ZONING CHANGE REVIEW SHEET

CASE: C14-2015-0104

Z.A.P./ P.C. DATE:
December 8, 2015
January 12, 2016
January 26, 2016

ADDRESS: Tracts 1&2: 444-456 Bastrop Hwy Southbound
Tract 3: 500 Bastrop Hwy Southbound
Tract 4: 434 Bastrop Hwy Southbound
Tract 5: 6705-6709 Ponca Street

DISTRICT AREA: 3

OWNER/APPLICANT: Tracts 1&2: 422 Bastrop Hwy, Ltd./Jimmy Nassour
Tract 3: 500 Bastrop Hwy, Ltd./Jimmy Nassour
Tract 4&5: Chase Equities, Inc./Jimmy Nassour

AGENT: Smith, Robertson, Elliott & Douglas, LLP/David Hartman

ZONING FROM: CS-NP, SF-3-NP, GO-NP, SF-2-NP **TO: CS-MU-NP** **AREA:** 23.091 acres

SUMMARY STAFF RECOMMENDATION:
Recommend CS-MU-CO-NP, LR-MU-CO-NP, GO-MU-CO-NP, MF-2-CO-NP
The property is located along the South bound frontage of Bastrop Highway/US Highway 183 within the Montopolis Neighborhood Planning Area. It extends southwestward into the neighborhood and is bounded on the northwest by Civitan Park, Allison Elementary and single family residences, the Burdett Prairie Cemetery and Montopolis Practice Fields to the southwest, City of Austin Watershed Protection lands to the south and southeast, and vacant commercially zoned property to the east. A portion of the property is included in the Airport Overlay (AO-3) which prohibits residential use.

The applicant is proposing to develop the tract with a mixture of retail fast-food restaurants and approximately 356 multi-family residential units. The residential units will be a mixture of 1(258), 2 (88) & 3 (10) bedroom units. The staff recommendation is intended to allow a transition of intensity from Bastrop Highway/US Highway 183 into the neighborhood. Residential use will be prohibited within the AO-3 portion of the property along Bastrop Highway/US Highway 183.

To address Austin Transportation Department (ATD) connectivity comments, the applicant is offering to provide a 12 foot bike/pedestrian access path to connect future improvements planned for Hwy 183 to city owned watershed protection property which includes the Montopolis Tributary Trail Network adopted as part of the Urban Trail Plan. In addition, ATD is recommending right-of-way dedication for the extension of Ponca Street through the property roughly west to east.

The following uses will be prohibited and included in a conditional overlay along with other provisions below:

Adult-oriented businesses
Agricultural sales and services
Bail bonds
Building maintenance services
Campground
Construction sales and services
Drop-off Recycling Facility
Kennels
Laundry services
Pawn shop services
Residential treatment
Scrap/Salvage
Vehicle Storage

-Dedication of a 12' pedestrian/bicycle trail along the southern boundary to connect to the proposed future bikeway along HWY 183 to the east with the adjacent property owned by the City of Austin to enable connection with the proposed Montopolis Tributary trail to the south.
-Dedication of right-of-way for the extension of Ponca Street.
-Vegetative buffer along the north boundary adjacent to existing single family residences on Valdez Street.
-75' vegetative buffer along the south property line adjacent to the cemetery.

PLANNING COMMISSION RECOMMENDATION:
December 8, 2015 – POSTPONED to January 12, 2016 at the request of the Montopolis Neighborhood Association.
January 12, 2016 – POSTPONED to January 26, 2016 by staff for transportation issues.

DEPARTMENT COMMENTS: Staff recommends an alternative to the requested zoning category. Instead of a blanket CS-MU-NP, staff prefers the current step-back approach from Bastrop Highway into the Montopolis Neighborhood with the addition of mixed-use and an increase in density from SF-2-to MF-2. The Airport Overlay (AO-3) prohibits residential use for much of the property fronting US Highway 183. The portion remaining CS-NP is within the Airport Overlay.

ISSUES:
This request requires a Neighborhood Plan Amendment (2015-0005.04). During the Neighborhood Plan Amendment public meeting residents of the existing mobile home community (Cactus Rose Mobile Home Park), who will be displaced with the redevelopment of these tracts, expressed concerns about their options for relocating, costs to move their homes, ability for their homes to withstand the move and their general treatment by the Cactus Rose operator. In response to these concerns, the applicant has proposed providing financial assistance for relocation to the residents.

Residents of the Montopolis neighborhood have concerns regarding new development taking access to Ponca street. City of Austin Transportation staff has requested that right-of-way be dedicated for the extension of Ponca street as well as a trail connection to the future bike lanes proposed in the HWY 183 expansion. There are also discussions with AISD regarding traffic flow around Allison Elementary School. Currently, Ponca Street is one-way in front of the school (westbound).

EXISTING ZONING AND LAND USES:

	ZONING	LAND USES
Site	CS-NP, SF-3-NP, GO-NP, SF-2-NP	Single family and mobile home
North	SF-3-NP	Vacant and parkland (Civitan Park)
East	CS, LI	Across HWY 183 - Retail (Callahan's), Gas Station and Undeveloped
South	CS-NP, SF-2-NP	Undeveloped and the Burdett Prairie Cemetary
West	SF-3-NP, SF-2	Single family and elementary school (Allison Elem)

NEIGHBORHOOD PLANNING AREA: Montopolis **TIA or NTA:** TIA

WATERSHED: Suburban, Colorado River & Carson Creek Watersheds.

DESIRED DEVELOPMENT ZONE: Yes

CAPITOL VIEW CORRIDOR: No **HILL COUNTRY ROADWAY:** No

NEIGHBORHOOD ORGANIZATIONS:
Montopolis Neighborhood Association
Montopolis Contact Team
Del Valle Community Coalition
East Austin Conservancy
El Concilio Mexican-American Neighborhoods
Friends of Austin Neighborhoods
Bike Austin
Austin Heritage Tree Foundation
Montopolis Community Alliance
Austin Neighborhood Council
Imperial Valley Neighborhood Association
Preservation Austin
Sierra Club
Real Estate Council of Austin
Vargas Neighborhood Association
Montopolis Tributary Trail Association
Montopolis Area Neighborhood Alliance
Vasquez Fields Neighborhood Association
Montopolis-Ponca Neighborhood Association
Carson Ridge Neighborhood Association
Southeast Austin Neighborhood Alliance
Friends of the Emma Barrientos MACC

Riverside Farms Road Neighborhood Association

SCHOOLS: Eastside Memorial HS, Martin MS, Allison Elementary and Del Valle HS, Ojeda MS, Smith Elementary. This property is bisected by Austin ISD and Del Valle ISD. There would have to be a request made by the land owner and approved by both school boards to make a "minor adjustment" to the boundaries.

CASE HISTORIES FOR THIS PROPERTY

NUMBER	REQUEST	PLANNING COMMISSION	CITY COUNCIL
C14-01-0060	Montopolis Neighborhood Plan SF-3, CS, SF-2 to CS-NP; SF-2, SF-3 to CS-NP; SF-2, SF-3 to GO-NP, SF-2 to SF-2-NP	SF-3-NP, CS-NP, GO-NP, SF-2-NP	SF-3-NP, CS-NP, GO-NP, SF-2-NP

CASE HISTORIES FOR SURROUNDING PROPERTIES

NUMBER	REQUEST	PLANNING COMMISSION	CITY COUNCIL
C14-2010-0138 526 & 626 Bastrop Hwy (McElhenney Tract)	CS-NP, GR-CO-NP & SF-2-NP to CS-NP	CS-NP	CS-NP

ABUTTING STREETS:

NAME	ROW	PAVEMENT	CLASSIFICATION
Bastrop HWY/HWY 183	325'-400'	62'	Major Arterial
Ponca Street	37'-40'	18'	Local

CITY COUNCIL DATE: **ACTION:**

ORDINANCE READINGS: **1st** **2nd** **3rd**

ORDINANCE NUMBER:

CASE MANAGER: Andrew Moore **PHONE:** 512-974-7604
EMAIL: andrew.moore@austintexas.gov

STAFF RECOMMENDATION
CS-CO-NP, CS-MU-CO-NP, LR-MU-CO-NP, GO-MU-CO-NP, MF-2-CO-NP
Conditional Overlay to include the following prohibited uses:
Adult-Oriented Business

Automotive – Washing/Sales/Services
Bail Bonds
Construction Sales/Services
Drop-off Recycle Facility
Equipment Repair Services
Exterminating Services
Maintenance and Services Facility
Outdoor Entertainment
Pawn Shops
Pet Services
Plant Nursery (conditional)
Scrap/Salvage
Service Station Repairs
Vehicle Storage

-Dedication of a 12' pedestrian/bicycle trail along the southern boundary to connect to the proposed future bikeway along HWY 183 to the east with the adjacent property owned by the City of Austin to enable connection with the proposed Montopolis Tributary trail to the south.
-Dedication of right-of-way for the extension of Ponca Street.
-Vegetative buffer along the north boundary adjacent to existing single family residences on Valdez Street.
-75' vegetative buffer along the south property line adjacent to the cemetery.

BASIS FOR RECOMMENDATION
Staff supports the addition of mixed use to the existing commercial districts because of the tracts' location along US Highway 183 and adjacent civic uses (parkland and elementary school) and a step down of intensity into the neighborhood. The proposed low density multi-family (MF-2) is suitable adjacent to single family residences.

EXISTING CONDITIONS
Site Characteristics
The 23 acre site consists of five tracts. Currently these tracts consist of a Mobile home/RV park with 50 residential units, seven single family homes and two duplexes. Approximately half of the property is undeveloped. An Austin Energy easement containing transmission lines runs diagonally through the back half. There is also a construction yard in the back portion of the property accessing Ponca Street.

Montopolis Neighborhood Plan
Please see associated Neighborhood Plan Amendment Case (NPA-2015-0005.03).

NPZ Environmental Review - Mike McDougal 512-974-6380
1. The site is not located over the Edwards Aquifer Recharge Zone. The site is in the Carson Creek Watershed, which is classified as a Suburban Watershed and the site is in the Colorado River Watershed, which is classified as an Urban Watershed. The site is in the Desired Development Zone.

2. In the suburban watershed portion of the property, development or redevelopment on this site will be subject to the following impervious cover limits:

Development Classification	*% of Gross Site Area*	*% of Gross Site Area with Transfers*
Single-Family (minimum lot size 5750 sq. ft.)	50%	60%
Other Single-Family or Duplex	55%	60%
Multifamily	60%	70%
Commercial	80%	90%

Zoning district impervious cover limits apply in the urban watershed classification.

3. According to floodplain maps there is no floodplain within or adjacent to the project location.

4. Standard landscaping and tree protection will be required in accordance with LDC 25-2 and 25-8 for all development and/or redevelopment.

5. Trees will likely be impacted with a proposed development associated with this rezoning case. Please be aware that an approved rezoning status does not eliminate a proposed development's requirements to meet the intent of the tree ordinances. If further explanation or specificity is needed, please contact the City Arborist at 512-974-1876. At this time, site specific information is unavailable regarding other vegetation, areas of steep slope, or other environmental features such as bluffs, springs, canyon rimrock, caves, sinkholes, and wetlands.

6. At this time, no information has been provided as to whether this property has any preexisting approvals that preempt current water quality or Code requirements.

7. In the suburban watershed portion of the property, development or redevelopment requires water quality control with increased capture volume and control of the 2 year storm on site. In the urban watershed portion of the property, the site is required to provide on-site water quality controls (or payment in lieu of) for all development and/or redevelopment when 8,000 s.f. cumulative is exceeded and on site control for the two-year storm.

DSD Transportation Review – Amanda Couch – 512-974-2881

TR1. If the requested zoning is recommended for this site, 25 feet of right-of-way should be dedicated from the centerline of Ponca St. in accordance with the Transportation Criteria Manual, in order to accommodate traffic anticipated to be generated by this site. LDC, 25-6-55; TCM, Tables 1-7, 1-12.

TR2. Additional right-of-way maybe required at the time of subdivision and/or site plan for SH 183.

TR3. A traffic impact analysis is required and has been received. Additional right-of-way, participation in roadway improvements, or limitations on development intensity may be recommended based on review of the TIA. [LDC, Sec. 25-6-142]. Comments will be provided in a separate memo.

TR4. Nadia Barrera, Urban Trails, Public Works Department and Nathan Wilkes, Bicycle Program, Austin Transportation Department may provide additional comments regarding bicycle and pedestrian connectivity per the Council Resolution No. 20130620-056.

TR5. According to the Austin 2009 Bicycle Plan Update approved by Austin City Council in June, 2009, a bicycle facility is not identified on SH 183 or Ponca St.

TR6. Complete Streets review (Ord. # 2014-0612-119). The following recommendations are made as a condition on zoning:

a. Ponca St be extended and stubbed out to the opposing eastern property line. This will support future connectivity to the east.

b. Provide a north/ south pedestrian and bike access easement to connect the proposed 183 Tollway Trail to the north and the Montopolis Tributary Trail Network to the south.

