yes	
50th-Percentile Queue Length [veh]	3.85	4.10	10.06	19.58	55.00	
50th-Percentile Queue Length [m]	29.35	31.23	76.65	149.16	419.08	
95th-Percentile Queue Length [veh]	6.93	7.38	15.26	31.25	85.72	
95th-Percentile Queue Length [m]	52.82	56.21	116.28	238.10	653.22	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	5.15	5.71	0.00	10.75	0.00	310.64	310.64	1864.58	0.00	0.00	0.00
Movement LOS		A	A		B		F	F	F			
d_A, Approach Delay [s/veh]	5.18			10.75			1281.39			0.00		
Approach LOS	A			B			F			A		
d_I, Intersection Delay [s/veh]	175.94											
Intersection LOS	F											
Intersection V/C	1.318											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#2: AV AMAZONAS Y JUAN VILLALENGUA

Control Type:	Signalized	Delay (sec / veh):	502.4
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	AMAZONAS S-N				AMAZONAS N-S			JUAN VILLALENGUA E-O					
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.00	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28				48.28			48.28			48.28		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	yes				yes			yes			yes		

Volumes

Name	AMAZONAS S-N				AMAZONAS N-S			JUAN VILLALENGUA E-O					
Base Volume Input [veh/h]	130	56	1559	0	0	2480	124	0	0	0	607	157	155
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.30	1.30	1.30	1.00	1.00	1.30	1.30	1.00	1.00	1.00	1.30	1.30	1.30
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	169	73	2027	0	0	3224	161	0	0	0	789	204	202
Peak Hour Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	18	507	0	0	806	40	0	0	0	197	51	51
Total Analysis Volume [veh/h]	169	73	2027	0	0	3224	161	0	0	0	789	204	202
Presence of On-Street Parking	no						no				no		no
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permi	Prote	Overl	Permi	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	1	0	0	1	0	0	0	0	0	2	0
Auxiliary Signal Groups			1										
Lead / Lag	-	Lag	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	0	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	30	50	0	0	50	0	0	0	0	0	30	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	0	10	0	0	0	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		no	no			no						no	
Maximum Recall		no	no			no						no	
Pedestrian Recall		no	no			no						no	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	L	C	C	C		C	C
L, Total Lost Time per Cycle [s]	0.00	0.00	0.00	0.00		0.00	0.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
g_i, Effective Green Time [s]	0	0	0	0		0	0
g / C, Green / Cycle	0.00	0.00	0.00	0.00		0.00	0.00
(v / s)_i Volume / Saturation Flow Rate	7.67	0.44	0.71	0.69		0.00	0.29
s, saturation flow rate [veh/h]	32	4567	3192	1635		0	1402
c, Capacity [veh/h]	80	0	0	0		80	0
d1, Uniform Delay [s]	45.00	0.00	0.00	0.00		45.00	0.00
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	943.71	0.00	0.00	0.00		4013.01	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	3.03	0.00	0.00	0.00		9.86	0.00
d, Delay for Lane Group [s/veh]	988.71	0.00	0.00	0.00		4058.01	0.00
Lane Group LOS	F	A	A	A		F	A
Critical Lane Group	no	no	no	no		no	no
50th-Percentile Queue Length [veh]	22.97	0.00	0.00	0.00		91.18	0.00
50th-Percentile Queue Length [m]	175.04	0.00	0.00	0.00		694.78	0.00
95th-Percentile Queue Length [veh]	30.83	0.00	0.00	0.00		106.84	0.00
95th-Percentile Queue Length [m]	234.94	0.00	0.00	0.00		814.10	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	988.7	988.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4058.01	0.00	0.00
Movement LOS	F	F	A			A	A				F	F	A
d_A, Approach Delay [s/veh]	105.45				0.00			0.00			2679.30		
Approach LOS	F				A			A			F		
d_I, Intersection Delay [s/veh]	502.41												
Intersection LOS	F												
Intersection V/C	0.000												

Intersection Level Of Service Report
#3: JORGE DROM Y ALFONSO PEREIRA

Control Type:	Two-way stop	Delay (sec / veh):	1,565.5
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	7.806

Intersection Setup

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Base Volume Input [veh/h]	0	0	0	241	18	0	0	282	38	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.30	1.30	1.00	1.00	1.30	1.30	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	313	23	0	0	367	49	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	78	6	0	0	92	12	0	0	0
Total Analysis Volume [veh/h]	0	0	0	313	23	0	0	367	49	0	0	0
Pedestrian Volume [ped/h]	0			663			663			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			no	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			no	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.19	0.00	0.00	0.00	7.81	0.30	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.75	0.00	0.00	0.00	1565.53	1314.28	0.00	0.00	0.00
Movement LOS				A	A			F	F			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.71	0.36	0.00	0.00	22.93	22.41	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	5.44	2.72	0.00	0.00	174.74	170.79	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.22			1535.93			0.00		
Approach LOS	A			A			F			A		
d_I, Intersection Delay [s/veh]	852.89											
Intersection LOS	F											

Intersection Level Of Service Report
#4: JORGE DROM Y JUAN VILLALENGUA

Control Type:	Two-way stop	Delay (sec / veh):	11.9
Analysis Method:	HCM2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.417

Intersection Setup

Name				JORGE DROM N-S						JUAN VILLALENGUA E-O		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name				JORGE DROM N-S						JUAN VILLALENGUA E-O		
Base Volume Input [veh/h]	0	0	0	0	50	72	0	0	0	107	235	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.30	1.30	1.00	1.00	1.00	1.30	1.30	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	65	94	0	0	0	139	306	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	16	24	0	0	0	35	77	0
Total Analysis Volume [veh/h]	0	0	0	0	65	94	0	0	0	139	306	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				no
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.42	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.83	11.91	0.00
Movement LOS					A	A				B	B	
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	1.20	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.52	9.14	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			0.00			11.57		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	8.53											
Intersection LOS	B											

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Scenario 2: Sin Proyecto 2020
1/15/2015

Turning Movement Volume: Summary

ID	Intersection Name	Northbound		Southbound	Eastbound			Total Volume
		Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	2181	99	3224	98	215	521	6338

ID	Intersection Name	Northbound			Southbound		Westbound			Total Volume
		U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	169	73	2027	3224	161	789	204	202	6849

ID	Intersection Name	Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	313	23	367	49	752

ID	Intersection Name	Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	65	94	139	306	604

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Scenario 2: Sin Proyecto 2020
1/15/2015

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound	Eastbound			Total Volume
			Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	Final Base	1678	76	2480	75	165	401	4875
		Growth Rate	1.30	1.30	1.30	1.30	1.30	1.30	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**2181**	**99**	**3224**	**98**	**215**	**521**	**6338**

ID	Intersection Name	Volume Type	Northbound			Southbound		Westbound			Total Volume
			U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	Final Base	130	56	1559	2480	124	607	157	155	5268
		Growth Rate	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	-
		In Process	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0
		Future Total	**169**	**73**	**2027**	**3224**	**161**	**789**	**204**	**202**	**6849**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	Final Base	241	18	282	38	579
		Growth Rate	1.30	1.30	1.30	1.30	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**313**	**23**	**367**	**49**	**752**

ID	Intersection Name	Volume Type	Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	Final Base	50	72	107	235	464
		Growth Rate	1.30	1.30	1.30	1.30	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**65**	**94**	**139**	**306**	**604**

Signal Warrants Report For Intersection #3: JORGE DROM Y ALFONSO PEREIRA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	W
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	W
1	336	416
2	323	399
3	316	391
4	269	333
5	255	316
6	228	283
7	212	262
8	202	250
9	161	200
10	151	187
11	151	187
12	144	179
13	131	162
14	121	150
15	121	150
16	118	146
17	67	83
18	37	46
19	34	42
20	13	17
21	10	12
22	10	12
23	7	8
24	7	8

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	336	2	416	No	No	No	Yes	No	No	No	No	Yes	No
2	2	323	2	399	No	No	No	No	No	No	No	No	Yes	No
3	2	316	2	391	No	No	No	No	No	No	No	No	Yes	No
4	2	269	2	333	No	No	No	No	No	No	No	No	No	No
5	2	255	2	316	No	No	No	No	No	No	No	No	No	No
6	2	228	2	283	No	No	No	No	No	No	No	No	No	No
7	2	212	2	262	No	No	No	No	No	No	No	No	No	No
8	2	202	2	250	No	No	No	No	No	No	No	No	No	No
9	2	161	2	200	No	No	No	No	No	No	No	No	No	No
10	2	151	2	187	No	No	No	No	No	No	No	No	No	No
11	2	151	2	187	No	No	No	No	No	No	No	No	No	No
12	2	144	2	179	No	No	No	No	No	No	No	No	No	No
13	2	131	2	162	No	No	No	No	No	No	No	No	No	No
14	2	121	2	150	No	No	No	No	No	No	No	No	No	No
15	2	121	2	150	No	No	No	No	No	No	No	No	No	No
16	2	118	2	146	No	No	No	No	No	No	No	No	No	No
17	2	67	2	83	No	No	No	No	No	No	No	No	No	No
18	2	37	2	46	No	No	No	No	No	No	No	No	No	No
19	2	34	2	42	No	No	No	No	No	No	No	No	No	No
20	2	13	2	17	No	No	No	No	No	No	No	No	No	No
21	2	10	2	12	No	No	No	No	No	No	No	No	No	No
22	2	10	2	12	No	No	No	No	No	No	No	No	No	No
23	2	7	2	8	No	No	No	No	No	No	No	No	No	No
24	2	7	2	8	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	1	0	0	0	0	3	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	1535.9
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	177:29
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	416
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	752
Number of Approaches on Intersection	2
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection #4: JORGE DROM Y JUAN VILLALENGUA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	E
1	159	445
2	153	427
3	149	418
4	127	356
5	121	338
6	108	303
7	100	280
8	95	267
9	76	214
10	72	200
11	72	200
12	68	191
13	62	174
14	57	160
15	57	160
16	56	156
17	32	89
18	17	49
19	16	45
20	6	18
21	5	13
22	5	13
23	3	9
24	3	9

Warrant Analysis by Hour

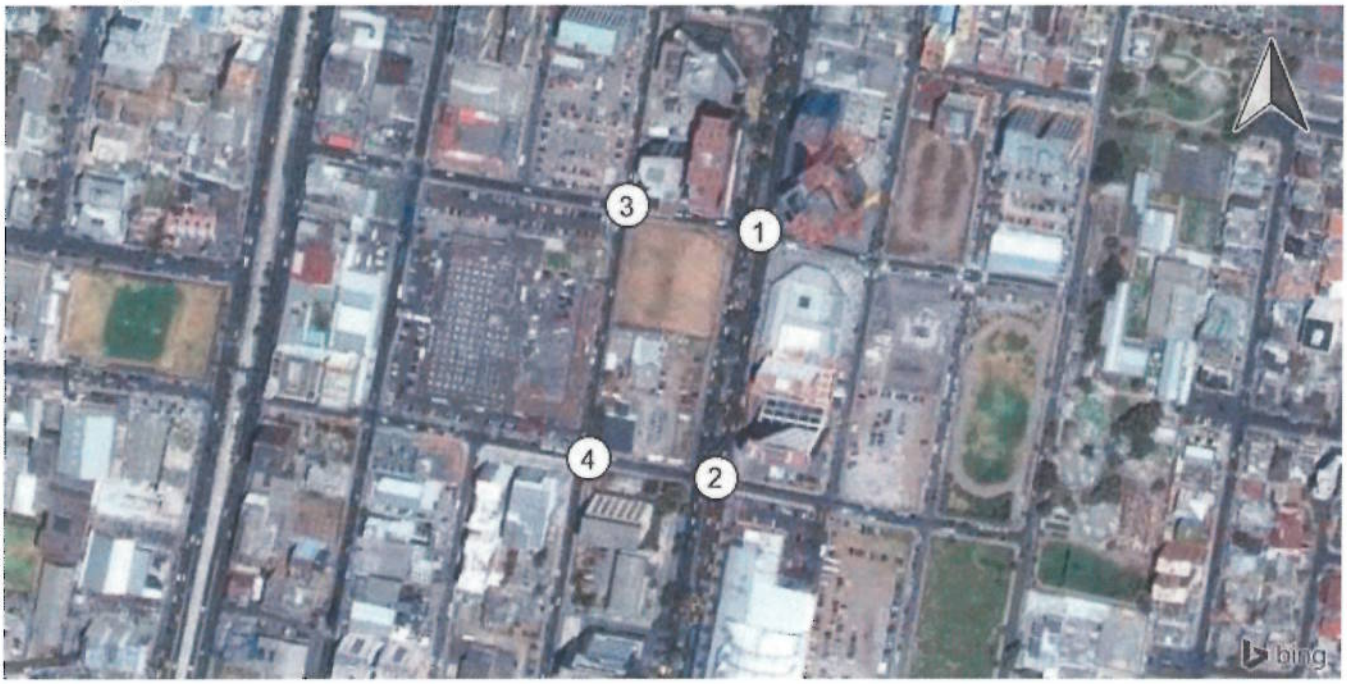
Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	159	2	445	No	No	No	No	No	No	No	No	No	No
2	2	153	2	427	No	No	No	No	No	No	No	No	No	No
3	2	149	2	418	No	No	No	No	No	No	No	No	No	No
4	2	127	2	356	No	No	No	No	No	No	No	No	No	No
5	2	121	2	338	No	No	No	No	No	No	No	No	No	No
6	2	108	2	303	No	No	No	No	No	No	No	No	No	No
7	2	100	2	280	No	No	No	No	No	No	No	No	No	No
8	2	95	2	267	No	No	No	No	No	No	No	No	No	No
9	2	76	2	214	No	No	No	No	No	No	No	No	No	No
10	2	72	2	200	No	No	No	No	No	No	No	No	No	No
11	2	72	2	200	No	No	No	No	No	No	No	No	No	No
12	2	68	2	191	No	No	No	No	No	No	No	No	No	No
13	2	62	2	174	No	No	No	No	No	No	No	No	No	No
14	2	57	2	160	No	No	No	No	No	No	No	No	No	No
15	2	57	2	160	No	No	No	No	No	No	No	No	No	No
16	2	56	2	156	No	No	No	No	No	No	No	No	No	No
17	2	32	2	89	No	No	No	No	No	No	No	No	No	No
18	2	17	2	49	No	No	No	No	No	No	No	No	No	No
19	2	16	2	45	No	No	No	No	No	No	No	No	No	No
20	2	6	2	18	No	No	No	No	No	No	No	No	No	No
21	2	5	2	13	No	No	No	No	No	No	No	No	No	No
22	2	5	2	13	No	No	No	No	No	No	No	No	No	No
23	2	3	2	9	No	No	No	No	No	No	No	No	No	No
24	2	3	2	9	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