TR7. Existing Street Characteristics:

Name	**ROW**	**Pavement**	**Classification**	**Sidewalks**	**Bike Route**	**Capital Metro (within ¼ mile)**
State Highway 183	325' – 400'	126'	Freeway	Yes	Yes; Route # 417; wide shoulder	Yes
Ponca St.	37' – 40'	18' (stub-out dirt road)	Local	No	No	Yes

Water and Wastewater

The landowner intends to serve the site with City of Austin water and wastewater utilities. The landowner, at own expense, will be responsible for providing any water and wastewater utility improvements, offsite main extensions, utility relocations and or abandonments required by the land use. The water and wastewater utility plan must be reviewed and approved by the Austin Water Utility for compliance with City criteria and suitability for operation and maintenance. Depending on the development plans submitted, water and or wastewater service extension requests may be required. All water and wastewater construction must be inspected by the

City of Austin. The landowner must pay the City inspection fee with the utility construction. The landowner must pay the tap and impact fee once the landowner makes an application for a City of Austin water and wastewater utility tap permit.

Storm Water Detention
At the time a final subdivision plat, subdivision construction plans, or site plan is submitted, the developer must demonstrate that the proposed development will not result in additional identifiable flooding of other property. Any increase in storm water runoff will be mitigated through on-site storm water detention ponds, or participation in the City of Austin Regional Storm water Management Program if available.

NPZ Site Plan Review - Rosemary Avila 512-974-2784

SP1. Site plans will be required for any new development other than single-family or duplex residential.

SP2. Any new development is subject to Subchapter E. Design Standards and Mixed Use. Additional comments will be made when the site plan is submitted.

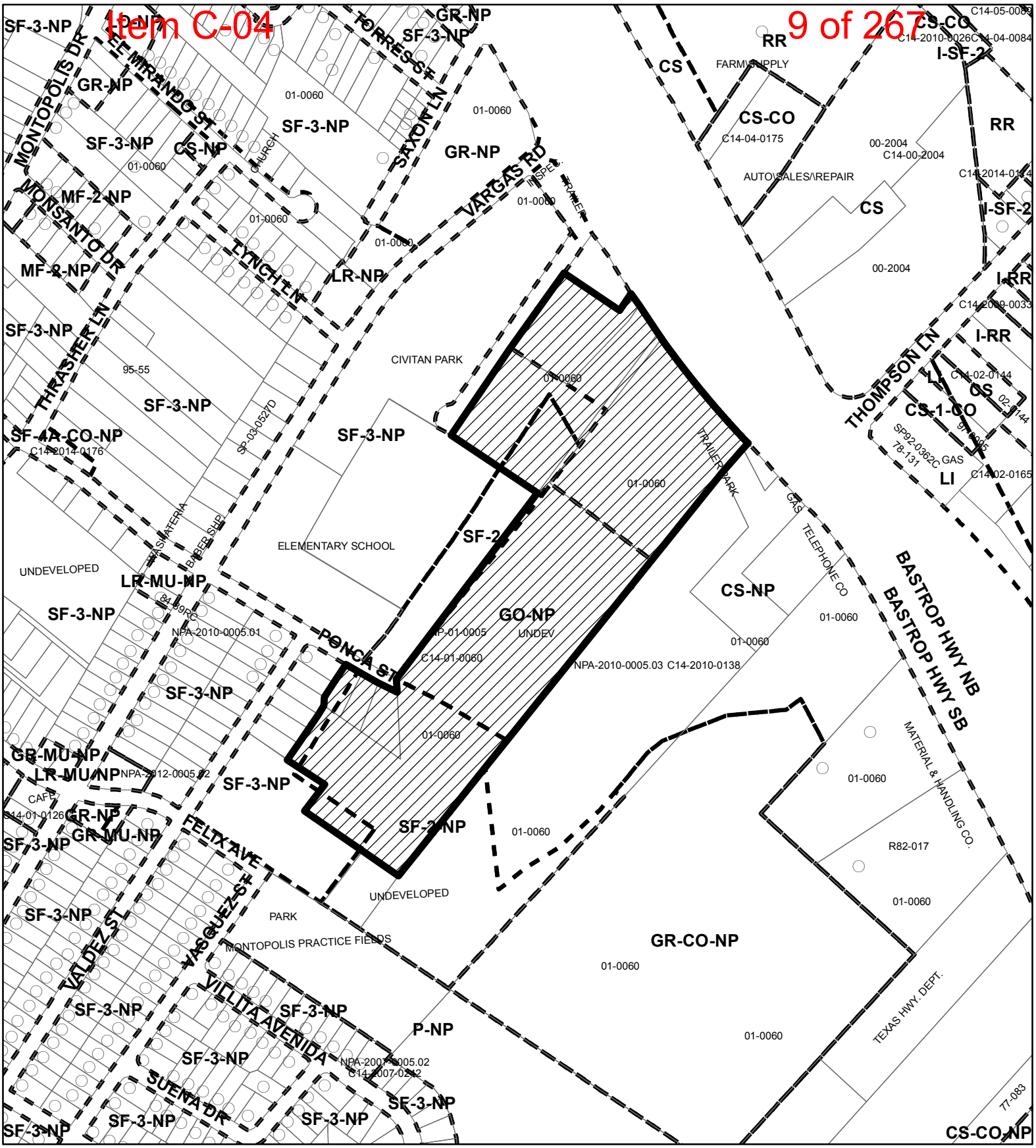
SP3. Any development which occurs in an SF-6 or less restrictive zoning district which is located 540-feet or less from property in an SF-5 or more restrictive zoning district will be subject to compatibility development regulations.

SP4. The site is subject to compatibility standards. Along the west and south property lines, the following standards apply:

- No structure may be built within 25 feet of the property line.
- No structure in excess of two stories or 30 feet in height may be constructed within 50 feet of the property line.
- No structure in excess of three stories or 40 feet in height may be constructed within 100 feet of the property line.
- No parking or driveways are allowed within 25 feet of the property line.
- A landscape area at least 25 feet wide is required along the property line. In addition, a fence, berm, or dense vegetation must be provided to screen adjoining properties from views of parking, mechanical equipment, storage, and refuse collection.

Additional design regulations will be enforced at the time a site plan is submitted.

SP5. This property is within both the Controlled Compatible Land Use Area and the Airport Overlay Zone, AO-3, defined by Chapter 241 of the Local Government Code. Airport hazards as defined in Federal Aviation Regulations Part 77, as adopted by the City in Section 25-13-23, are prohibited. Noise level reduction measures may be required for certain new structures. For more information, contact Joe Medici, Noise Abatement Officer at (512) 530-6652.



N

SUBJECT TRACT

PENDING CASE

ZONING BOUNDARY

1 " = 400 '

ZONING

CASE#: C14-2015-0104

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

This product has been produced by CTM for the sole purpose of geographic reference. No warranty is made by the City of Austin regarding specific accuracy or completeness.

ZONING

N

SUBJECT TRACT

ZONING BOUNDARY

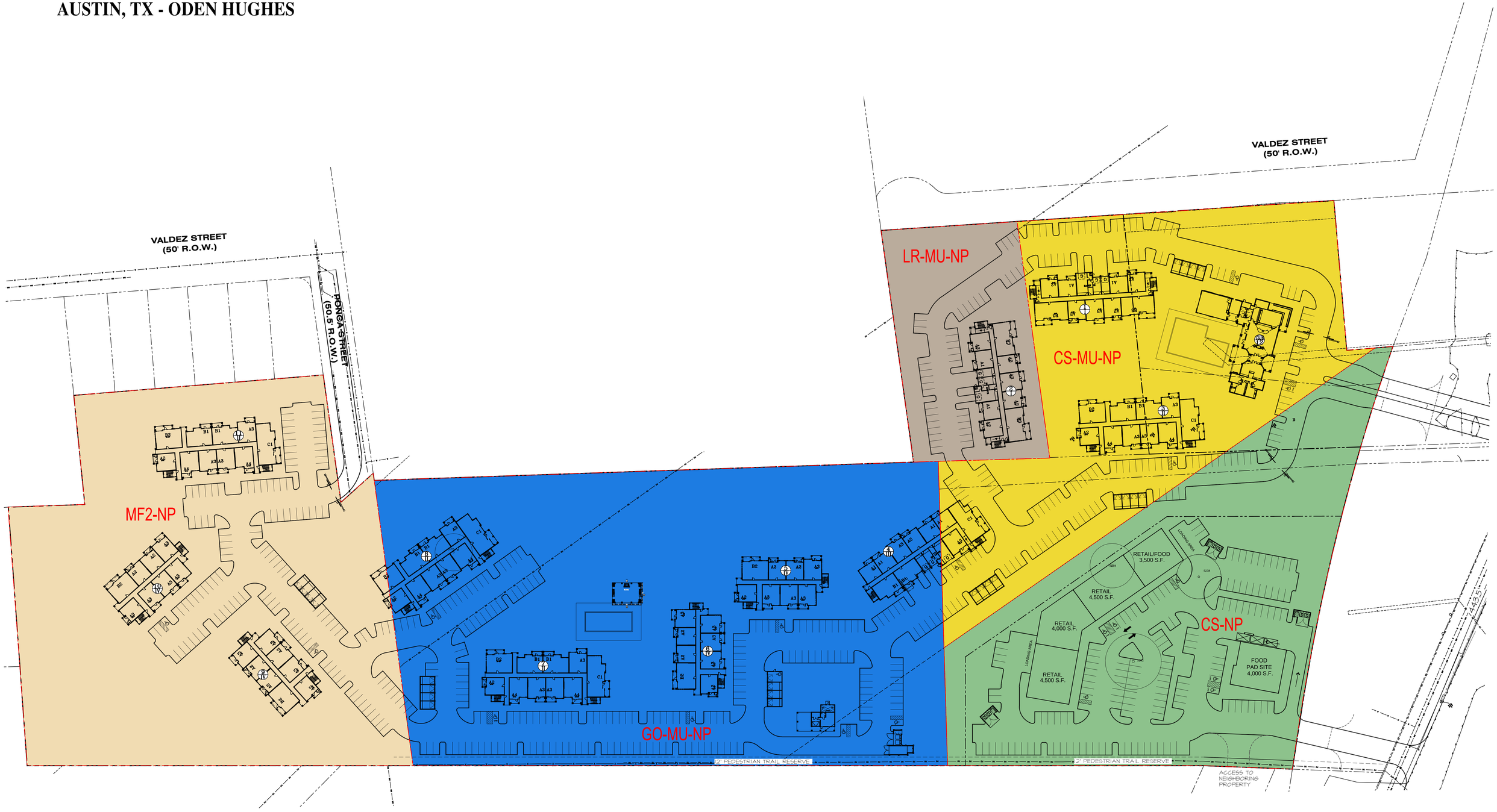
1' = 400'

ZONING CASE#: C14-2015-0104
LOCATION: 434-500 Bastrop Hwy & 6705-6709 Ponca
SUBJECT AREA: 23.09 ACRES
MANAGER: Andrew Moore

This map has been produced by the Communications Technology Management Dept. on behalf of the Planning Development Review Dept. for the sole purpose of geographic reference. No warranty is made by the City of Austin regarding specific accuracy or completeness.

LENOX OAKS

AUSTIN, TX - ODEN HUGHES



• ARCHITECTURE • LAND PLANNING • LANDSCAPE DESIGN • CONSTRUCTION ADMINISTRATION •

KELLY GROSSMAN
A R C H I T E C T S , L L C

260 ADDIE ROY ROAD SUITE 210 AUSTIN, TEXAS 78746 ph: +1.512/327.3397

NORTH

0 30' 60' 120'

SCALE: 1:60

IF THIS BAR SCALE DOES NOT MEASURE 2", THEN THE DRAWING IS NOT TO SCALE.

SITE PLAN

12/17/2015 12:14:36 PM

EDUCATIONAL IMPACT STATEMENT

Prepared for the City of Austin

Austin Independent School District

PROJECT NAME: **Lenox Oaks**
ADDRESS/LOCATION: 434-500 Bastrop Hwy., 6705 – 6709 Ponca St.
CASE #: C14-2015-0104

☐ NEW SINGLE FAMILY ☐ DEMOLITION OF MULTIFAMILY
☒ NEW MULTIFAMILY ☐ TAX CREDIT

SF UNITS: _____ STUDENTS PER UNIT ASSUMPTION
Elementary School: _____ Middle School: _____ High School: _____

MF UNITS: 356 STUDENTS PER UNIT ASSUMPTION
Elementary School: 0.124 Middle School: 0.035 High School: 0.071

IMPACT ON SCHOOLS

The proposed multifamily development is located within both Austin ISD and Del Valle ISD. This Educational Impact Statement reflects the total number of apartments (356) due to the proximity of the proposed development to Allison Elementary School and the District's policy to allow out-of district transfers into schools with availability.

The district-wide student yield factor (across all grade levels) is 0.23 per apartment. Using this district-wide average, the multifamily development is projected to add approximately 82 students across all grade levels to the projected student population. It is estimated that of the 82 students, 44 will be assigned to Allison Elementary School, 13 to Martin Middle School, and 25 at Eastside Memorial High School.

The percent of permanent capacity by enrollment for SY 2019-20, including the additional students projected with this development, would be within the target range of 75-115% for Allison (92%), assuming the mobility rates remain the same. The projected additional students at Martin MS and Eastside Memorial HS would help to offset the anticipated decline in student enrollment (due to demographic shifts in the area). This would result in a percent of permanent of permanent capacity by enrollment of 57% at Martin MS and 43% at Eastside Memorial HS for SY2019-20, assuming the mobility rates remain the same. All of these schools will be able to accommodate the projected additional student population from the proposed development.

TRANSPORTATION IMPACT

The transportation impact analysis is based on the number of multifamily units (116) located only within the Austin ISD because the district does not provide transportation for out-of district transfers. Based on 116 multifamily units, it is estimated that 14 students will be assigned to Allison ES, 4 to Martin MS, and 8 to Eastside Memorial HS. Allison ES is located within 2 miles of the proposed development; therefore students would not qualify for transportation unless a hazardous route condition was identified. Students within the proposed

EDUCATIONAL IMPACT STATEMENT

Prepared for the City of Austin

Austin Independent School District

development attending Martin MS and Eastside Memorial HS will qualify for transportation due to the distance from the proposed development to the schools. Existing buses should be able to accommodate the additional students.

SAFETY IMPACT

There are no known safety impacts at this time.

Date Prepared: 10/12/15 **Director's Signature:** Paul Turner

EDUCATIONAL IMPACT STATEMENT

Prepared for the City of Austin

Austin Independent School District

DATA ANALYSIS WORKSHEET

ELEMENTARY SCHOOL: Allison RATING: Met Standard

ADDRESS: 515 Vargas Rd. PERMANENT CAPACITY: 486

% QUALIFIED FOR FREE/REDUCED LUNCH: 95.48% MOBILITY RATE: -2.2%

POPULATION (without mobility rate)

ELEMENTARY SCHOOL STUDENTS	2014-15 Population	5- Year Projected Population (without proposed development)	5-Year Projected Population (with proposed development)
Number	502	411	455
% of Permanent Capacity	103%	85%	94%

ENROLLMENT (with mobility rate)

ELEMENTARY SCHOOL STUDENTS	2014-15 Enrollment	5- Year Projected Enrollment* (without proposed development)	5-Year Projected Enrollment* (with proposed development)
Number	491	402	446
% of Permanent Capacity	101%	83%	92%

MIDDLE SCHOOL: Martin RATING: Improvement Required

ADDRESS: 1601 Haskell PERMANENT CAPACITY: 804

% QUALIFIED FOR FREE/REDUCED LUNCH: 93.72% MOBILITY RATE: -49.0%

POPULATION (without mobility rate)

MIDDLE SCHOOL STUDENTS	2014-15 Population	5- Year Projected Population (without proposed development)	5-Year Projected Population (with proposed development)
Number	1,076	877	890
% of Permanent Capacity	134%	109%	111%

ENROLLMENT (with mobility rate)

MIDDLE SCHOOL STUDENTS	2014-15 Enrollment	5- Year Projected Enrollment* (without proposed development)	5-Year Projected Enrollment* (with proposed development)
Number	549	447	460
% of Permanent Capacity	68%	56%	57%

EDUCATIONAL IMPACT STATEMENT

Prepared for the City of Austin

Austin Independent School District

HIGH SCHOOL: Eastside Memorial	RATING: Improvement Required
ADDRESS: 1012 Arthur Stiles	PERMANENT CAPACITY: 1,156
% QUALIFIED FOR FREE/REDUCED LUNCH: 88.01%	MOBILITY RATE: -41.5%

POPULATION (without mobility rate)

HIGH SCHOOL STUDENTS	2014-15 Population	5- Year Projected Population (without proposed development)	5-Year Projected Population (with proposed development)
Number	1,088	810	835
% of Permanent Capacity	94%	70%	72%

ENROLLMENT (with mobility rate)

HIGH SCHOOL STUDENTS	2014-15 Enrollment	5- Year Projected Enrollment* (without proposed development)	5-Year Projected Enrollment* (with proposed development)
Number	636	473	498
% of Permanent Capacity	55%	41%	43%

*The 5-Year Projected Enrollment (with and without the proposed development) is an estimate calculated with the assumption that the stated mobility rates (transfers in and out of the school) remain the same over the 5-year period. These estimates are for the sole purpose of the Educational Impact Statement and should not be used for any other purposes.

The Montopolis Community Alliance a neighborhood association
December 1, 2015

To All Interested Parties,

The purpose of this letter is to notify any interested party that the majority of the members of the Montopolis Community Allinace are in full support of the:

1) **Zoning change requested for Zoning Case C14-2015-0104**
2) **FLUM change NPA-2015-005.4_BWFLUM**

If you have any additional comments are questions ; please feel free to contact us.

Thank you for your consideration,
del

Delwin Goss
President
Montopolis Community Alliance
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Austin, Texas 78741
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512-507-7615 cell
delwingoss@aol.com

Delwin Goss Chairman
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delwingoss@aol.com

INFORMACIÓN DE AUDIENCIA PÚBLICA

Esta petición de zonificación / rezonificación será repasada y acción será tomada de acuerdo a dos audiencias públicas: ante la Comisión de Usos Urbanos y el cabildo municipal. Aunque solicitantes y/o su(s) agente(s) se les requiere atender la audiencia pública, usted no esta bajo requisito de atender. De todos modos, si usted atiende la audiencia pública, tendrá la oportunidad de hablar a FAVOR o EN CONTRA al propuesto desarrollo urbano o cambio de zonificación. Usted también puede contactar a una organización de protección al medio ambiente u organización de vecinos que haya expresado interés en la aplicación teniendo implicaciones a su propiedad.

Durante la audiencia pública, la comisión podría postergar o continuar audiencia del caso en una fecha futura, o puede evaluar la recomendación de los oficiales municipales y las del público al mismo tiempo mandando su recomendación al cabildo municipal. Si la comisión anuncia una fecha y hora específica para postergar o continuar discusión, y no se extiende más de 60 días, no tendrá obligación de otra notificación pública.

El cabildo municipal, durante su audiencia pública, puede otorgar o negar una petición de zonificación, rézonificar el terreno a una clasificación de zonificación menos intensiva que lo que es pedida. En ningún caso se otorgara una clasificación de zonificación más intensiva de la petición.

Para otorgar un desarrollo de usos urbanos mixtos, el cabildo municipal puede agregar la designación USO MIXTO (MU) DISTRITO COMBINADO, *Mixed-use (MU) Combining District*, a ciertos usos urbanos de comercio. La designación *MU-* Distrito Combinado simplemente permite usos urbanos residenciales en adición a los usos ya permitidos el los siete distritos con zonificación para comercio. Como resultado, la designación *MU-* Distrito Combinado, otorga la combinación de oficinas, comercio, y usos urbanos residenciales en el mismo sitio.

Para más información acerca del proceso de desarrollo urbano de la ciudad de Austin, por favor visite nuestra página de la *Internet*: www.austintexas.gov/planning.

Comentarios escritos deberán ser sometidos a la comisión (o a la persona designada en la noticia oficial) antes o durante la audiencia pública. Sus comentarios deben incluir el nombre de la comisión, la fecha de la audiencia pública, y el número de caso de la persona designada en la noticia oficial.

Numero de caso: C14-2015-0104 9 Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Saúl Madero
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

500 Bastrop Hwy Lot # 51
Su domicilio(s) afectado(s) por esta solicitud

Firma — Dec. 20. 2015 *Fecha*

Daytime Telephone: 512 589 8962

Comments: Si ustedes pasan este cambio de Zona, van a perjudicar como a 50 familias, familias como a mas de 200 a 300 personas y no van hacer fácil de relocar a todas en poco tiempo.

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Durante la audiencia pública, la comisión podría postergar o continuar audiencia del caso en una fecha futura, o puede evaluar la recomendación de los oficiales municipales y las del público al mismo tiempo mandando su recomendación al cabildo municipal. Si la comisión anuncia una fecha y hora específica para postergar o continuar discusión, y no se extiende más de 60 días, no tendrá obligación de otra notificación pública.

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Para otorgar un desarrollo de usos urbanos mixtos, el cabildo municipal puede agregar la designación USO MIXTO (MU) DISTRITO COMBINADO, *Mixed-use (MU) Combining District*, a ciertos usos urbanos de comercio. La designación *MU-* Distrito Combinado simplemente permite usos urbanos residenciales en adición a los usos ya permitidos el los siete distritos con zonificación para comercio. Como resultado, la designación *MU-* Distrito Combinado, otorga la combinación de oficinas, comercio, y usos urbanos residenciales en el mismo sitio.

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Numero de caso: C14-2015-0104 9 Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Regina Herrera
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

500 Bastrop Hwy Lot. # 34
Su domicilio(s) afectado(s) por esta solicitud

No sabe escribir — 12-16-2015
Firma — *Fecha*

Daytime Telephone: No phone

Comments:
Disabilitado

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

INFORMACIÓN DE AUDIENCIA PÚBLICA

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Numero de caso: C14-2015-0104 9 Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Israel Molina Resendiz
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

444 HW 1835
Su domicilio(s) afectado(s) por esta solicitud

Firma 12-20-15 *Fecha*

Daytime Telephone: 512-545-9573

Comments: No Hax muchos prosodimientos para consejir una bibienda. Nesesitamos tener una respuesta que pueda Ayudarnos para consegir un Lugar donde estar con mi Familia. si usted que tiene nosotros no. tenemos somos muchas personas que Que nesitamos un Hogar. Gracias.
Attm. Israel Molina

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Numero de caso: C14-2015-0104.9 Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Antonio Bando
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

500 Bastrop Hwy #115
Su domicilio(s) afectado(s) por esta solicitud

Antonio Bando — 12/18/15
Firma — *Fecha*

Daytime Telephone: (512) 696 4430

Comments:

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

INFORMACIÓN DE AUDIENCIA PÚBLICA

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Numero de caso: C14-2015-0104.9 / Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Sandra Sorto
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

500 Bastrop Hwy
Su domicilio(s) afectado(s) por esta solicitud

Sandra Sorto — 12-15-15
Firma — *Fecha*

Daytime Telephone: 512) 6963809

Comments: Me Afecta Economicamente Siendo que soy madre soltera y no cuento con mucho dinero para poder moverme.

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Numero de caso: C14-2015-0104 | **Case Number: NPA-2015-0005.04**
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

RONNIE RAMIREZ
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

500 E BASTROP HWY x LOT 53
Su domicilio(s) afectado(s) por esta solicitud

Ronnie Ramirez — 12-16-15
Firma — *Fecha*

Daytime Telephone: 512 792 6930

Comments:

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

INFORMACIÓN DE AUDIENCIA PÚBLICA

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Numero de caso: C14-2015-0104.9 Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Branden Banner
Su nombre (en letra de molde)

☐ **Estoy a favor**
☒ **Yo me opongo**

4416 Bastrop Hwy
Su domicilio(s) afectado(s) por esta solicitud

Firma 12/20/15 *Fecha*

Daytime Telephone: 512-216-3423

Comments: Hi we've Been at this address for 3+ years our home. our kids love it here and our neighbors are great. Im very saddened and dissapointed that ya'll are trying to make us move. Just to make condos to raise taxes to our community.

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Numero de caso: C14-2015-0104 / Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

FRANCISCO J. NUNEZ
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

500 BASTROP HWY. #60
Su domicilio(s) afectado(s) por esta solicitud

AUST TX 78741
Firma *Fecha* 12-17-15

Daytime Telephone: 512-217-8871

Comments:

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Numero de caso: C14-2015-0104 **Case Number: NPA-2015-0005.04**
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Fidel Gonzalez
Su nombre (en letra de molde)

☐ **Estoy a favor**
☒ **Yo me opongo**

500 bastrop Hwy. #28 Austin Tx 78741
Su domicilio(s) afectado(s) por esta solicitud

Fidel Gonzalez — *Firma*
12-20-15 — *Fecha*

Daytime Telephone: 512 389-20-89

Comments:

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Numero de caso: C14-2015-0104 9 Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Gregorio Robles
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

Su domicilio(s) afectado(s) por esta solicitud

Firma 12-20-15 *Fecha*

Daytime Telephone: 512- 822-9085

Comments:

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Danny Silva
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

500 BASTROP HWY
Su domicilio(s) afectado(s) por esta solicitud

LOT 15

Firma *Fecha*

Daytime Telephone: —

Comments: EVERYONE IS COOL AND CARE FOR EACH OUTHER AND I LOVE IT HERE

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Numero de caso: C14-2015-0104 9 Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Javier Gonzalez
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

500 Bastrop Hwy #25
Su domicilio(s) afectado(s) por esta solicitud

Firma

12-20-15
Fecha

Daytime Telephone: (512) 806-5387

Comments:

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Numero de caso: C14-2015-0104 9 Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Maria Amada Alejo de Hernandez
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

500 Bastrop Hwy #606 Austin, TX 78741
Su domicilio(s) afectado(s) por esta solicitud

Maria Amada Alejo de Hernandez 12.26.15
Firma *Fecha*

Daytime Telephone: 512-739-3204

Comments: Dont have somewhere else to move. No relocation to go.