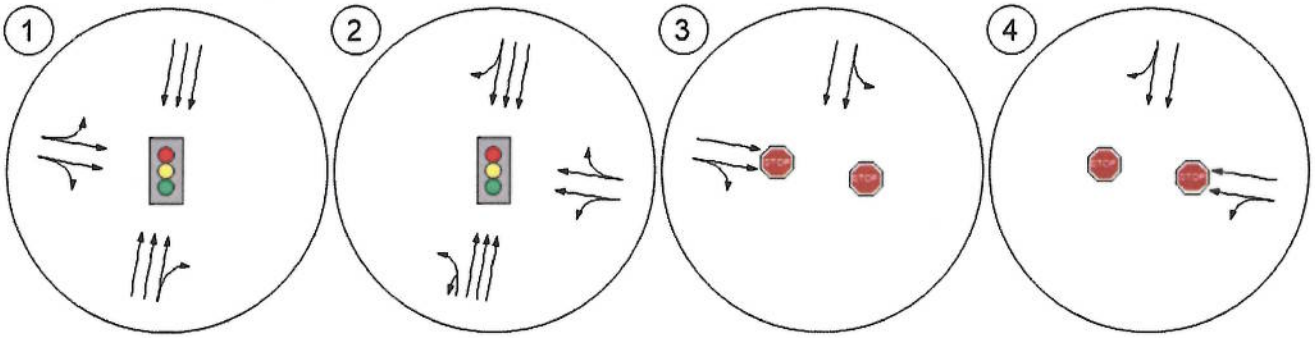
Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	11.6
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:25
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	445
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	604
Number of Approaches on Intersection	2
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

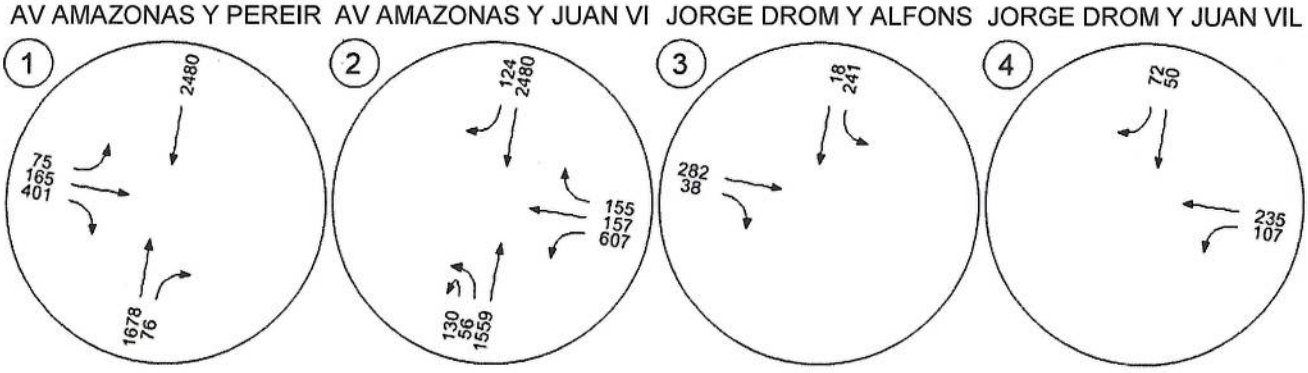
Study Intersections

Lane Configuration and Traffic Control





Report Figure 3a: Traffic Volume - Base Volume



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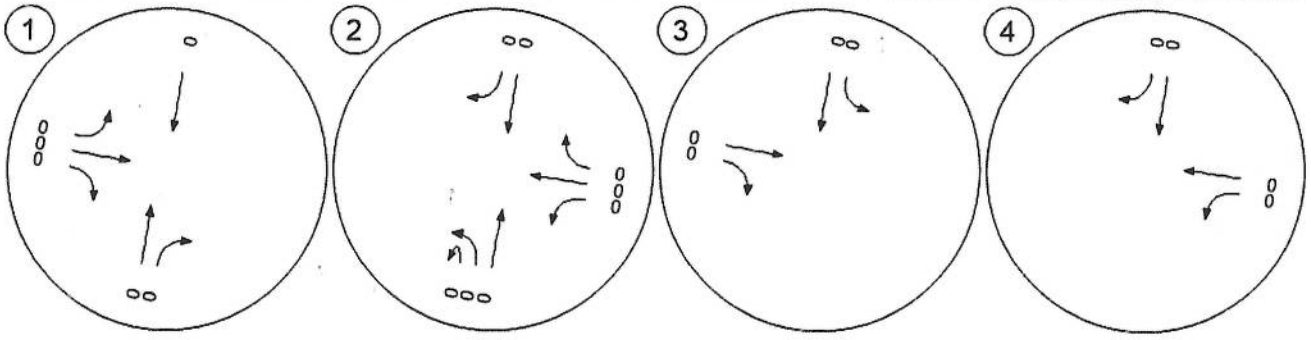
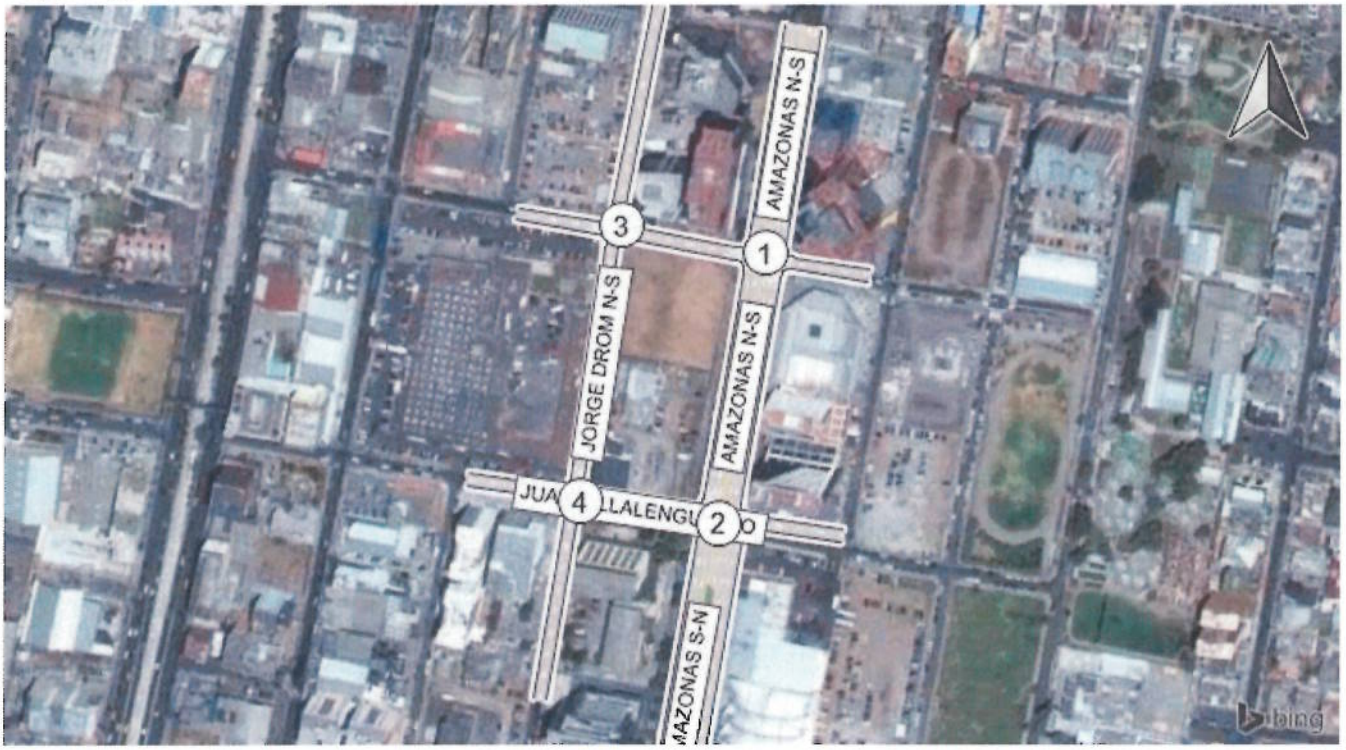
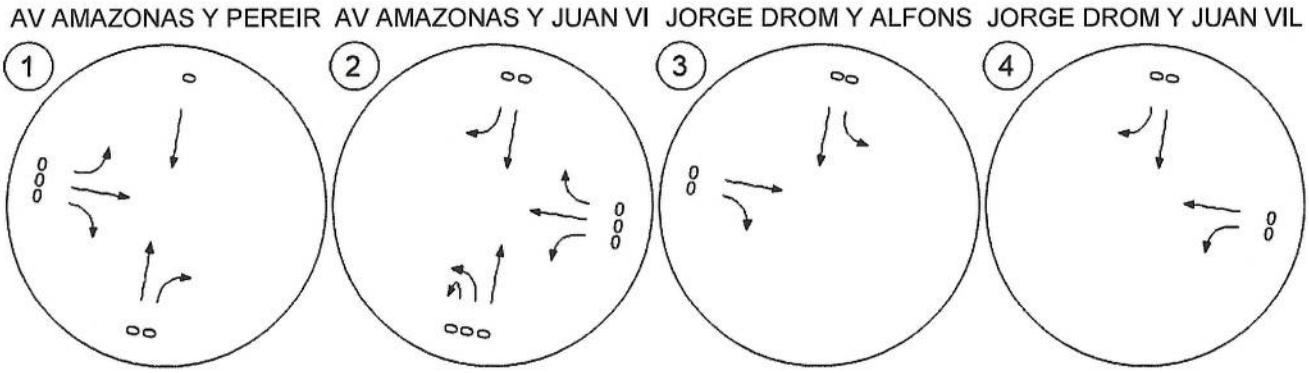
Report Figure 3b: Traffic Volume - In-Process Volume