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Numero de caso: C14-2015-0104 **Case Number: NPA-2015-0005.04**
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

☐ Estoy a favor
☒ Yo me opongo

Su nombre (en letra de molde)

Margaret Dust

Su domicilio(s) afectado(s) por esta solicitud

~~500~~ ~~B~~ Stroop Hwy 15 Austin TX 78741

Firma *Fecha*

Daytime Telephone: ~~(512) 399-6262~~ (512) 774-2087

Comments: Don't want to move. We've lived here 60yrs. It's the best place I've lived everyone here is so friendly + caring

Si usted usa esta forma para proveer comentarios, puede retornarlos :

City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Numero de caso: C14-2015-0104 9 Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

enRique G ortiz
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

Su domicilio(s) afectado(s) por esta solicitud

500 Bastrop Hwy
Firma

Dec. 20-2015
Fecha

Daytime Telephone: 512-743 9016

Comments:

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

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Numero de caso: C14-2015-0104.9 / Case Number: NPA-2015-0005.04
Persona designada: Andrew Moore, 512-974-7604
Audiencia Publica: Jan. 12, 2016, Planning Commission

Cynthia Martinez
Su nombre (en letra de molde)

☐ Estoy a favor
☒ Yo me opongo

500 Bastrop HWY #47
Su domicilio(s) afectado(s) por esta solicitud

Cynthia Martinez — 12/16/15
Firma — *Fecha*

Daytime Telephone: 512-328-7606

Comments: Estoy totalmente opuesta a esta propuesta. Van a dejar a mi familia de 6 ninos sin un hogar esto es lo unico que tenemos. Afecta la escuela de 5 de ellos. Todos estudian menos la bebe de 8 meses. Les Pido por favor que no nos echen.

Si usted usa esta forma para proveer comentarios, puede retornarlos :
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

RECEIVED 1/6/2016

PUBLIC HEARING INFORMATION

This zoning/rezoning request will be reviewed and acted upon at two public hearings: before the Land Use Commission and the City Council. Although applicants and/or their agent(s) are expected to attend a public hearing, you are not required to attend. However, if you do attend, you have the opportunity to speak FOR or AGAINST the proposed development or change. You may also contact a neighborhood or environmental organization that has expressed an interest in an application affecting your neighborhood.

During its public hearing, the board or commission may postpone or continue an application's hearing to a later date, or may evaluate the City staff's recommendation and public input forwarding its own recommendation to the City Council. If the board or commission announces a specific date and time for a postponement or continuation that is not later than 60 days from the announcement, no further notice is required.

During its public hearing, the City Council may grant or deny a zoning request, or rezone the land to a less intensive zoning than requested but in no case will it grant a more intensive zoning.

However, in order to allow for mixed use development, the Council may add the MIXED USE (MU) COMBINING DISTRICT to certain commercial districts. The MU Combining District simply allows residential uses in addition to those uses already allowed in the seven commercial zoning districts. As a result, the MU Combining District allows the combination of office, retail, commercial, and residential uses within a single development.

For additional information on the City of Austin's land development process, visit our website: www.austintexas.gov/planning.

Written comments must be submitted to the board or commission (or the contact person listed on the notice) before or at a public hearing. Your comments should include the board or commission's name, the scheduled date of the public hearing, and the Case Number and the contact person listed on the notice.

Case Number: C14-2015-0104
Contact: Andrew Moore, 512-974-7604
Public Hearing: Dec 8, 2015, Planning Commission

Natasha Williams
Your Name (please print)

☐ I am in favor
☑ I object

701 Valle ez St Austin, TX 78741
Your address(es) affected by this application

Signature — *Date* 12/1/15

Daytime Telephone (512) 400-9445

Comments:

If you use this form to comment, it may be returned to:
City of Austin
Planning & Zoning Department
Andrew Moore
P. O. Box 1088
Austin, TX 78767-8810

Traffic Impact Analysis

Lenox Oaks

Austin, Texas
First Submittal: July 28, 2015
Second Submittal: November 6, 2015

Traffic Impact Analysis

Lenox Oaks

Austin, Texas
First Submittal: July 28, 2015
Second Submittal: November 6, 2015

Prepared for

Oden|Hughes, LLC.

Prepared by

HDR Engineering, Inc.
Texas P.E. Firm Registration No. F-754
504 Lavaca Street, Suite 1175
Austin, Texas 78701 USA
Telephone 512 904-3700
Facsimile 512 904-3773
Website: hdrinc.com

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Certification Statement

I hereby certify that this report complies with Ordinance requirements and applicable technical requirements of the City of Austin and is complete and accurate to the best of my knowledge.

I do hereby certify that the engineering work being submitted herein complies with all provisions of the Texas Engineering Practice Act, including Section 131.152(e). I hereby acknowledge that any misrepresentation regarding this certification constitutes a violation of the Act, and may result in criminal, civil and/or administrative penalties against me, as authorized by the Act.

Leslie Pollack #101285 — 11/6/15

(Signature of Responsible Engineer) Texas P.E. # — Date

Leslie Pollack — 11/6/15

Signature of Submitter — Date

Leslie D Pollack — 11/6/15

Printed Name of Submitter — Date

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Introduction

The Lenox Oaks development is located west of US 183 at Thompson Lane in Austin, Texas as shown in Figure 1. The proposed development is expected to consist of 360 apartment dwelling units, 16,900 square feet of shopping center and 4,100 square feet of fast-food restaurant with drive-through. Currently, the property consists of 45 mobile home vehicles and 9 single-family detached housing dwelling units.

Site and Access Characteristics

Access to the development is proposed via three (3) driveways: two (2) on US 183, and one (1) via Ponca Street, as shown in Figure 2.

Existing Thoroughfare System

As indicated on the area location map and the conceptual site plan (Figures 1 and 2), the project is west of US 183 at Thompson Lane in Austin, Texas. The interrelationship of these roadways and others in the study area is shown in Figure 1. Average daily traffic estimates for these roadways were obtained from TxDOT Statewide Planning Maps (Ref. 1) and counts conducted by HDR in July and September 2015. The Austin Metropolitan Area Transportation Plan (AMATP) (Ref. 2) and CAMPO 2040 Regional Transportation Plan (Ref. 3) catalog the classifications of these major roadways and document proposed improvements. Capital Metro bus schedules and maps (Ref. 4) were used to identify bus service provided in the vicinity of the site, as shown in Figure 3. In addition, the 2014 Austin Bicycle Plan (Ref. 5) proposes recommendations which are discussed in the following paragraphs.

US 183 (Bergstrom Expressway)

The AMATP classifies US 183 as a six-lane major arterial divided between the Colorado River and SH 71. CAMPO classifies US 183 as a principal arterial. According to Texas Department of Transportation (TxDOT) average daily traffic counts, the 2013 traffic volumes on US 183 was approximately 65,100 vehicles per day (vpd). The AMATP recommends US 183 will be widened to an eight-lane freeway by 2025. As shown in Figure 4, TxDOT and CTRMA have plans to widen US 183 to a controlled-access, tolled freeway facility with frontage roads, between US 290 and SH 71. The facility will be known as Bergstrom Expressway. Bergstrom Expressway will provide 10 tolled lanes and two 3-lane frontage roads in the immediate vicinity of the site. A bicycle lane and shared-use path are proposed on the southbound Bergstrom Expressway frontage road. Sidewalks are proposed on the northbound frontage road. Construction is expected to begin in 2016 with completion by 2020 in the vicinity of the site. US 183 is referred to as a north/south facility for the purposes of this TIA.

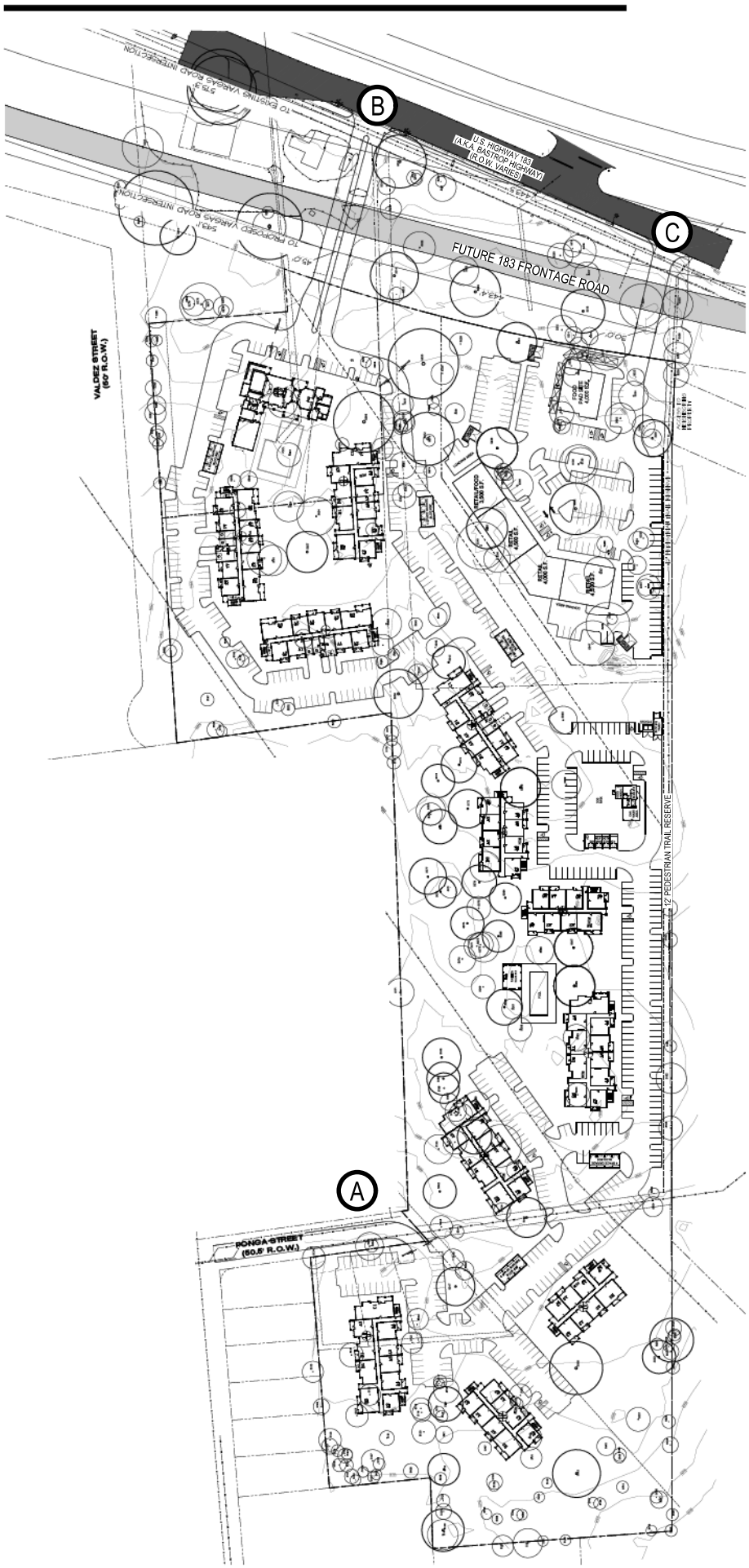
Background Map Copyrighted by Google, 2015

LEGEND

X VPD = VEHICLES PER DAY

FIGURE 1

AREA LOCATION MAP



LEGEND

(X) = DRIVEWAY

FIGURE 2

CONCEPTUAL SITE PLAN

Background Map Copyrighted by Kelly Grossman Architects LLC, 2015

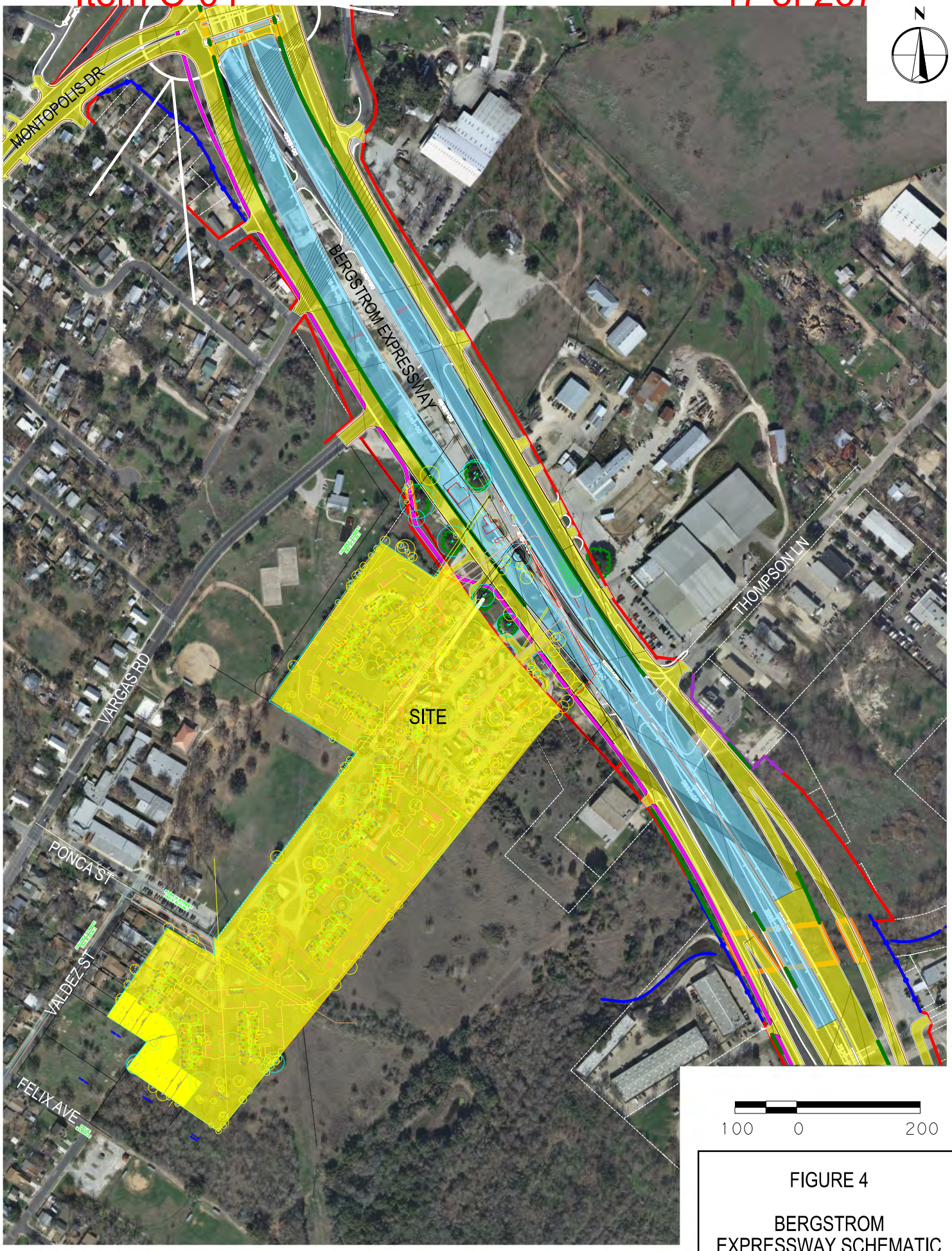
LEGEND

- LOCAL ROUTE
- CROSSTOWN ROUTE
- BUS STOP

FIGURE 3

TRANSIT AND BIKE MAP

Background Map Copyrighted by Google, 2015



Background Map Copyrighted by Google, 2015

FIGURE 4

BERGSTROM EXPRESSWAY SCHEMATIC

c:\pwworking\dal\d0697054\04 Bergstrom Expy Map.dgn

Vargas Road

Vargas Road is a two-lane local street in the vicinity of the site and terminates at US 183. Based on a review of peak hour traffic counts conducted by HDR, 2,900 vpd are estimated on Vargas Road, west of US 183. Currently, Vargas Road has wide curb lanes for bicycle facilities in the vicinity of the site. The 2014 Austin Bicycle Plan recommends a bike lane on Vargas Road between US 183 and Ponca Street and a buffered bike lane between Ponca Street and E Riverside Drive.

Thompson Lane

Thompson lane is a two-lane local street in the vicinity of the site and terminates at US 183. Based on a review of peak hour traffic counts conducted by HDR, 3,600 vpd are estimated on Thompson Lane, east of US 183.

Montopolis Drive

The AMATP classifies Montopolis Drive as a four-lane major arterial undivided between US 183 and SH 71. CAMPO classifies Montopolis Drive as a principal arterial. Based on a review of peak hour traffic counts conducted by HDR, 17,900 vpd are estimated on Montopolis Drive, east of Ponca Street. Currently, Montopolis Drive has shared-lane bicycle facilities in the vicinity of the site. The 2014 Austin Bicycle Plan recommends protected bike lanes on Montopolis Drive from US 183 to E. Stassney Lane.

Ponca Street

Ponca Street is a two-lane local street north of Vargas Road and a one-way northbound street, south of Vargas Road, in the vicinity of Allison Elementary School. Based on a review of peak hour traffic counts conducted by HDR, 450 vpd are estimated on Ponca Street, south of Vargas Road.

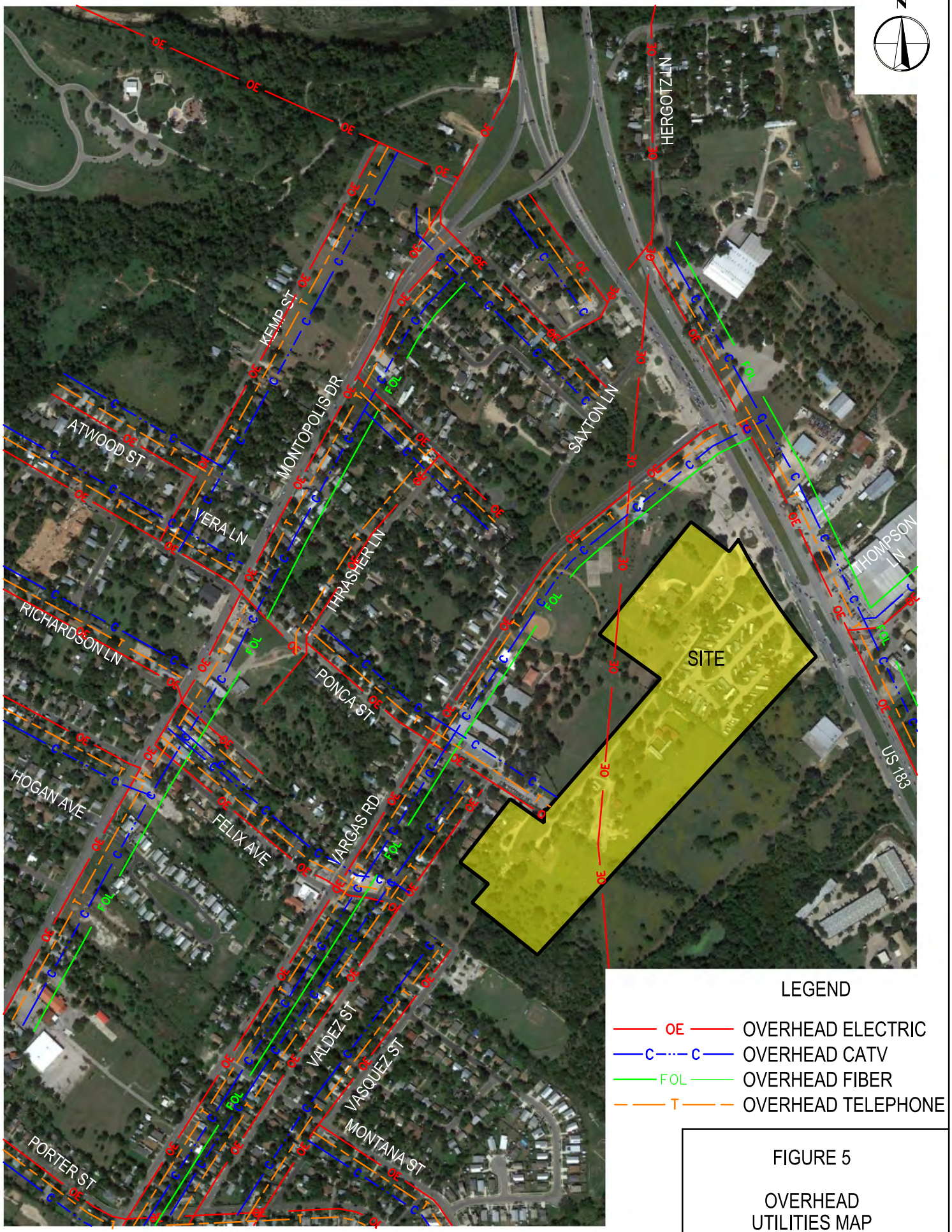
Felix Avenue

Felix Avenue is a two-lane local street in the vicinity of the site. Based on a review of peak hour traffic counts conducted by HDR, 1,300 vpd are estimated on Felix Avenue, south of Vargas Road. Currently, Felix Avenue has shared-lane bicycle facilities in the vicinity of the site. The 2014 Austin Bicycle Plan recommends bike lanes on Felix Avenue between Montopolis Drive and Vasquez Street.

Valdez Street

Valdez Street is a two-lane local street in the vicinity of the site. Based on a review of peak hour traffic counts conducted by HDR, 550 vpd are estimated on Valdez Street, east of Felix Avenue.

Figure 5 shows study area utilities along the site.



Background Map Copyrighted by Google, 2015

FIGURE 5

OVERHEAD UTILITIES MAP

Traffic Analysis

In order to assess the traffic impacts of the proposed development, two (2) time periods and three (3) travel conditions were evaluated:

- 2015 Existing Conditions
- 2020 Forecasted Conditions (without site traffic)
- 2020 Site Plus Forecasted Traffic Conditions

Intersections in the vicinity of the site are considered the locations of principal concern because they are the locations of highest traffic conflict and delay. The standard used to evaluate traffic conditions at intersections is level of service (LOS), which is a qualitative measure of the effect of a number of factors such as speed, volume of traffic, geometric features, traffic interruptions, freedom to maneuver, safety, driving comfort, convenience, and operating cost.

Two types of intersections to be evaluated are signalized and unsignalized, which use different criteria for assessment of operating levels. The analysis procedures are described in the following sections.

Signalized Intersection Level of Service

Signalized intersection LOS is defined in terms of delay, which is a direct and/or indirect measure of driver discomfort, frustration, fuel consumption, and lost travel time. The levels of service have been established based on driver acceptability of various delays. The delay for each approach lane group is calculated based on a number of factors including lane geometrics, percentage of trucks, peak hour factor, number of lanes, signal progression, volume, signal green time to total cycle time ratio, roadway grades, parking conditions, and pedestrian flows.

Because delay is a complex measure, its relationship to capacity is also complex. The City of Austin considers overall intersection levels of service A to D to be acceptable, while overall LOS of E and F is unacceptable.

Table 1 summarizes the levels of service that are appropriate for different levels of average control delay, and a qualitative description for each. The 2010 HCM uses the criteria of average control delay. Average control delay includes initial deceleration, delay, queue move-up time, stopped delay, and final acceleration delay (Ref. 6).

Table 1. Signalized Intersection: Level of Service Measurement and Qualitative Descriptions

Level of Service	Control Delay Per Vehicle (sec)	Qualitative Description
A	< 10	Good progression and short cycle lengths
B	> 10 and < 20	Good progression or short cycle lengths, more vehicle stops
C	> 20 and < 35	Fair progression and/or longer cycle lengths, some cycle failures
D	> 35 and < 55	Congestion becomes noticeable, high volume to capacity ratio
E	> 55 and < 80	Limit of acceptable delay, poor progression, long cycles, and/or high volume
F	> 80	Unacceptable to drivers, volume greater than capacity

Unsignalized Intersection Level of Service

Unsignalized intersection LOS is defined in terms of average control delay and, in some cases, v/c ratio. Control delay is that portion of total delay attributed to traffic control measures, either traffic signals or stop signs. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

For two-way stop-controlled intersections, the analysis method assumes that major street through traffic is not affected by minor street flows. Major street left-turning traffic and the traffic on the minor approaches will be affected by opposing movements. Stop or yield signs are used to assign the right-of-way to the major street. This designation forces drivers on the controlled street to judgmentally select gaps in the major street flow through which to execute crossing or turning maneuvers. Thus, the capacity of the controlled legs is based upon two factors:

- The distribution of gaps in the major street traffic stream.
- Driver judgment in selecting gaps through which to execute their desired maneuvers.

The LOS procedure computes a capacity for each movement based upon the critical time gap required to complete the maneuver and the volume of traffic that is opposing the movement. The average control delay for any particular movement is calculated as a function of the capacity of the approach and the degree of saturation (v/c ratio). The degree of saturation is defined as the volume for a movement, expressed as an hourly flow rate, divided by the capacity of the movement, expressed as an hourly flow rate. With the 2010 HCM methodology, overall intersection LOS is best quantified based on minor street movement average control delay. The 2010 HCM methodology adjusts individual movement delay to account for a degree of saturation (v/c ratio) that is greater than 1.0. Those movements are assigned an LOS of F, regardless of the average control delay. Engineering judgment must be used to determine which minor street movement

controls for overall intersection LOS, and whether unacceptable LOS on minor street movements appropriately reflects unacceptable LOS for the overall intersection.

Table 2 shows the relationship between the average control delay and the LOS. The LOS range for unsignalized intersections is different than that for signalized intersections. This difference is due to the fact that drivers expect different levels of performance from different kinds of transportation facilities. Unsignalized intersections carry less traffic volume than signalized intersections and delays at unsignalized intersections are variable. For these reasons, control delay would be less for an unsignalized intersection than for a signalized intersection. The overall approach LOS is computed as a weighted average of the vehicle delay for each movement; therefore, an approach may have an overall LOS C or D and have individual movements, which are LOS E or F.

Analysis was performed using the simulation program "Synchro 8.0" by Trafficware (Ref. 7), which is based on the procedures contained in the Highway Capacity Manual.