AV AMAZONAS Y PEREIR AV AMAZONAS Y JUAN VI JORGE DROM Y ALFONS JORGE DROM Y JUAN VIL

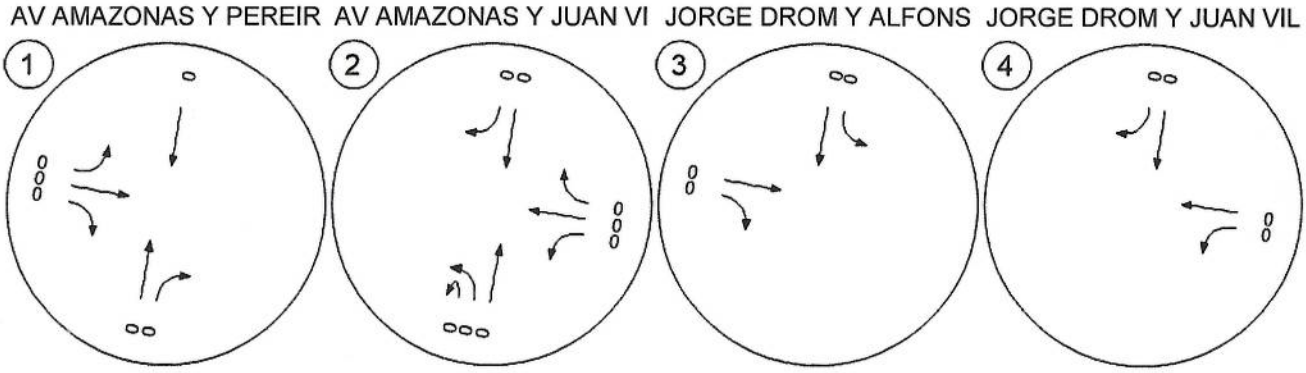


Report Figure 3c: Traffic Volume - Net New Site Trips

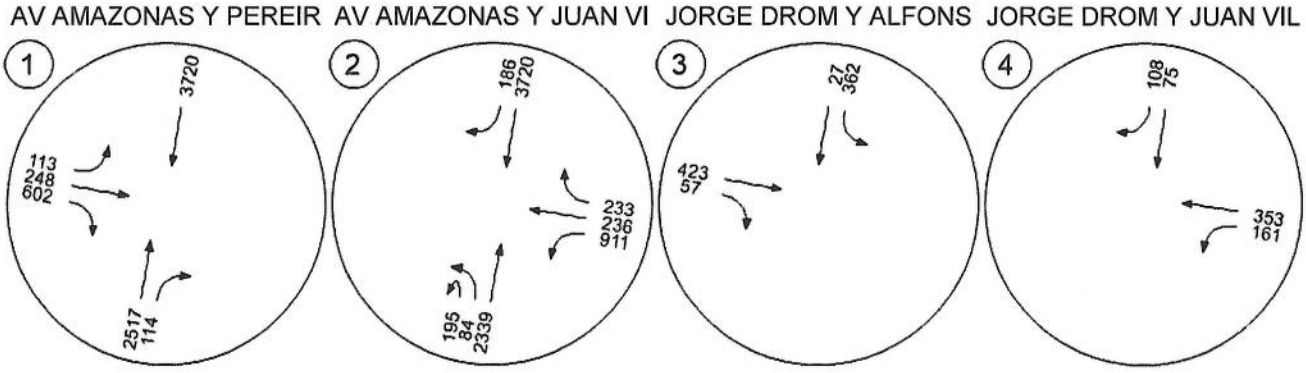




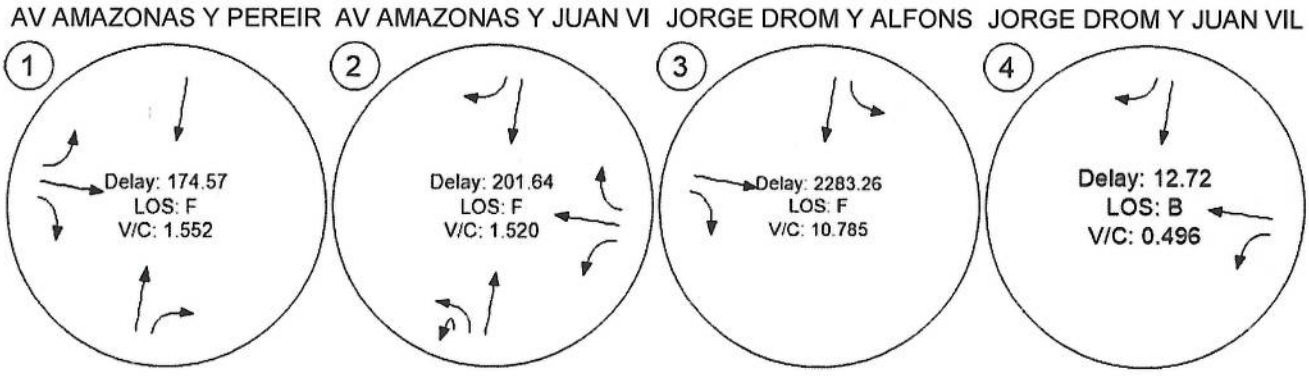
Report Figure 3d: Traffic Volume - Other Volume



Report Figure 3e: Traffic Volume - Future Total Volume



Report Figure 4: Traffic Conditions



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Scenario: Base Scenario
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.034	42.3	D
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	WBL	1.013	41.0	D
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	4.624	800.8	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.306	11.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value; for all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
#1: AV AMAZONAS Y PEREIRA

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.034

Intersection Setup

Name	AMAZONAS N-S			AMAZONAS N-S								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	AMAZONAS N-S			AMAZONAS N-S								
Base Volume Input [veh/h]	0	1678	76	0	2480	0	75	165	401	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1678	76	0	2480	0	75	165	401	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	420	19	0	620	0	19	41	100	0	0	0
Total Analysis Volume [veh/h]	0	1678	76	0	2480	0	75	165	401	0	0	0
Presence of On-Street Parking			no				no		no			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	941			941			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	0	0	1	0	0	2	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	60	0	0	60	0	0	40	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		no			no			no				
Maximum Recall		no			no			no				
Pedestrian Recall		no			no			no				
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	C	C	C	C	C	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	56	56	56	36	36	
g / C, Green / Cycle	0.56	0.56	0.56	0.36	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.37	0.36	0.54	0.15	0.49	
s, saturation flow rate [veh/h]	3192	1639	4567	1651	817	
c, Capacity [veh/h]	1788	918	2557	594	294	
d1, Uniform Delay [s]	15.28	15.05	21.18	23.96	32.00	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.88	3.37	12.00	2.04	184.13	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.65	0.64	0.97	0.40	1.36	
d, Delay for Lane Group [s/veh]	17.16	18.42	33.18	26.00	216.13	
Lane Group LOS	B	B	C	C	F	
Critical Lane Group	no	no	yes	no	yes	
50th-Percentile Queue Length [veh]	9.08	9.35	19.73	4.52	21.88	
50th-Percentile Queue Length [m]	69.21	71.23	150.37	34.43	166.73	
95th-Percentile Queue Length [veh]	14.03	14.36	27.02	8.01	35.01	
95th-Percentile Queue Length [m]	106.88	109.43	205.89	61.00	266.76	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	17.54	18.42	0.00	33.18	0.00	26.00	26.00	216.13	0.00	0.00	0.00
Movement LOS		B	B		C		C	C	F			
d_A, Approach Delay [s/veh]	17.58			33.18			144.94			0.00		
Approach LOS	B			C			F			A		
d_I, Intersection Delay [s/veh]	42.26											
Intersection LOS	D											
Intersection V/C	1.034											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#2: AV AMAZONAS Y JUAN VILLALENGUA

Control Type:	Signalized	Delay (sec / veh):	41.0
Analysis Method:	HCM2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.013

Intersection Setup

Name	AMAZONAS S-N				AMAZONAS N-S			JUAN VILLALENGUA E-O					
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.00	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28				48.28			48.28			48.28		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	yes				yes			yes			yes		

Volumes

Name	AMAZONAS S-N				AMAZONAS N-S			JUAN VILLALENGUA E-O					
Base Volume Input [veh/h]	130	56	1559	0	0	2480	124	0	0	0	607	157	155
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	56	1559	0	0	2480	124	0	0	0	607	157	155
Peak Hour Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	14	390	0	0	620	31	0	0	0	152	39	39
Total Analysis Volume [veh/h]	130	56	1559	0	0	2480	124	0	0	0	607	157	155
Presence of On-Street Parking	no						no				no		no
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Perm	Prote	Overl	Perm	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	1	0	0	1	0	0	0	0	0	2	0
Auxiliary Signal Groups			1										
Lead / Lag	-	Lag	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	0	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	40	60	0	0	60	0	0	0	0	0	40	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	0	10	0	0	0	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		no	no			no						no	
Maximum Recall		no	no			no						no	
Pedestrian Recall		no	no			no						no	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	L	C	C	C		C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00		2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	36	56	56	56		36	36
g / C, Green / Cycle	0.36	0.56	0.56	0.56		0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.19	0.34	0.54	0.53		0.47	0.22
s, saturation flow rate [veh/h]	957	4567	3192	1635		1293	1403
c, Capacity [veh/h]	222	2557	1788	916		537	505
d1, Uniform Delay [s]	43.67	14.70	21.22	20.63		34.15	26.34
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	29.68	1.09	15.47	19.51		79.58	5.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.61	0.97	0.95		1.13	0.62
d, Delay for Lane Group [s/veh]	73.34	15.79	36.69	40.14		113.74	31.92
Lane Group LOS	E	B	D	D		F	C
Critical Lane Group	no	no	yes	no		yes	no
50th-Percentile Queue Length [veh]	6.46	7.63	21.61	22.24		25.26	6.76
50th-Percentile Queue Length [m]	49.24	58.11	164.67	169.46		192.49	51.51
95th-Percentile Queue Length [veh]	10.63	12.16	29.23	29.97		36.28	11.02
95th-Percentile Queue Length [m]	81.00	92.63	222.77	228.39		276.46	84.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	73.34	73.34	15.79	0.00	0.00	37.73	40.14	0.00	0.00	0.00	113.74	31.92	31.92
Movement LOS	E	E	B			D	D				F	C	C
d_A, Approach Delay [s/veh]	21.92				37.84			0.00			85.96		
Approach LOS	C				D			A			F		
d_I, Intersection Delay [s/veh]	40.96												
Intersection LOS	D												
Intersection V/C	1.013												

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#3: JORGE DROM Y ALFONSO PEREIRA

Control Type:	Two-way stop	Delay (sec / veh):	800.8
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.624

Intersection Setup

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Base Volume Input [veh/h]	0	0	0	241	18	0	0	282	38	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	241	18	0	0	282	38	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	60	5	0	0	71	10	0	0	0
Total Analysis Volume [veh/h]	0	0	0	241	18	0	0	282	38	0	0	0
Pedestrian Volume [ped/h]	0			663			663			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			no	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			no	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.15	0.00	0.00	0.00	4.62	0.23	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.60	0.00	0.00	0.00	800.76	659.44	0.00	0.00	0.00
Movement LOS				A	A			F	F			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.52	0.26	0.00	0.00	15.56	15.02	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	3.97	1.99	0.00	0.00	118.59	114.47	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.08			783.98			0.00		
Approach LOS	A			A			F			A		
d_I, Intersection Delay [s/veh]	436.45											
Intersection LOS	F											

Intersection Level Of Service Report
#4: JORGE DROM Y JUAN VILLALENGUA

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.306

Intersection Setup

Name				JORGE DROM N-S						JUAN VILLALENGUA E-O		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name				JORGE DROM N-S						JUAN VILLALENGUA E-O		
Base Volume Input [veh/h]	0	0	0	0	50	72	0	0	0	107	235	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	50	72	0	0	0	107	235	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	13	18	0	0	0	27	59	0
Total Analysis Volume [veh/h]	0	0	0	0	50	72	0	0	0	107	235	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				no
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.31	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.08	10.95	0.00
Movement LOS					A	A				B	B	
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.80	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.74	6.11	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			0.00			10.68		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	7.87											
Intersection LOS	B											

Vistro File: G:\...\EDIFICIO NORTE JUDICATURAV6.vistro
Report File: C:\...\SITUACION ACTUAL.pdf

Scenario: Base Scenario
1/15/2015

Turning Movement Volume: Summary

ID	Intersection Name	Northbound		Southbound	Eastbound			Total Volume
		Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	1678	76	2480	75	165	401	4875

ID	Intersection Name	Northbound			Southbound		Westbound			Total Volume
		U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	130	56	1559	2480	124	607	157	155	5268

ID	Intersection Name	Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	241	18	282	38	579

ID	Intersection Name	Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	50	72	107	235	464

Vistro File: G:\...\EDIFICIO NORTE JUDICATURAV6.vistro
Report File: C:\...\SITUACION ACTUAL.pdf

Scenario: Base Scenario
1/15/2015

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound	Eastbound			Total Volume
			Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	Final Base	1678	76	2480	75	165	401	4875
		Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**1678**	**76**	**2480**	**75**	**165**	**401**	**4875**

ID	Intersection Name	Volume Type	Northbound			Southbound		Westbound			Total Volume
			U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	Final Base	130	56	1559	2480	124	607	157	155	5268
		Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0
		Future Total	**130**	**56**	**1559**	**2480**	**124**	**607**	**157**	**155**	**5268**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	Final Base	241	18	282	38	579
		Growth Rate	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**241**	**18**	**282**	**38**	**579**

ID	Intersection Name	Volume Type	Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	Final Base	50	72	107	235	464
		Growth Rate	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**50**	**72**	**107**	**235**	**464**

Signal Warrants Report For Intersection #3: JORGE DROM Y ALFONSO PEREIRA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	W
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	W
1	259	320
2	249	307
3	243	301
4	207	256
5	197	243
6	176	218
7	163	202
8	155	192
9	124	154
10	117	144
11	117	144
12	111	138
13	101	125
14	93	115
15	93	115
16	91	112
17	52	64
18	28	35
19	26	32
20	10	13
21	8	10
22	8	10
23	5	6
24	5	6

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	259	2	320	No	No	No	No	No	No	No	No	No	No
2	2	249	2	307	No	No	No	No	No	No	No	No	No	No
3	2	243	2	301	No	No	No	No	No	No	No	No	No	No
4	2	207	2	256	No	No	No	No	No	No	No	No	No	No
5	2	197	2	243	No	No	No	No	No	No	No	No	No	No
6	2	176	2	218	No	No	No	No	No	No	No	No	No	No
7	2	163	2	202	No	No	No	No	No	No	No	No	No	No
8	2	155	2	192	No	No	No	No	No	No	No	No	No	No
9	2	124	2	154	No	No	No	No	No	No	No	No	No	No
10	2	117	2	144	No	No	No	No	No	No	No	No	No	No
11	2	117	2	144	No	No	No	No	No	No	No	No	No	No
12	2	111	2	138	No	No	No	No	No	No	No	No	No	No
13	2	101	2	125	No	No	No	No	No	No	No	No	No	No
14	2	93	2	115	No	No	No	No	No	No	No	No	No	No
15	2	93	2	115	No	No	No	No	No	No	No	No	No	No
16	2	91	2	112	No	No	No	No	No	No	No	No	No	No
17	2	52	2	64	No	No	No	No	No	No	No	No	No	No
18	2	28	2	35	No	No	No	No	No	No	No	No	No	No
19	2	26	2	32	No	No	No	No	No	No	No	No	No	No
20	2	10	2	13	No	No	No	No	No	No	No	No	No	No
21	2	8	2	10	No	No	No	No	No	No	No	No	No	No
22	2	8	2	10	No	No	No	No	No	No	No	No	No	No
23	2	5	2	6	No	No	No	No	No	No	No	No	No	No
24	2	5	2	6	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	784
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	69:41
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	320
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	579
Number of Approaches on Intersection	2
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection #4: JORGE DROM Y JUAN VILLALENGUA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	E
1	122	342
2	117	328
3	115	321
4	98	274
5	93	260
6	83	233
7	77	215
8	73	205
9	59	164
10	55	154
11	55	154
12	52	147
13	48	133
14	44	123
15	44	123
16	43	120
17	24	68
18	13	38
19	12	34
20	5	14
21	4	10
22	4	10
23	2	7
24	2	7