Table 2. Unsignalized Intersection: Level of Service Measurement

Level of Service	Control Delay Per Vehicle (sec)
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

2015 Existing Conditions

The analysis of existing traffic requires the collection of data on the major roadways and intersections. Traffic counts were conducted on Wednesday September 9, 2015 at the following intersections:

- Vargas Road and Ponca Street
- Vargas Road and Felix Avenue
- Valdez Street and Ponca Street
- Valdez Street and Felix Avenue

Traffic counts were conducted on Wednesday July 1, 2015 and Thursday July 2, 2015 at the following intersections:

- US 183 and Vargas Road
- US 183 and Thompson Lane
- US 183 and Callahan's Driveway/Private Driveway

- Montopolis Drive and Ponca Street

To accommodate data collection when school was not in session, a growth factor of twenty percent in the AM peak and a growth factor of ten percent in the PM peak were applied to the traffic counts not collected on September 9, 2015.

Signalized Intersections

The following intersections within the study area are signalized:

- US 183 and Vargas Road
- US 183 and Thompson Lane
- Montopolis Drive and Ponca Street

Existing roadway geometrics of the above intersections are presented in Figures 6 through 8 along with current and forecasted (without site) turning movement counts and LOS. Brief descriptions of the intersections follow:

US 183 and Vargas Road

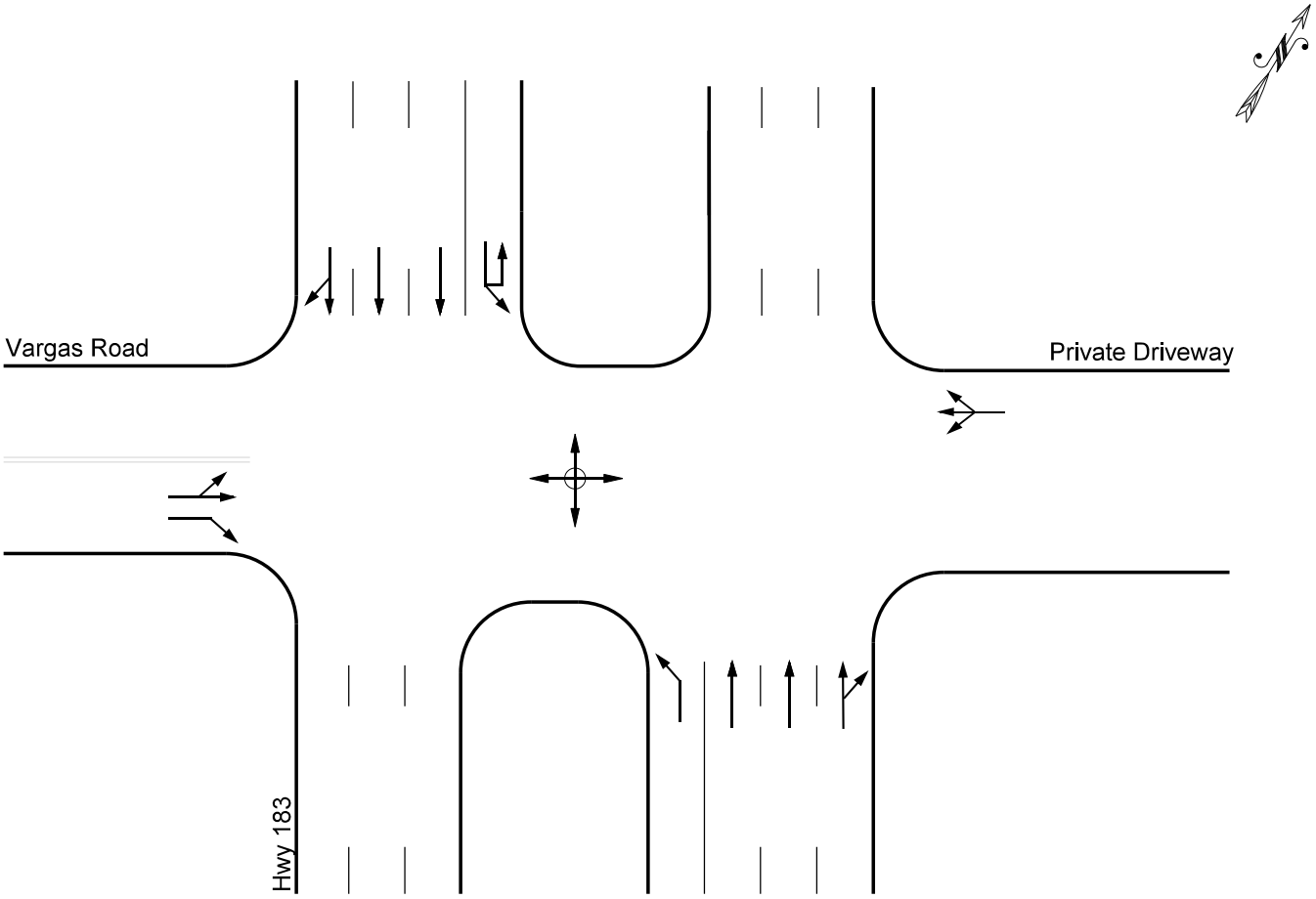
As shown in Figure 6, the northbound approach of US 183 provides one left-turn lane, two through lanes, and one through/right-turn lane. The southbound approach of US 183 provides one left-turn/u-turn lane, two through lanes, and one through/right-turn shared lane. The eastbound approach of Vargas Road provides one left-turn/through shared lane and one right-turn lane. The westbound approach is a gated driveway. The intersection operates at LOS D and F under the 2015 existing traffic conditions during the AM and PM peak periods, respectively.

US 183 and Thompson Lane

As shown in Figure 7, the northbound approach of US 183 provides two through lanes, and one through/right-turn lane with a yield-controlled, channelized right turn. The southbound approach of US 183 provides one left-turn lane and three through lanes. The westbound approach of Thompson Lane provides one left-turn lane and one yield-controlled, channelized right-turn lane. The intersection operates at LOS F under 2015 existing traffic conditions during both the AM and PM peak periods.

Montopolis Drive and Ponca Street

As shown in Figure 8, the northbound and southbound approaches of Montopolis Drive provide one left-turn/through shared lane and one through/right-turn shared lane. The eastbound and westbound approaches of Ponca Street provide one left-turn/through/right-turn shared lane. The intersection operates at LOS A under 2015 existing traffic conditions during both AM and PM peak periods. Assuming the same geometry, the intersection will operate at LOS A during both the AM and PM peak periods under 2020 forecasted traffic conditions.



LEGEND

000/000 = AM/PM Peak Hour Volume

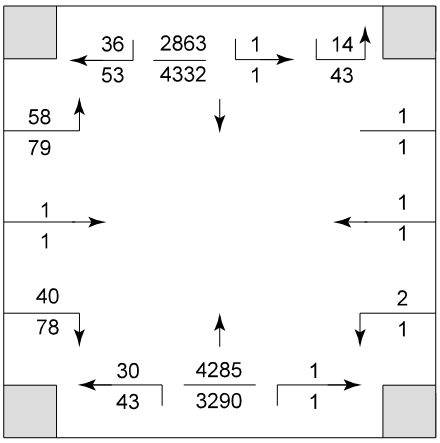
.00X/.00X = AM/PM Service Measures (V/C LOS)

= Traffic Signal

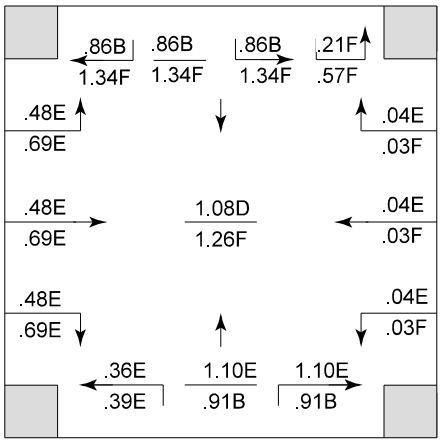
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle (sec)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Traffic Volumes: 2015 Existing



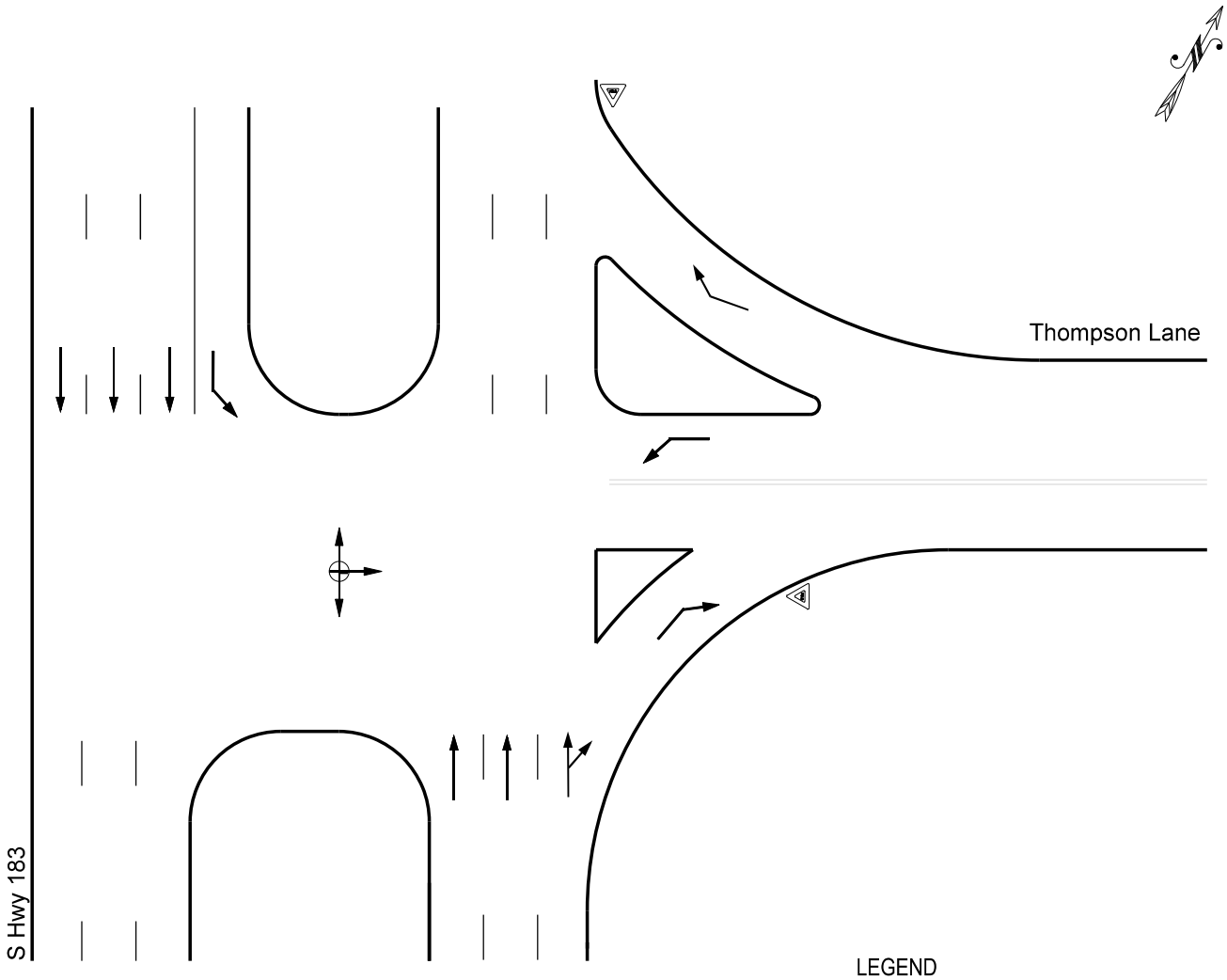
Service Measures: 2015 Existing



Note: Intersection geometry shown is conceptual and is not to scale.

FIGURE 6

2015 EXISTING GEOMETRIC AND TRAFFIC VOLUME CONDITIONS



LEGEND

000/000 = AM/PM Peak Hour Volume

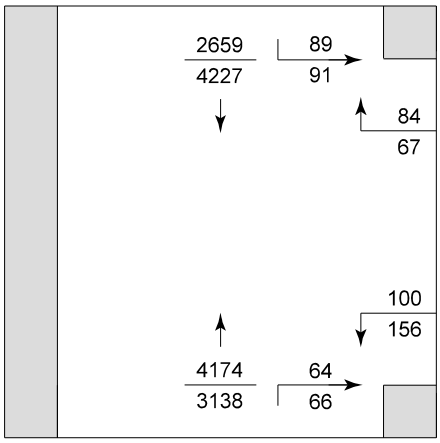
.00X/.00X = AM/PM Service Measures (V/C LOS)

= Traffic Signal

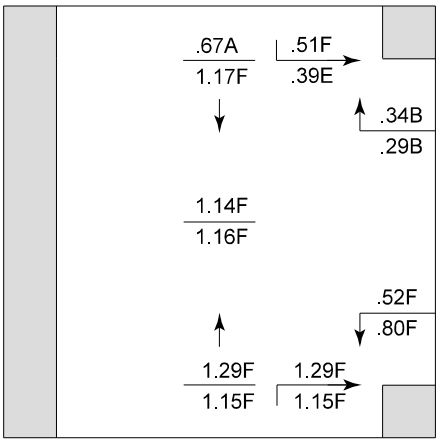
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle (sec)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Traffic Volumes: 2015 Existing



Service Measures: 2015 Existing

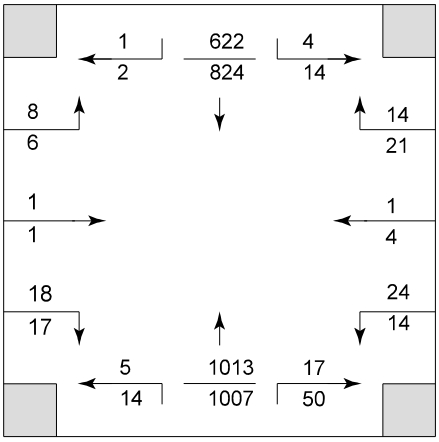


Note: Intersection geometry shown is conceptual and is not to scale.

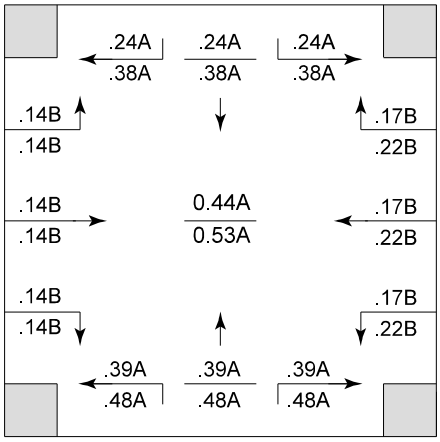
FIGURE 7

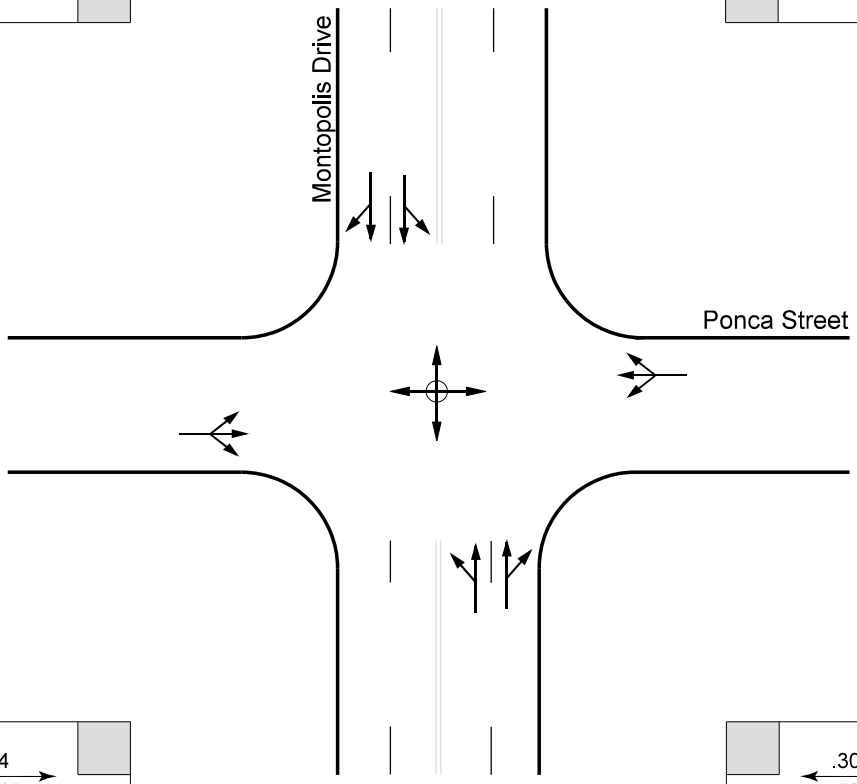
2015 EXISTING GEOMETRIC AND TRAFFIC VOLUME CONDITIONS

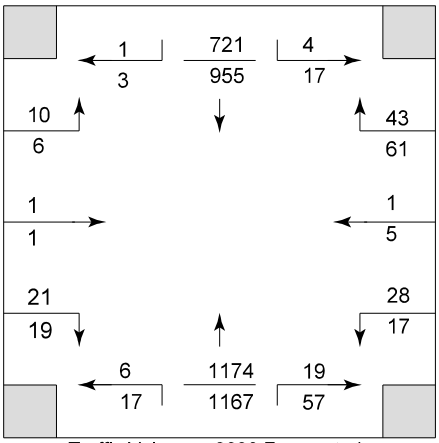
Traffic Volumes: 2015 Existing



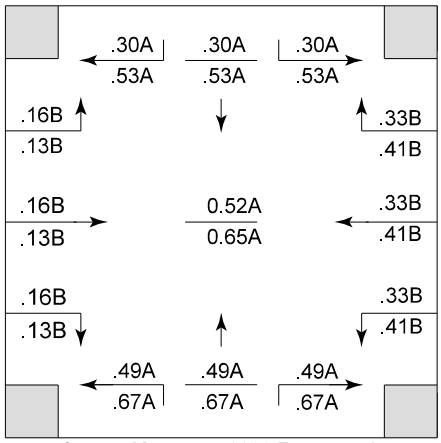
Service Measures: 2015 Existing







Traffic Volumes: 2020 Forecasted



Service Measures: 2020 Forecasted

LEGEND

000 AM / 000 PM = Peak Hour Volume

.00 X / .00 X = AM / PM Service Measures (V/C LOS)

= Traffic Signal

= Yield Sign

Signalized Intersection
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle (sec)
A	≤10
B	> 10 and ≤20
C	> 20 and ≤35
D	> 35 and ≤55
E	> 55 and ≤80
F	> 80

FIGURE 8

2015 EXISTING/
2020 FORECASTED
GEOMETRIC AND
TRAFFIC VOLUME
CONDITIONS

Unsignalized Intersections

The following intersections within the study area are unsignalized:

- US 183 and Callahan's Driveway/Private Driveway
- Vargas Road and Ponca Street
- Vargas Road and Felix Avenue
- Valdez Street and Ponca Street
- Valdez Street and Felix Avenue

Existing roadway geometrics of the above intersections are presented in Figures 9 through 13 along with current and forecasted (without site) turning movement counts and LOS. Brief descriptions of the intersections follow:

US 183 and Callahan's Driveway/Private Driveway

As shown in Figure 9, the northbound and southbound approaches of US 183 provide one left-turn lane, two through lanes, and one through/right-turn shared lane. The westbound approach of Callahan's Driveway provides one left-turn/through/right-turn shared lane. The eastbound private driveway approach also provides one left-turn/through/right-turn shared lane. The overall intersection operates at LOS C and D under 2015 existing traffic conditions during the AM and PM peak periods, respectively. The highest delay minor street approach (EB) operates at LOS F during both the AM and PM peak periods.

Vargas Road and Ponca Street

As shown in Figure 10, all intersection approaches are stop-controlled. The northbound approach of Vargas Road provides one left-turn/through shared lane, while the southbound approach provides one through/right-turn shared lane. The westbound approach of Ponca Street provides one left-turn/through/right-turn shared lane, while the eastbound approach provides one left-turn/right-turn shared lane. The intersection operates at LOS A under 2015 existing traffic conditions during both AM and PM peak periods. The highest delay minor street approach (NB) operates at LOS B and A during the AM and PM peak periods, respectively. Assuming the same geometry under 2020 forecasted traffic conditions, the intersection will operate as LOS B and A during the AM and PM peak periods, respectively, while the highest delay minor street approach (NB) will operate at LOS B and A during the AM and PM peak periods, respectively.

Vargas Road and Felix Avenue

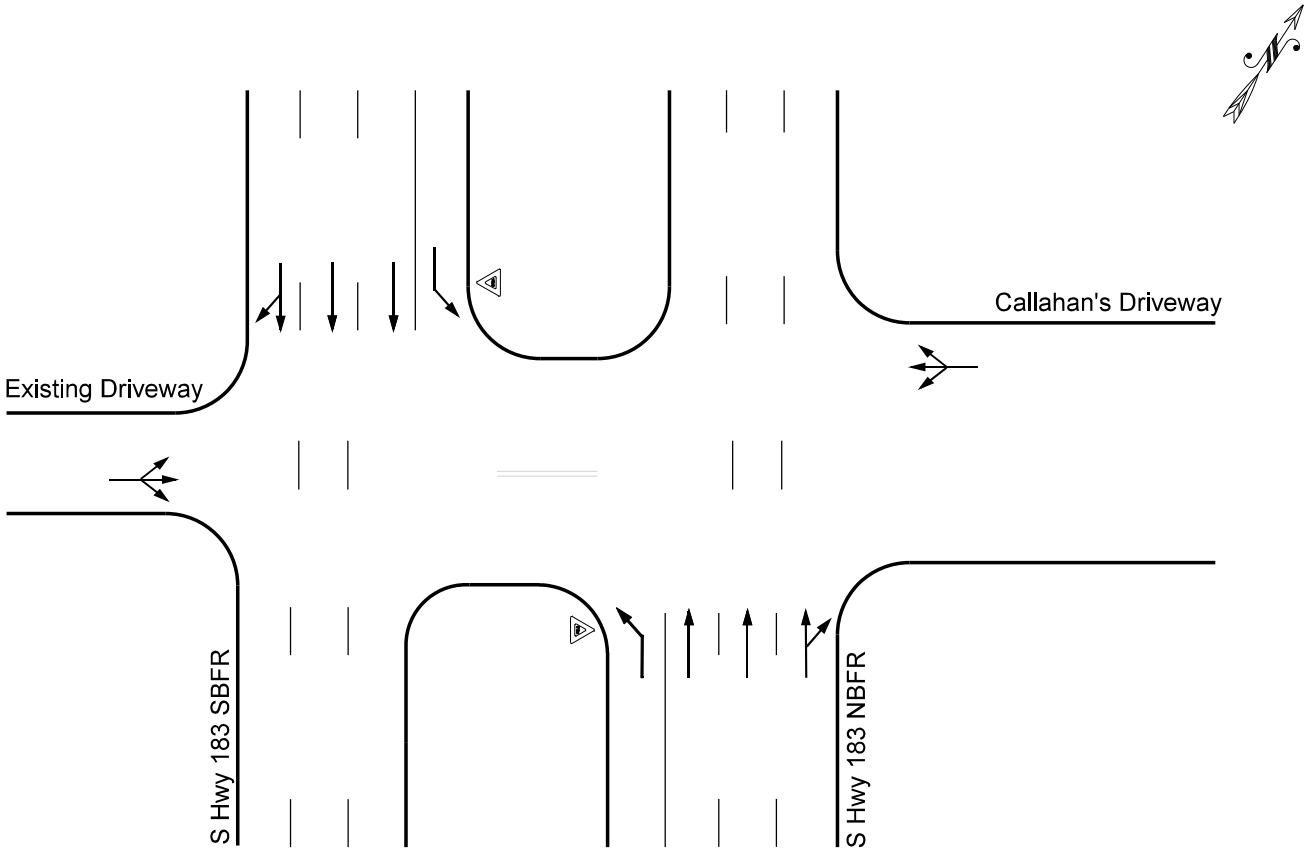
As shown in Figure 11, all intersection approaches are stop-controlled and provide one left-turn/through/right-turn shared lane. Under the 2015 existing traffic conditions, this intersection operates at LOS B and A during the AM and PM peak periods, respectively. The highest delay minor street approach (NB) operates at LOS B and A during the AM and PM peak periods, respectively. Assuming the same geometry under 2020 forecasted traffic conditions, the intersection will operate at LOS B and A during the AM and PM peak periods, respectively, while the highest delay minor street approach (NB) will operate at LOS C and A during both the AM and PM peak periods.

Valdez Street and Ponca Street

As shown in Figure 12, the northbound approach of Valdez Street comprises the stop-controlled approach and provides one left-turn/through/right-turn shared lane. The southbound approach of the intersection is an existing driveway to the Allison Elementary School parking lot. The westbound approach of Ponca Street provides one left-turn/through/right-turn shared lane. The westbound approach is currently a dirt roadway. The intersection operates at LOS A under 2015 existing traffic conditions during both AM and PM peak periods. The highest delay minor street approach (NB) operates at LOS A during both the AM and PM peak periods. Assuming the same geometry under 2020 forecasted traffic conditions, this intersection will operate at LOS A during both the AM and PM peak periods, while the highest delay minor street approach (NB) will operate at LOS A during both the AM and PM peak periods.

Valdez Street and Felix Avenue

As shown in Figure 13, the eastbound and westbound approaches of Felix Avenue comprise the stop-controlled approaches at this intersection and both provide one left-turn/through/right-turn shared lane. The northbound and southbound approaches of Valdez Street provide one left-turn/through/right-turn shared lane. The overall intersection operates at LOS A under 2015 existing traffic conditions during both AM and PM peak period. The highest delay minor street approach (EB) operates at LOS B and A during both the AM and PM peak periods. Assuming the same geometry under 2020 forecasted traffic conditions, this intersection will operate at LOS A during both the AM and PM peak periods, while the highest delay minor street approach (EB) will operate at LOS B and A during the AM and PM peak periods, respectively.