Warrant Analysis by Hour

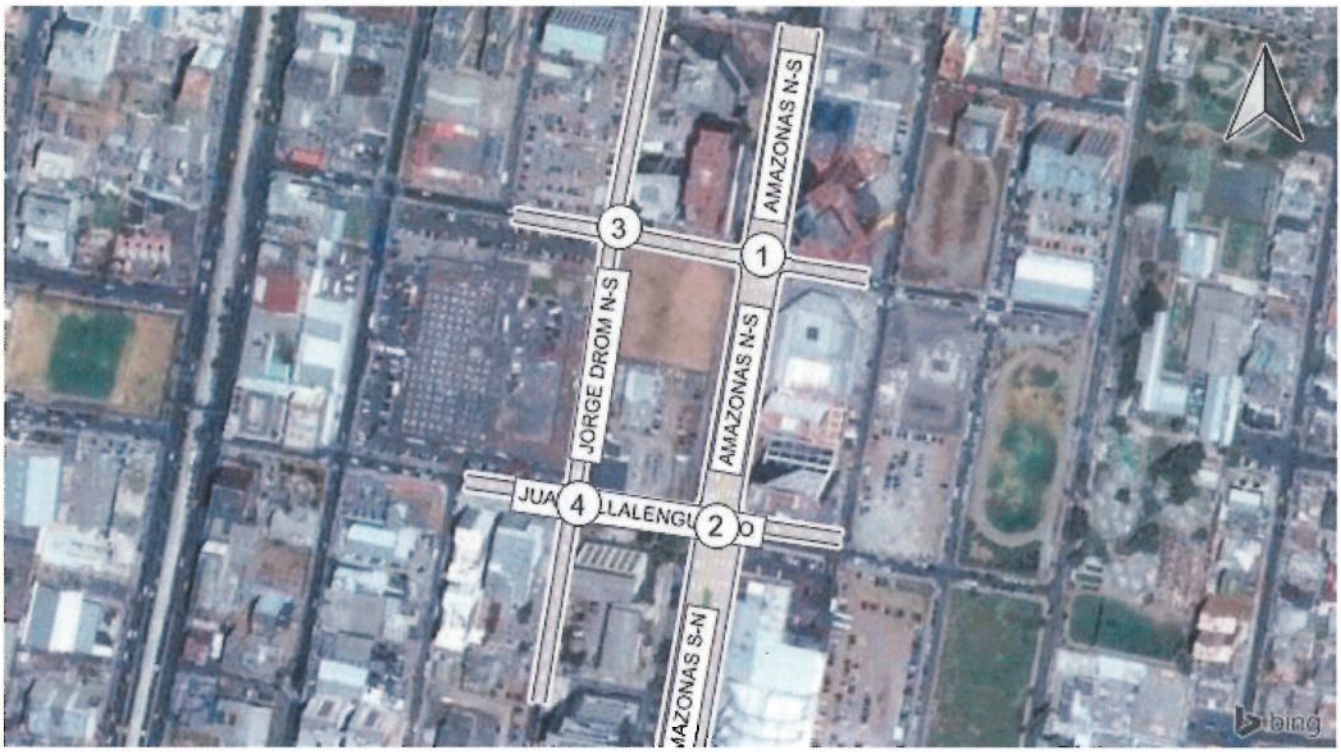
Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	122	2	342	No	No	No	No	No	No	No	No	No	No
2	2	117	2	328	No	No	No	No	No	No	No	No	No	No
3	2	115	2	321	No	No	No	No	No	No	No	No	No	No
4	2	98	2	274	No	No	No	No	No	No	No	No	No	No
5	2	93	2	260	No	No	No	No	No	No	No	No	No	No
6	2	83	2	233	No	No	No	No	No	No	No	No	No	No
7	2	77	2	215	No	No	No	No	No	No	No	No	No	No
8	2	73	2	205	No	No	No	No	No	No	No	No	No	No
9	2	59	2	164	No	No	No	No	No	No	No	No	No	No
10	2	55	2	154	No	No	No	No	No	No	No	No	No	No
11	2	55	2	154	No	No	No	No	No	No	No	No	No	No
12	2	52	2	147	No	No	No	No	No	No	No	No	No	No
13	2	48	2	133	No	No	No	No	No	No	No	No	No	No
14	2	44	2	123	No	No	No	No	No	No	No	No	No	No
15	2	44	2	123	No	No	No	No	No	No	No	No	No	No
16	2	43	2	120	No	No	No	No	No	No	No	No	No	No
17	2	24	2	68	No	No	No	No	No	No	No	No	No	No
18	2	13	2	38	No	No	No	No	No	No	No	No	No	No
19	2	12	2	34	No	No	No	No	No	No	No	No	No	No
20	2	5	2	14	No	No	No	No	No	No	No	No	No	No
21	2	4	2	10	No	No	No	No	No	No	No	No	No	No
22	2	4	2	10	No	No	No	No	No	No	No	No	No	No
23	2	2	2	7	No	No	No	No	No	No	No	No	No	No
24	2	2	2	7	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

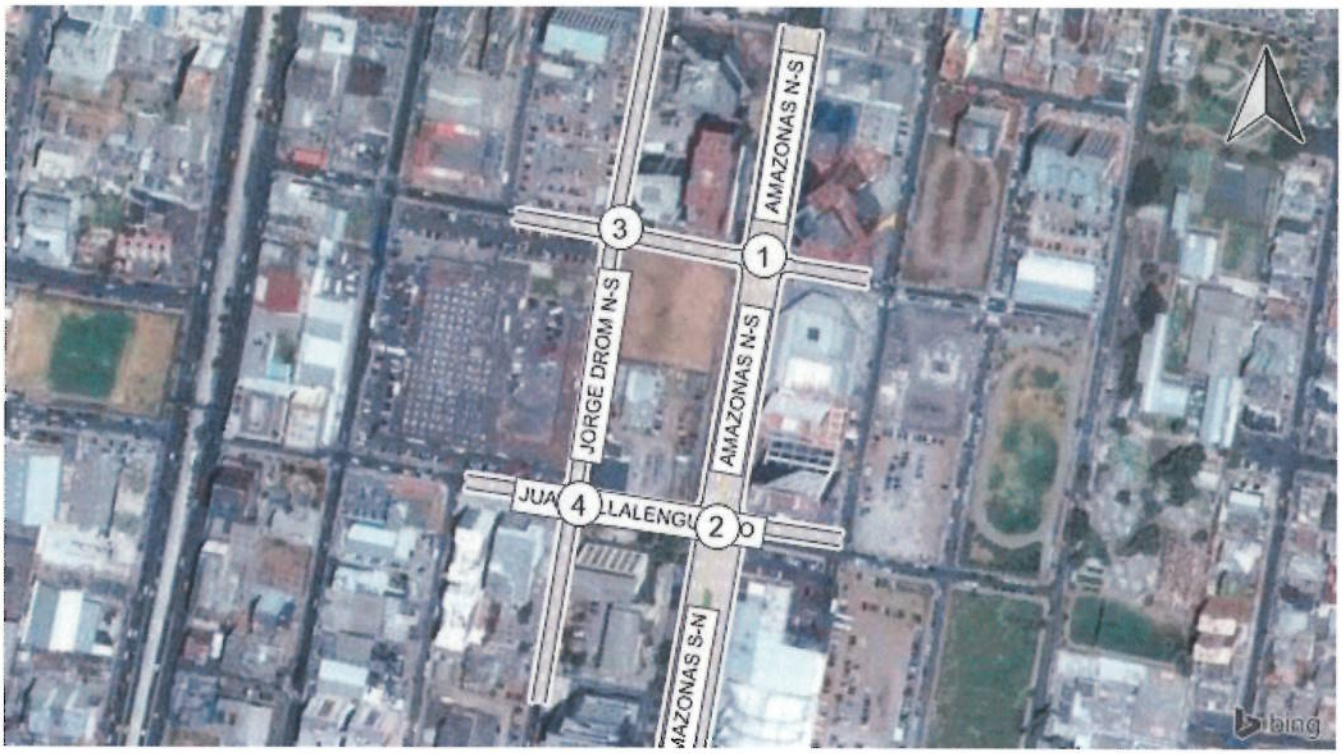
Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.7
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	342
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	464
Number of Approaches on Intersection	2
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

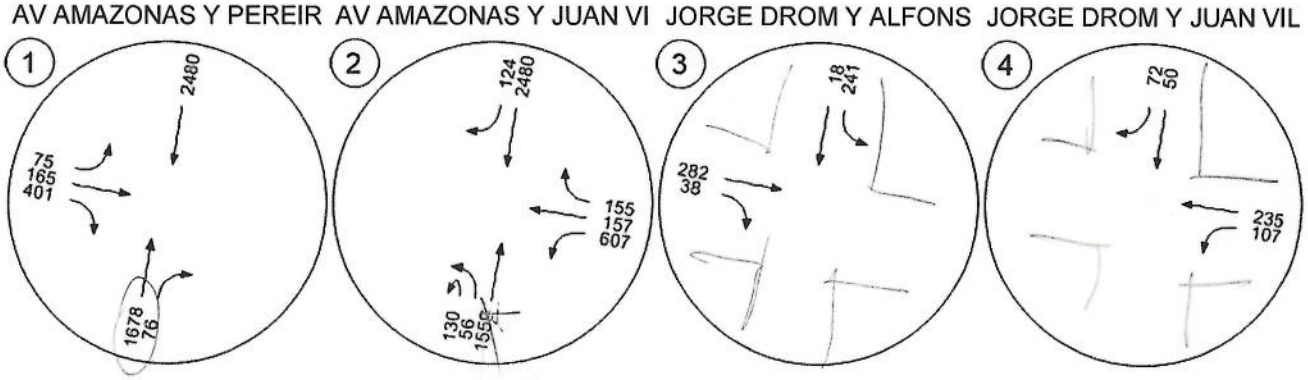
Report Figure 1: Study Intersections

Report Figure 2: Lane Configuration and Traffic Control

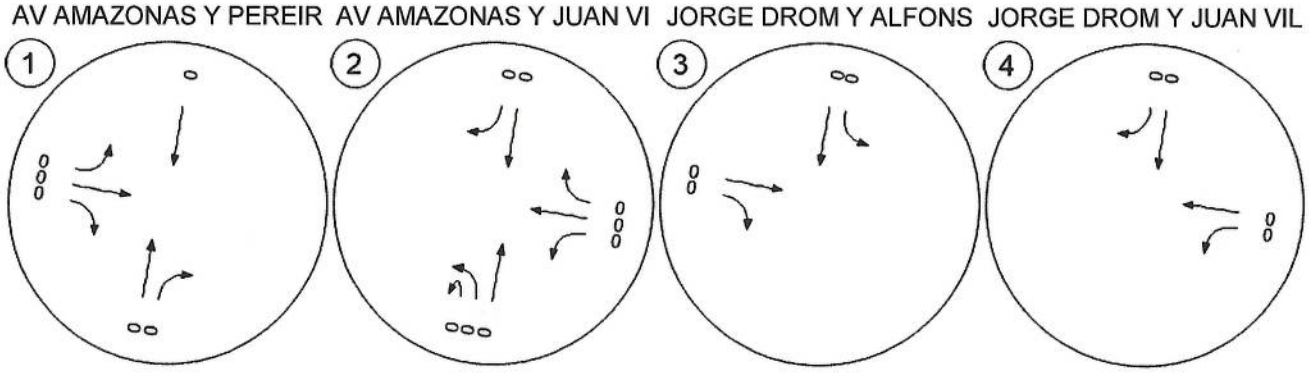


Report Figure 3a: Traffic Volume - Base Volume

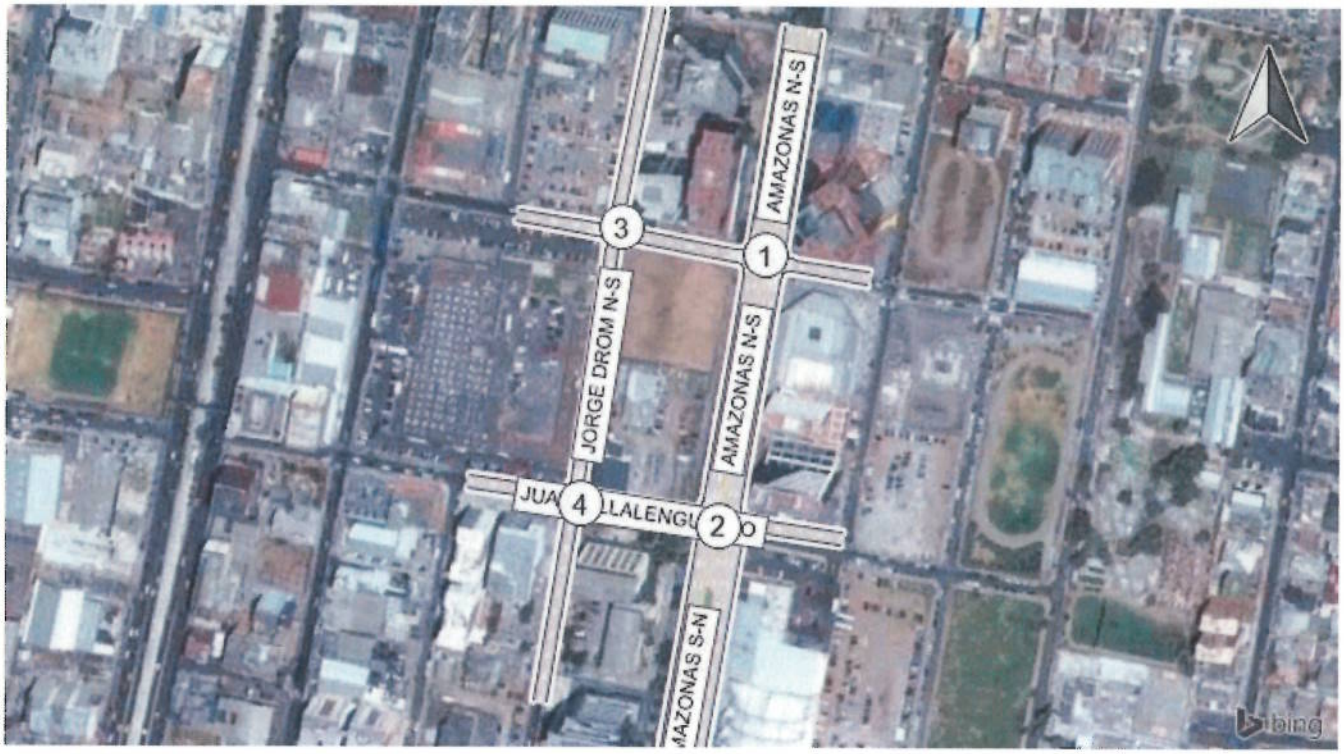


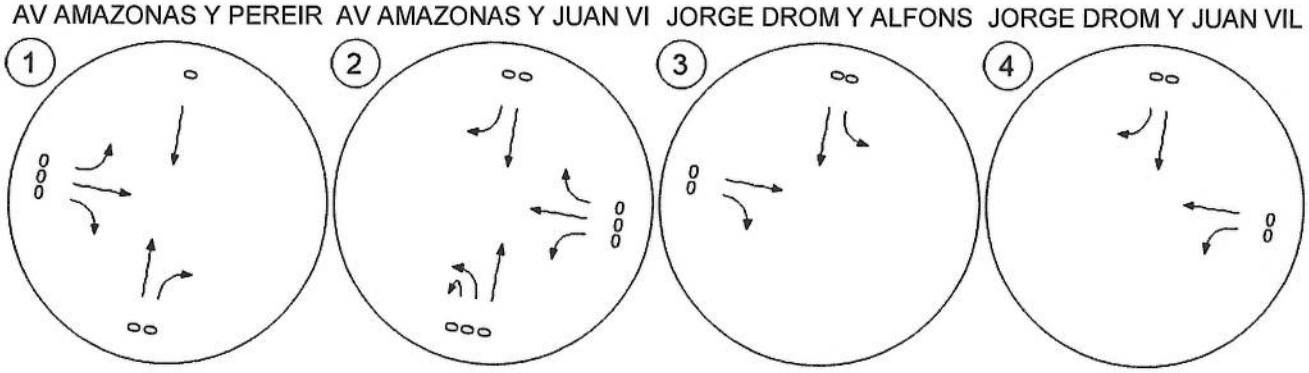


Report Figure 3b: Traffic Volume - In-Process Volume

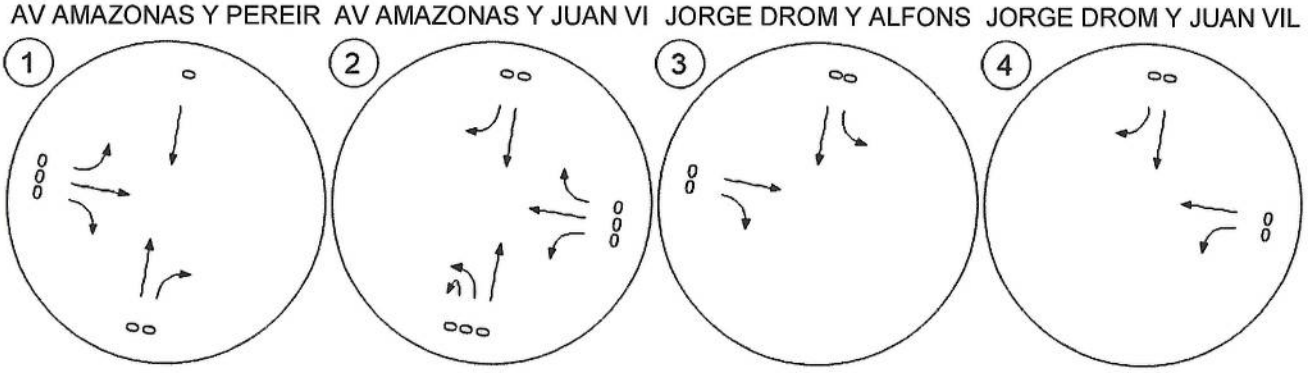


Report Figure 3c: Traffic Volume - Net New Site Trips

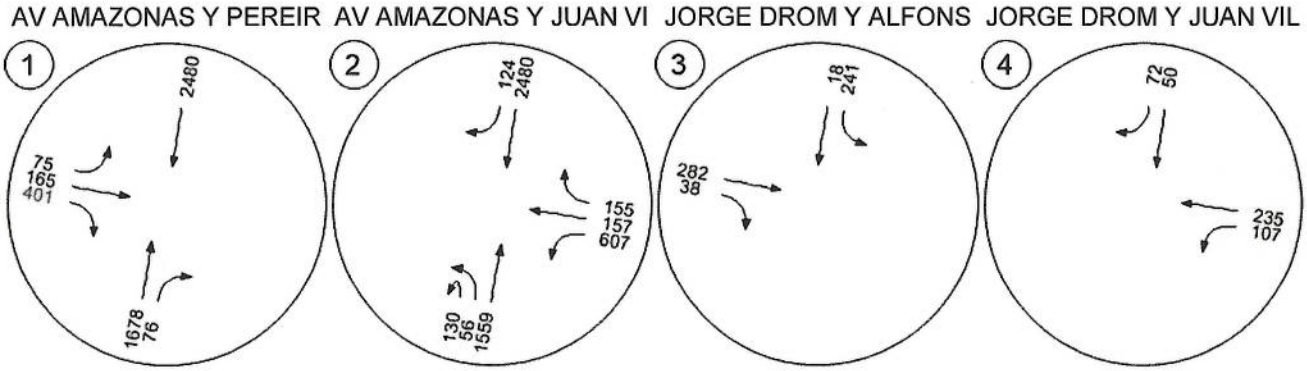




Report Figure 3d: Traffic Volume - Other Volume

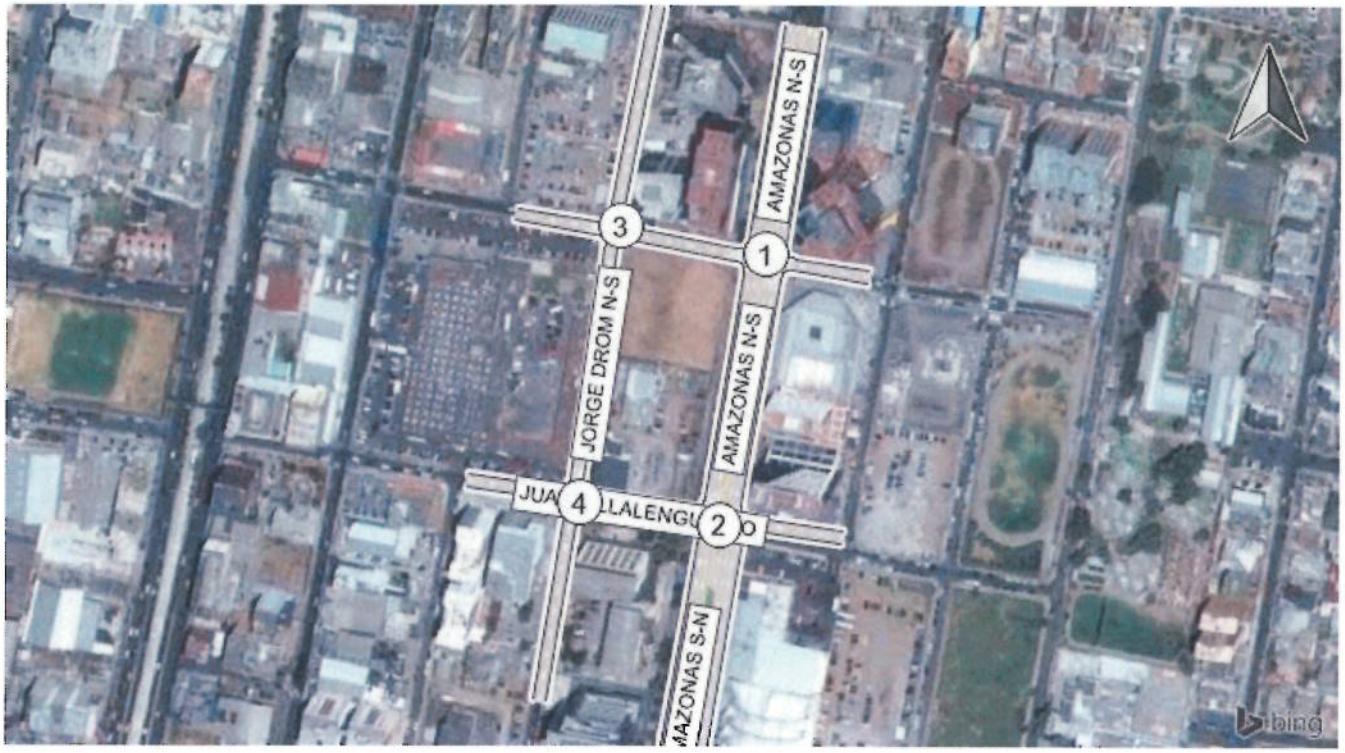


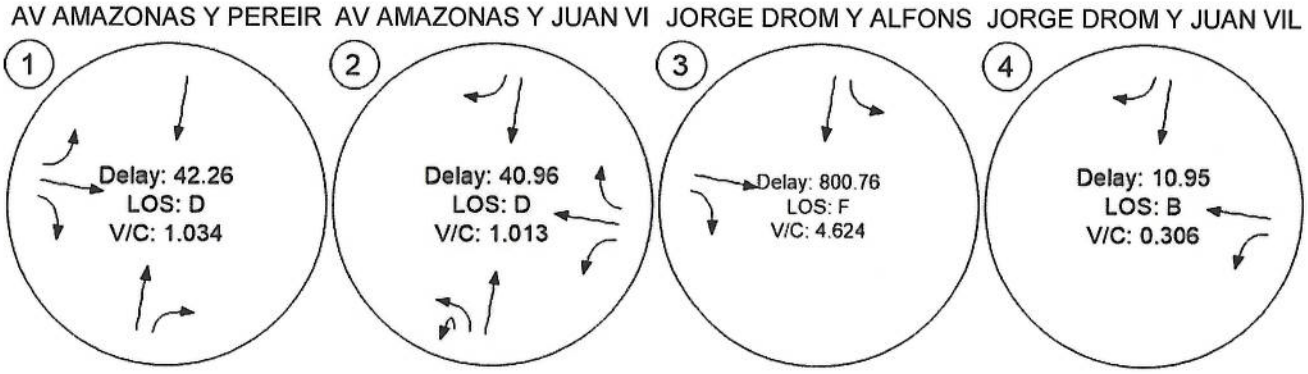
Report Figure 3e: Traffic Volume - Future Total Volume



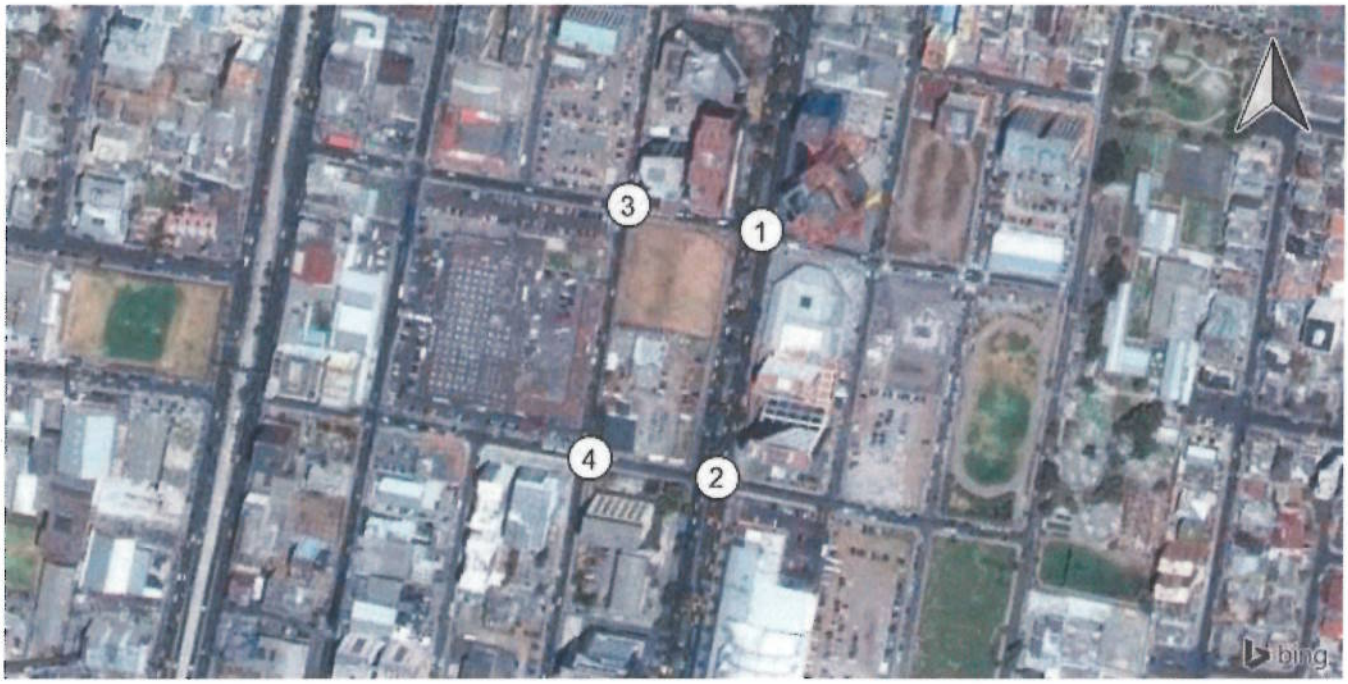
P. 2020

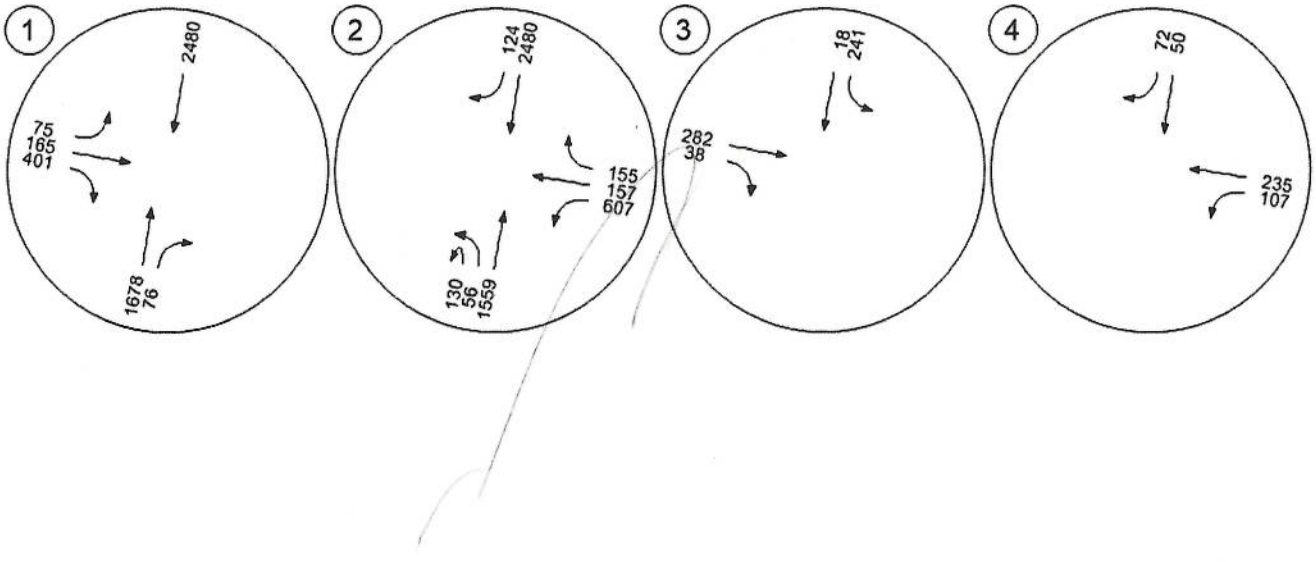
Report Figure 4: Traffic Conditions



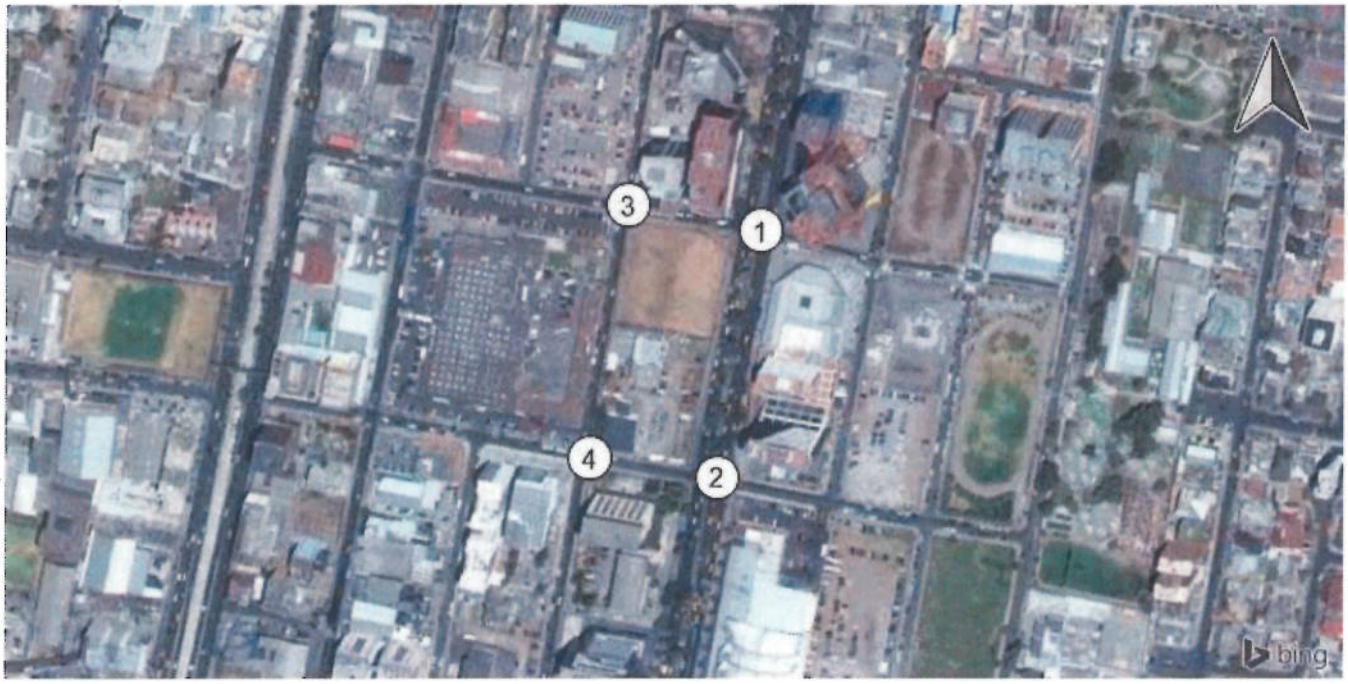


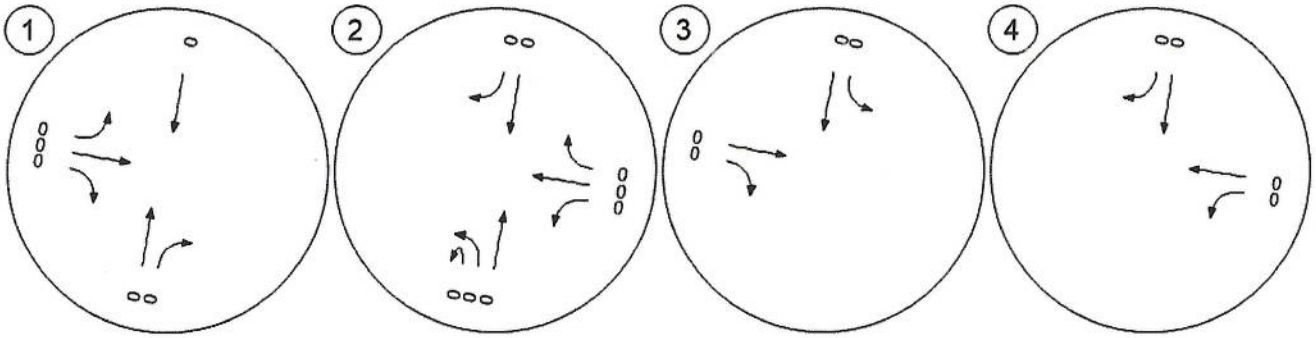
Traffic Volume - Base Volume



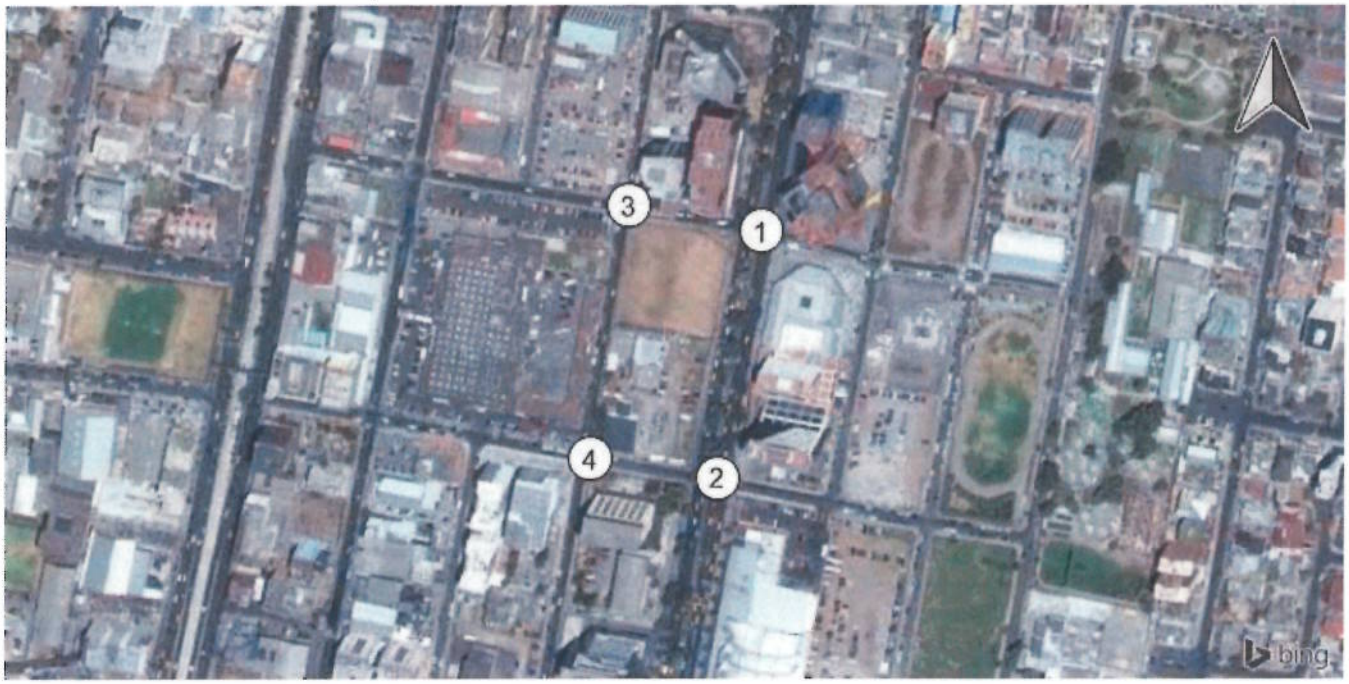


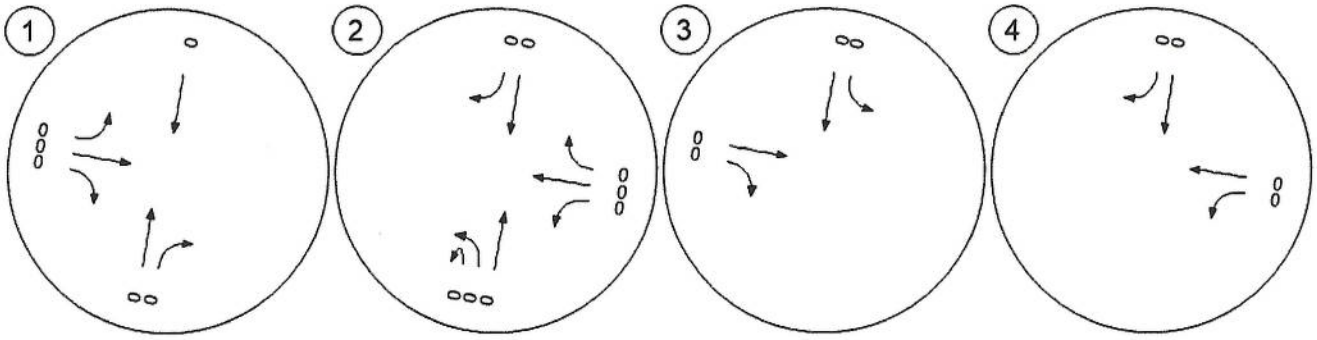
Traffic Volume - In-Process Volume



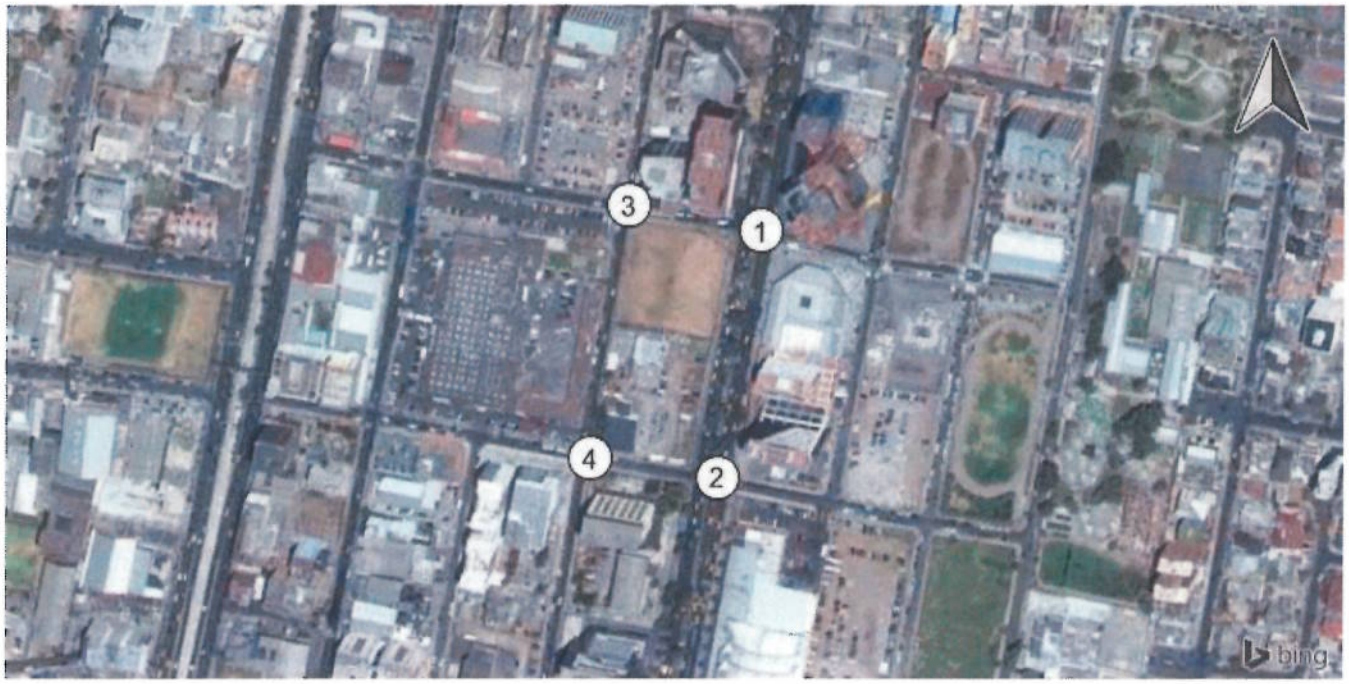


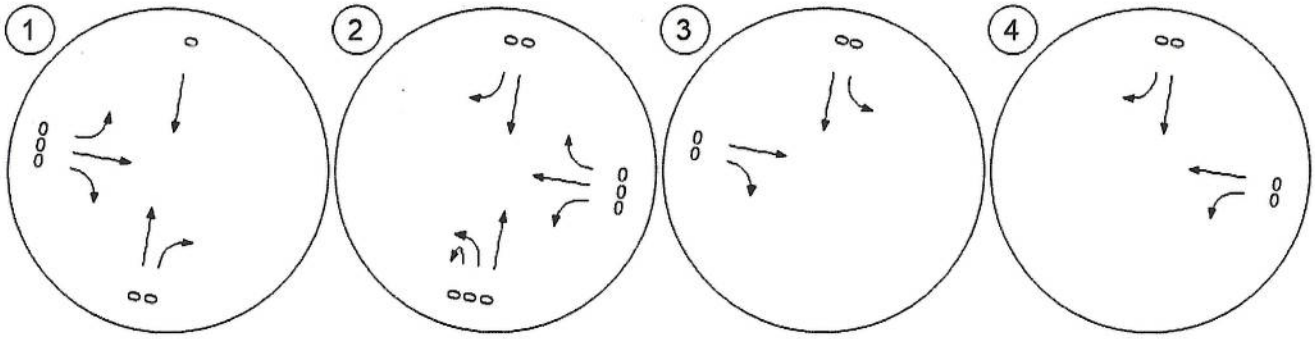
Traffic Volume - Net New Site Trips



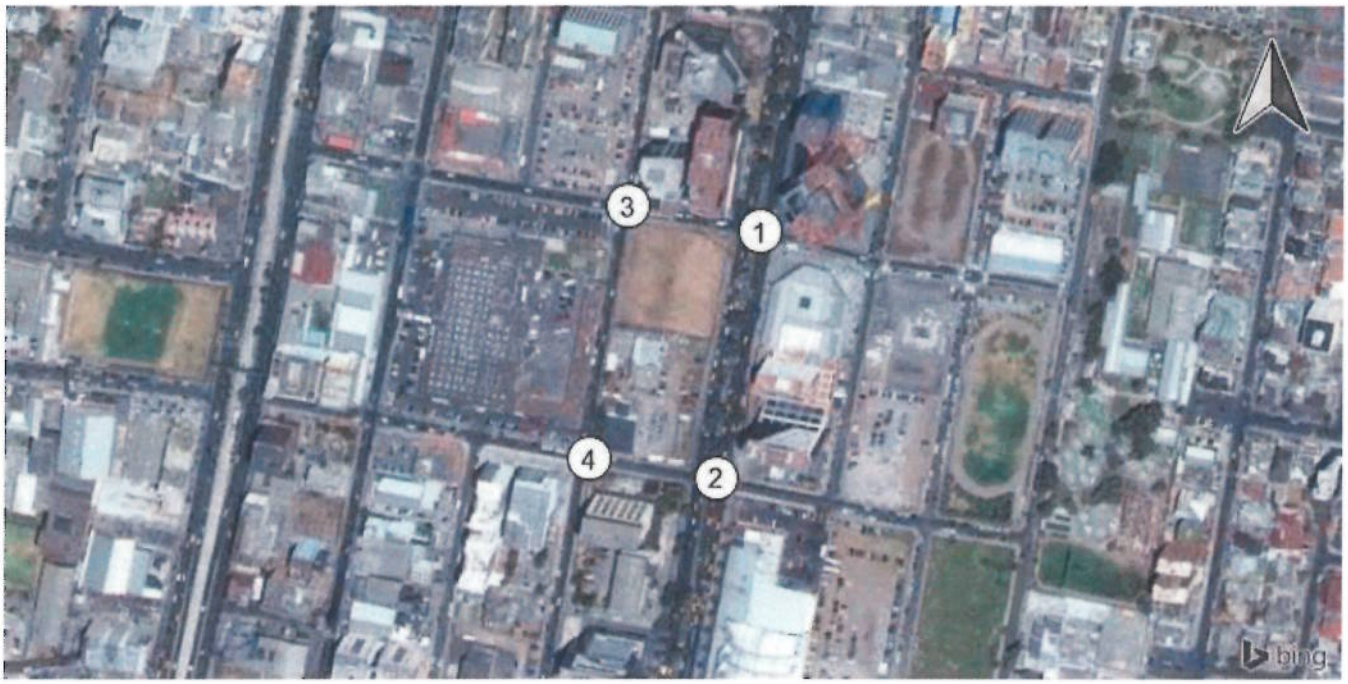


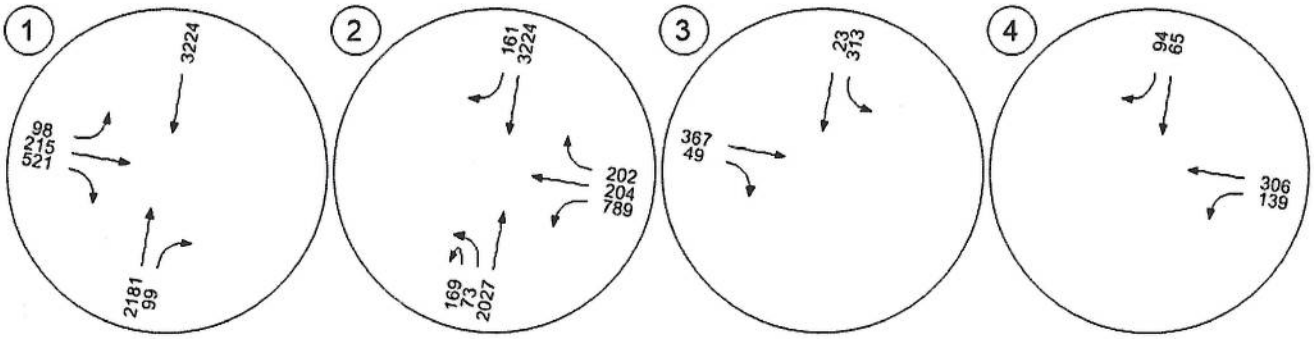
Traffic Volume - Other Volume



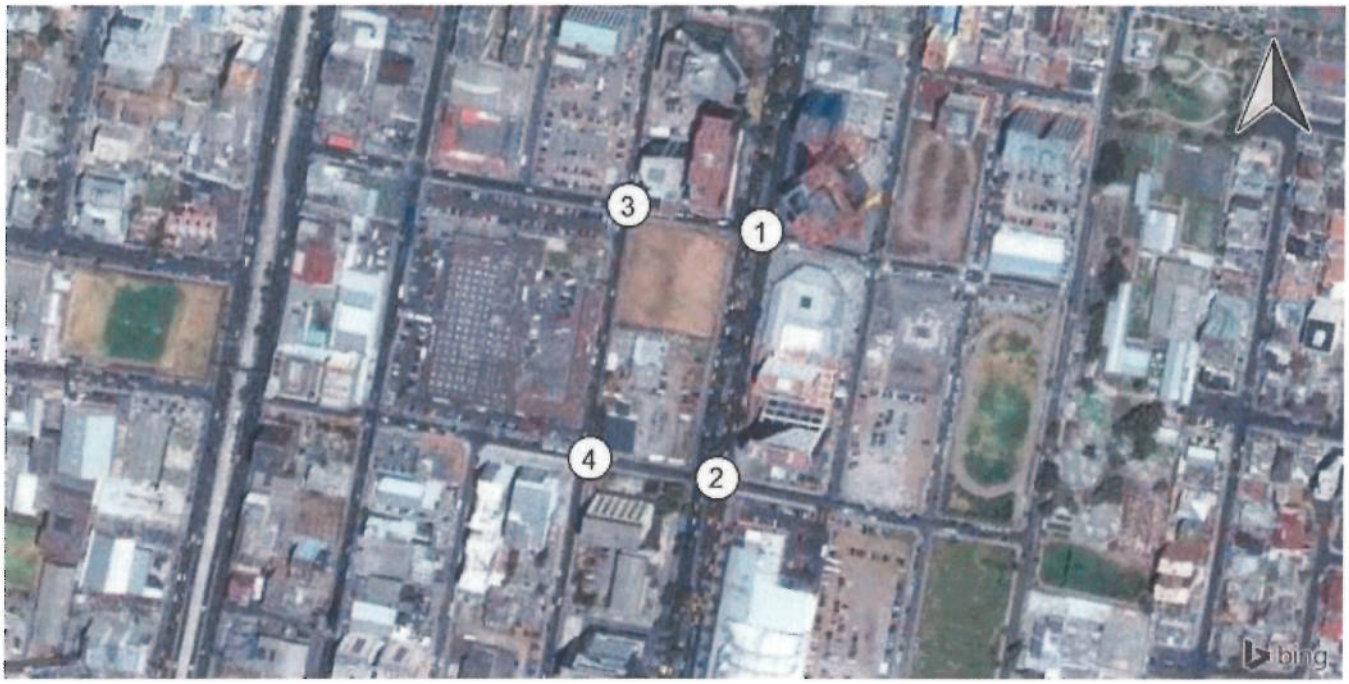


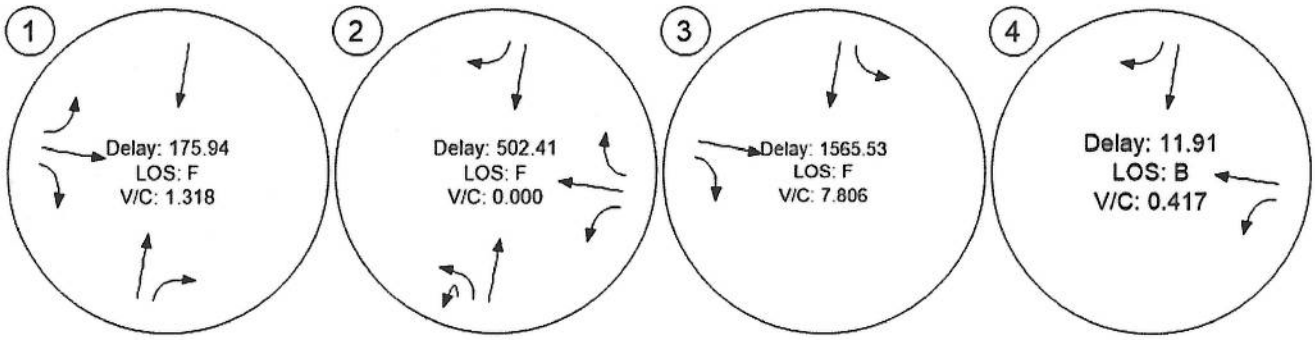
Traffic Volume - Future Total Volume





Traffic Conditions





Vistro File: G:\...\EDIFICIO NORTE JUDICATURAV6.vistro
Report File: C:\...\SIN PROYECTO 2025.pdf

Scenario 3: Sin Proyecto 2025
1/15/2015

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	AV AMAZONAS Y PEREIRA	Signalized	HCM2010	EBR	1.552	174.6	F
2	AV AMAZONAS Y JUAN VILLALENGUA	Signalized	HCM2010	NBU	1.520	201.6	F
3	JORGE DROM Y ALFONSO PEREIRA	Two-way stop	HCM2010	EBT	10.785	2,283.3	F
4	JORGE DROM Y JUAN VILLALENGUA	Two-way stop	HCM2010	WBT	0.496	12.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value; for all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
#1: AV AMAZONAS Y PEREIRA

Control Type:	Signalized	Delay (sec / veh):	174.6
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.552

Intersection Setup

Name	AMAZONAS N-S			AMAZONAS N-S								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	AMAZONAS N-S			AMAZONAS N-S								
Base Volume Input [veh/h]	0	1678	76	0	2480	0	75	165	401	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.50	1.50	1.00	1.50	1.00	1.50	1.50	1.50	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2517	114	0	3720	0	113	248	602	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	629	29	0	930	0	28	62	151	0	0	0
Total Analysis Volume [veh/h]	0	2517	114	0	3720	0	113	248	602	0	0	0
Presence of On-Street Parking			no				no		no			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	941			941			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	1	0	0	1	0	0	2	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	60	0	0	60	0	0	40	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		no			no			no				
Maximum Recall		no			no			no				
Pedestrian Recall		no			no			no				
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	C	C	C	C	C	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	56	56	56	36	36	
g / C, Green / Cycle	0.56	0.56	0.56	0.36	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.55	0.54	0.81	0.22	0.74	
s, saturation flow rate [veh/h]	3192	1639	4567	1651	817	
c, Capacity [veh/h]	1788	918	2557	594	294	
d1, Uniform Delay [s]	21.49	20.82	22.00	26.21	32.00	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	17.29	20.72	206.81	4.57	483.03	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.98	0.96	1.45	0.61	2.05	
d, Delay for Lane Group [s/veh]	38.77	41.54	228.81	30.78	515.03	
Lane Group LOS	D	D	F	C	F	
Critical Lane Group	no	no	yes	no	yes	
50th-Percentile Queue Length [veh]	22.47	22.90	67.06	7.64	46.29	
50th-Percentile Queue Length [m]	171.22	174.48	511.02	58.19	352.75	
95th-Percentile Queue Length [veh]	30.24	30.75	102.84	12.17	77.03	
95th-Percentile Queue Length [m]	230.46	234.28	783.63	92.72	586.96	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	39.61	41.54	0.00	228.81	0.00	30.78	30.78	515.03	0.00	0.00	0.00
Movement LOS		D	D		F		C	C	F			
d_A, Approach Delay [s/veh]	39.70			228.81			333.50			0.00		
Approach LOS	D			F			F			A		
d_I, Intersection Delay [s/veh]	174.57											
Intersection LOS	F											
Intersection V/C	1.552											

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#2: AV AMAZONAS Y JUAN VILLALENGUA

Control Type:	Signalized	Delay (sec / veh):	201.6
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.520

Intersection Setup

Name	AMAZONAS S-N				AMAZONAS N-S			JUAN VILLALENGUA E-O					
Approach	Northbound				Southbound			Eastbound			Westbound		
Lane Configuration													
Turning Movement	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.00	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28				48.28			48.28			48.28		
Grade [%]	0.00				0.00			0.00			0.00		
Crosswalk	yes				yes			yes			yes		

Volumes

Name	AMAZONAS S-N				AMAZONAS N-S			JUAN VILLALENGUA E-O					
Base Volume Input [veh/h]	130	56	1559	0	0	2480	124	0	0	0	607	157	155
Base Volume Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.50	1.50	1.50	1.00	1.00	1.50	1.50	1.00	1.00	1.00	1.50	1.50	1.50
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	195	84	2339	0	0	3720	186	0	0	0	911	236	233
Peak Hour Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	21	585	0	0	930	47	0	0	0	228	59	58
Total Analysis Volume [veh/h]	195	84	2339	0	0	3720	186	0	0	0	911	236	233
Presence of On-Street Parking	no						no				no		no
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0				0			0			0		
Bicycle Volume [bicycles/h]	0				0			0			0		

Intersection Settings

Located in CBD	yes
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Perm	Prote	Overl	Perm	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	1	0	0	1	0	0	0	0	0	2	0
Auxiliary Signal Groups			1										
Lead / Lag	-	Lag	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	0	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	40	60	0	0	60	0	0	0	0	0	40	0
Vehicle Extension [s]	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	10	0	0	10	0	0	0	0	0	10	0
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		no	no			no						no	
Maximum Recall		no	no			no						no	
Pedestrian Recall		no	no			no						no	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Calculations

Lane Group	L	C	C	C		C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00		2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	36	56	56	56		36	36
g / C, Green / Cycle	0.36	0.56	0.56	0.56		0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.34	0.51	0.82	0.80		0.70	0.33
s, saturation flow rate [veh/h]	828	4567	3192	1635		1293	1403
c, Capacity [veh/h]	87	2557	1788	916		537	505
d1, Uniform Delay [s]	49.84	19.84	22.00	22.00		34.15	30.77
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	1016.91	6.46	208.71	196.22		320.68	25.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	3.20	0.91	1.46	1.42		1.69	0.93
d, Delay for Lane Group [s/veh]	1066.75	26.30	230.71	218.22		354.83	56.54
Lane Group LOS	F	C	F	F		F	E
Critical Lane Group	no	no	yes	no		yes	no
50th-Percentile Queue Length [veh]	26.84	16.45	70.78	69.35		61.26	14.11
50th-Percentile Queue Length [m]	204.52	125.37	539.37	528.43		466.79	107.51
95th-Percentile Queue Length [veh]	48.12	23.11	108.23	105.05		96.28	20.27
95th-Percentile Queue Length [m]	366.68	176.06	824.75	800.52		733.63	154.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1066.	1066.	26.30	0.00	0.00	226.96	218.22	0.00	0.00	0.00	354.83	56.54	56.54
Movement LOS	F	F	C			F	F				F	E	E
d_A, Approach Delay [s/veh]	137.18				226.55			0.00			253.46		
Approach LOS	F				F			A			F		
d_I, Intersection Delay [s/veh]	201.64												
Intersection LOS	F												
Intersection V/C	1.520												

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
#3: JORGE DROM Y ALFONSO PEREIRA

Control Type:	Two-way stop	Delay (sec / veh):	2,283.3
Analysis Method:	HCM2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	10.785

Intersection Setup

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name	JORGE DROM N-S			JORGE DROM N-S			ALFONSO PEREIRA O-E					
Base Volume Input [veh/h]	0	0	0	241	18	0	0	282	38	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.50	1.50	1.00	1.00	1.50	1.50	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	362	27	0	0	423	57	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	91	7	0	0	106	14	0	0	0
Total Analysis Volume [veh/h]	0	0	0	362	27	0	0	423	57	0	0	0
Pedestrian Volume [ped/h]	0			663			663			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			no	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			no	
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.22	0.00	0.00	0.00	10.78	0.35	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	7.85	0.00	0.00	0.00	2283.26	1922.33	0.00	0.00	0.00
Movement LOS				A	A			F	F			
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.86	0.43	0.00	0.00	27.80	27.31	0.00	0.00	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	6.53	3.26	0.00	0.00	211.80	208.11	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			7.31			2240.40			0.00		
Approach LOS	A			A			F			A		
d_I, Intersection Delay [s/veh]	1240.78											
Intersection LOS	F											

Intersection Level Of Service Report
#4: JORGE DROM Y JUAN VILLALENGUA

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

Intersection Setup

Name				JORGE DROM N-S						JUAN VILLALENGUA E-O		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	yes			yes			yes			yes		

Volumes

Name				JORGE DROM N-S						JUAN VILLALENGUA E-O		
Base Volume Input [veh/h]	0	0	0	0	50	72	0	0	0	107	235	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.50	1.50	1.00	1.00	1.00	1.50	1.50	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	75	108	0	0	0	161	353	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	19	27	0	0	0	40	88	0
Total Analysis Volume [veh/h]	0	0	0	0	75	108	0	0	0	161	353	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance				no
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.50	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.46	12.72	0.00
Movement LOS					A	A				B	B	
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42	1.53	0.00
95th-Percentile Queue Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.81	11.69	0.00
d_A, Approach Delay [s/veh]	0.00			0.00			0.00			12.33		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	9.09											
Intersection LOS	B											

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Scenario 3: Sin Proyecto 2025
1/15/2015

Turning Movement Volume: Summary

ID	Intersection Name	Northbound		Southbound	Eastbound			Total Volume
		Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	2517	114	3720	113	248	602	7314

ID	Intersection Name	Northbound			Southbound		Westbound			Total Volume
		U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	195	84	2339	3720	186	911	236	233	7904

ID	Intersection Name	Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	362	27	423	57	869

ID	Intersection Name	Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	75	108	161	353	697

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Scenario 3: Sin Proyecto 2025
1/15/2015

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound		Southbound	Eastbound			Total Volume
			Thru	Right	Thru	Left	Thru	Right	
1	AV AMAZONAS Y PEREIRA	Final Base	1678	76	2480	75	165	401	4875
		Growth Rate	1.50	1.50	1.50	1.50	1.50	1.50	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**2517**	**114**	**3720**	**113**	**248**	**602**	**7314**

ID	Intersection Name	Volume Type	Northbound			Southbound		Westbound			Total Volume
			U-T	Left	Thru	Thru	Right	Left	Thru	Right	
2	AV AMAZONAS Y JUAN VILLALENGUA	Final Base	130	56	1559	2480	124	607	157	155	5268
		Growth Rate	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	-
		In Process	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0
		Future Total	**195**	**84**	**2339**	**3720**	**186**	**911**	**236**	**233**	**7904**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	
3	JORGE DROM Y ALFONSO PEREIRA	Final Base	241	18	282	38	579
		Growth Rate	1.50	1.50	1.50	1.50	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**362**	**27**	**423**	**57**	**869**

ID	Intersection Name	Volume Type	Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	
4	JORGE DROM Y JUAN VILLALENGUA	Final Base	50	72	107	235	464
		Growth Rate	1.50	1.50	1.50	1.50	-
		In Process	0	0	0	0	0
		Net New Trips	0	0	0	0	0
		Other	0	0	0	0	0
		Future Total	**75**	**108**	**161**	**353**	**697**

Signal Warrants Report For Intersection #3: JORGE DROM Y ALFONSO PEREIRA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	W
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	W
1	389	480
2	373	461
3	366	451
4	311	384
5	296	365
6	265	326
7	245	302
8	233	288
9	187	230
10	175	216
11	175	216
12	167	206
13	152	187
14	140	173
15	140	173
16	136	168
17	78	96
18	43	53
19	39	48
20	16	19
21	12	14
22	12	14
23	8	10
24	8	10

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	389	2	480	No	No	No	Yes	No	No	No	No	Yes	Yes
2	2	373	2	461	No	No	No	Yes	No	No	No	No	Yes	Yes
3	2	366	2	451	No	No	No	Yes	No	No	No	No	Yes	Yes
4	2	311	2	384	No	No	No	No	No	No	No	No	Yes	No
5	2	296	2	365	No	No	No	No	No	No	No	No	Yes	No
6	2	265	2	326	No	No	No	No	No	No	No	No	No	No
7	2	245	2	302	No	No	No	No	No	No	No	No	No	No
8	2	233	2	288	No	No	No	No	No	No	No	No	No	No
9	2	187	2	230	No	No	No	No	No	No	No	No	No	No
10	2	175	2	216	No	No	No	No	No	No	No	No	No	No
11	2	175	2	216	No	No	No	No	No	No	No	No	No	No
12	2	167	2	206	No	No	No	No	No	No	No	No	No	No
13	2	152	2	187	No	No	No	No	No	No	No	No	No	No
14	2	140	2	173	No	No	No	No	No	No	No	No	No	No
15	2	140	2	173	No	No	No	No	No	No	No	No	No	No
16	2	136	2	168	No	No	No	No	No	No	No	No	No	No
17	2	78	2	96	No	No	No	No	No	No	No	No	No	No
18	2	43	2	53	No	No	No	No	No	No	No	No	No	No
19	2	39	2	48	No	No	No	No	No	No	No	No	No	No
20	2	16	2	19	No	No	No	No	No	No	No	No	No	No
21	2	12	2	14	No	No	No	No	No	No	No	No	No	No
22	2	12	2	14	No	No	No	No	No	No	No	No	No	No
23	2	8	2	10	No	No	No	No	No	No	No	No	No	No
24	2	8	2	10	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	3	0	0	0	0	5	3

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	2240.4
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	298:43
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	480
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	869
Number of Approaches on Intersection	2
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection #4: JORGE DROM Y JUAN VILLALENGUA

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N
Minor Approaches	E
Speed > 40mph	Yes
Population < 10,000	Yes
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets	Minor Streets
	N	E
1	183	514
2	176	493
3	172	483
4	146	411
5	139	391
6	124	350
7	115	324
8	110	308
9	88	247
10	82	231
11	82	231
12	79	221
13	71	200
14	66	185
15	66	185
16	64	180
17	37	103
18	20	57
19	18	51
20	7	21
21	5	15
22	5	15
23	4	10
24	4	10

Warrant Analysis by Hour

Hour	Major Lanes		Minor Lanes		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	183	2	514	No	No	No	No	No	No	No	No	Yes	No
2	2	176	2	493	No	No	No	No	No	No	No	No	Yes	No
3	2	172	2	483	No	No	No	No	No	No	No	No	Yes	No
4	2	146	2	411	No	No	No	No	No	No	No	No	No	No
5	2	139	2	391	No	No	No	No	No	No	No	No	No	No
6	2	124	2	350	No	No	No	No	No	No	No	No	No	No
7	2	115	2	324	No	No	No	No	No	No	No	No	No	No
8	2	110	2	308	No	No	No	No	No	No	No	No	No	No
9	2	88	2	247	No	No	No	No	No	No	No	No	No	No
10	2	82	2	231	No	No	No	No	No	No	No	No	No	No
11	2	82	2	231	No	No	No	No	No	No	No	No	No	No
12	2	79	2	221	No	No	No	No	No	No	No	No	No	No
13	2	71	2	200	No	No	No	No	No	No	No	No	No	No
14	2	66	2	185	No	No	No	No	No	No	No	No	No	No
15	2	66	2	185	No	No	No	No	No	No	No	No	No	No
16	2	64	2	180	No	No	No	No	No	No	No	No	No	No
17	2	37	2	103	No	No	No	No	No	No	No	No	No	No
18	2	20	2	57	No	No	No	No	No	No	No	No	No	No
19	2	18	2	51	No	No	No	No	No	No	No	No	No	No
20	2	7	2	21	No	No	No	No	No	No	No	No	No	No
21	2	5	2	15	No	No	No	No	No	No	No	No	No	No
22	2	5	2	15	No	No	No	No	No	No	No	No	No	No
23	2	4	2	10	No	No	No	No	No	No	No	No	No	No
24	2	4	2	10	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	3	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	12.3
Number of Lanes on Minor Street Approach	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:45
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	514
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	697
Number of Approaches on Intersection	2
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Report Figure 1: Study Intersections

Report Figure 2: Lane Configuration and Traffic Control