LEGEND

000/000	= AM/PM	Peak Hour Volume
X/X	= AM/PM	Service Measures (LOS)

= Stop Sign

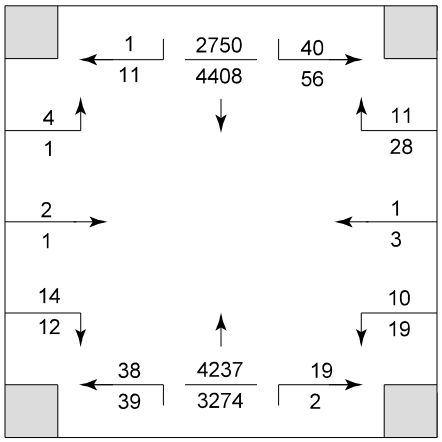
+ = Undefined Service Measure

LEVEL OF SERVICE (LOS)

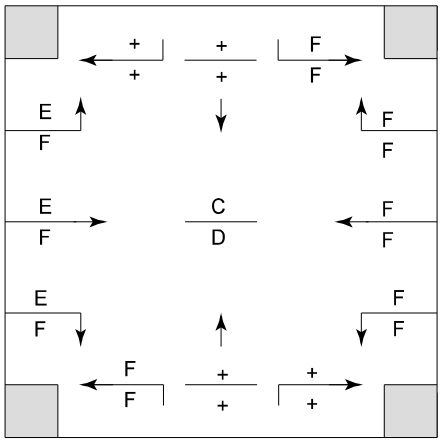
Unsignalized Intersection
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

Traffic Volumes: 2015 Existing



Service Measures: 2015 Existing

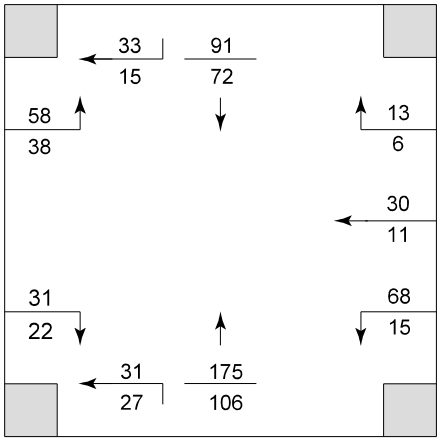


Note: Intersection geometry shown is conceptual and is not to scale.

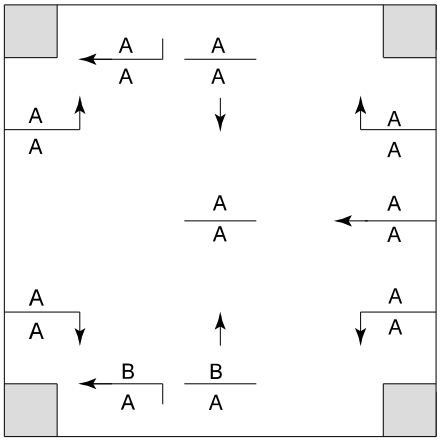
FIGURE 9

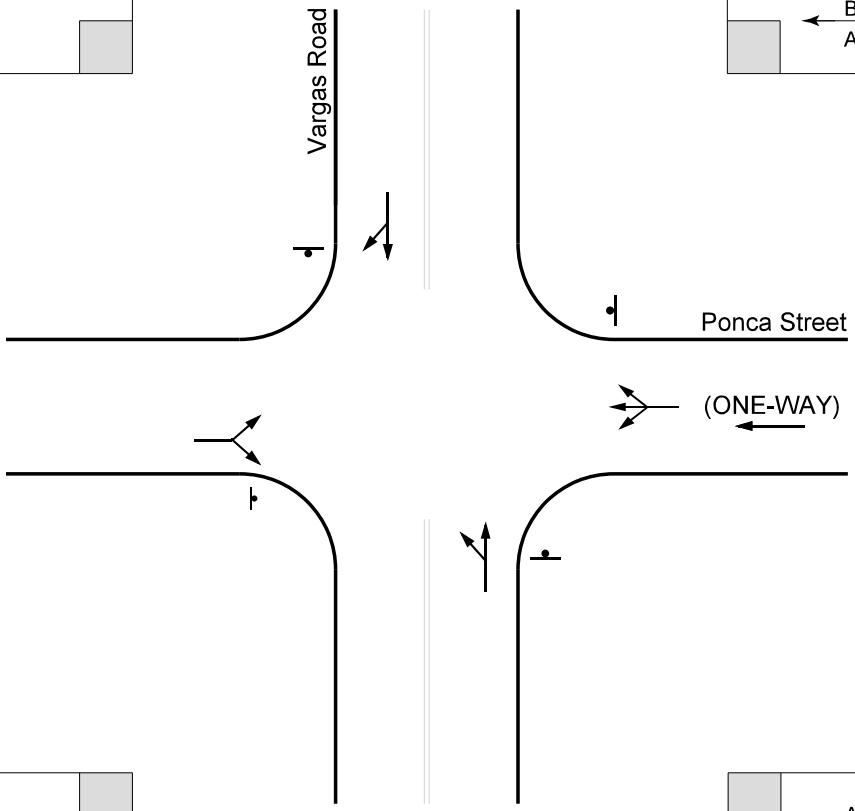
2015 EXISTING GEOMETRIC AND TRAFFIC VOLUME CONDITIONS

Traffic Volumes: 2015 Existing

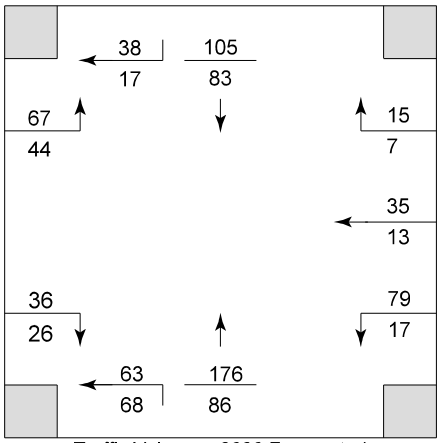


Service Measures: 2015 Existing

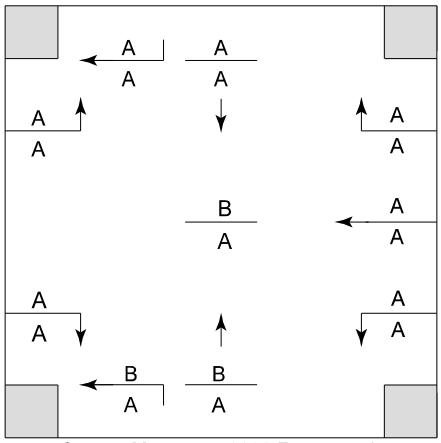




Traffic Volumes: 2020 Forecasted



Service Measures: 2020 Forecasted



LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

—•— = Stop Sign

\+ Undefined Service Measure

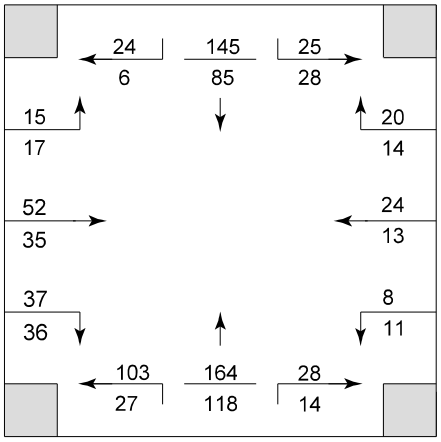
Unsignalized Intersection
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

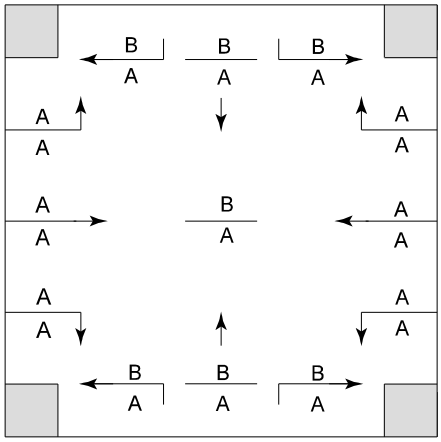
FIGURE 10

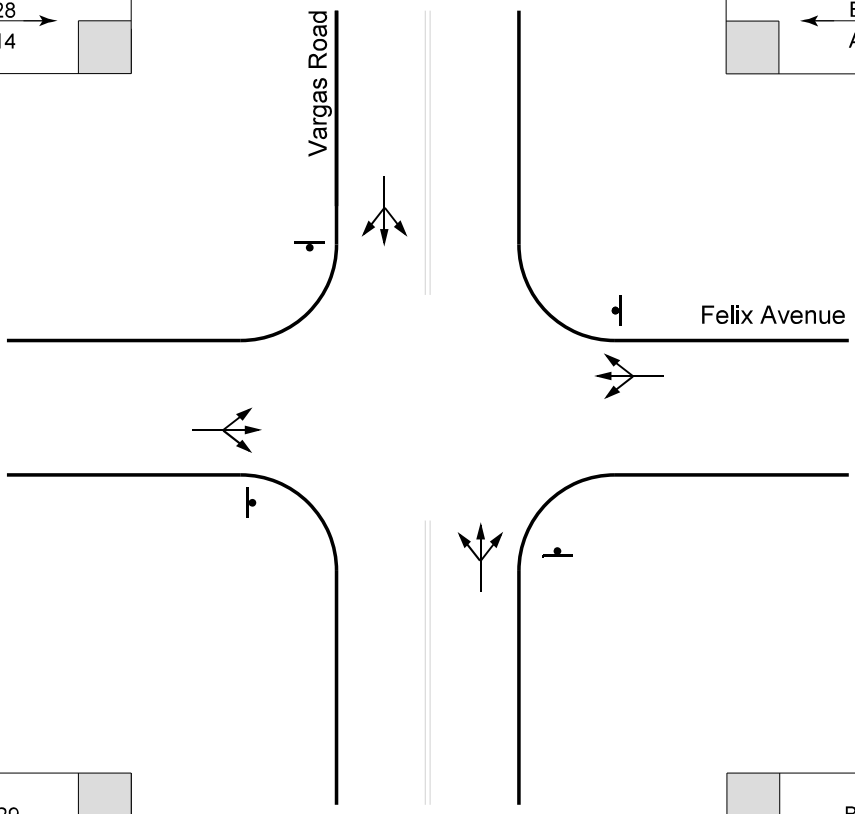
2015 EXISTING/
2020 FORECASTED
GEOMETRIC AND
TRAFFIC VOLUME
CONDITIONS

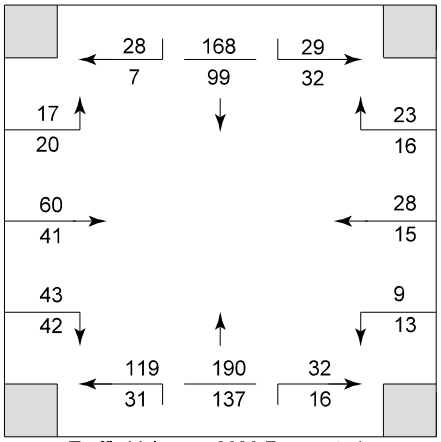
Traffic Volumes: 2015 Existing



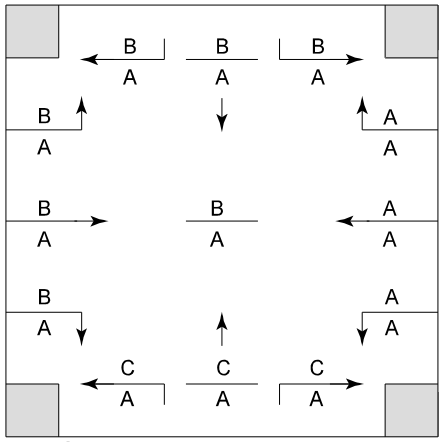
Service Measures: 2015 Existing







Traffic Volumes: 2020 Forecasted



Service Measures: 2020 Forecasted

LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

= Stop Sign

\+ Undefined Service Measure

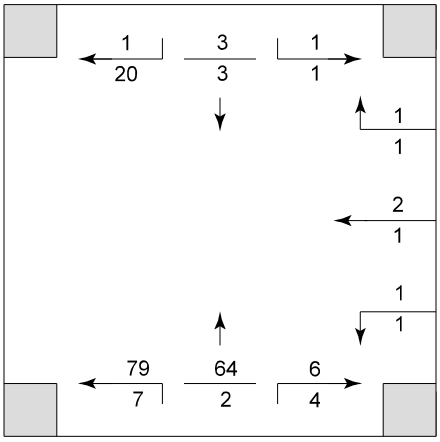
Unsignalized Intersection
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

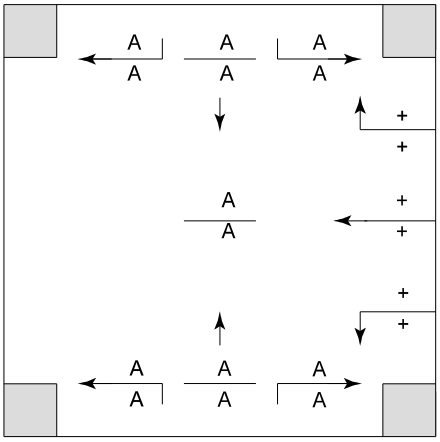
FIGURE 11

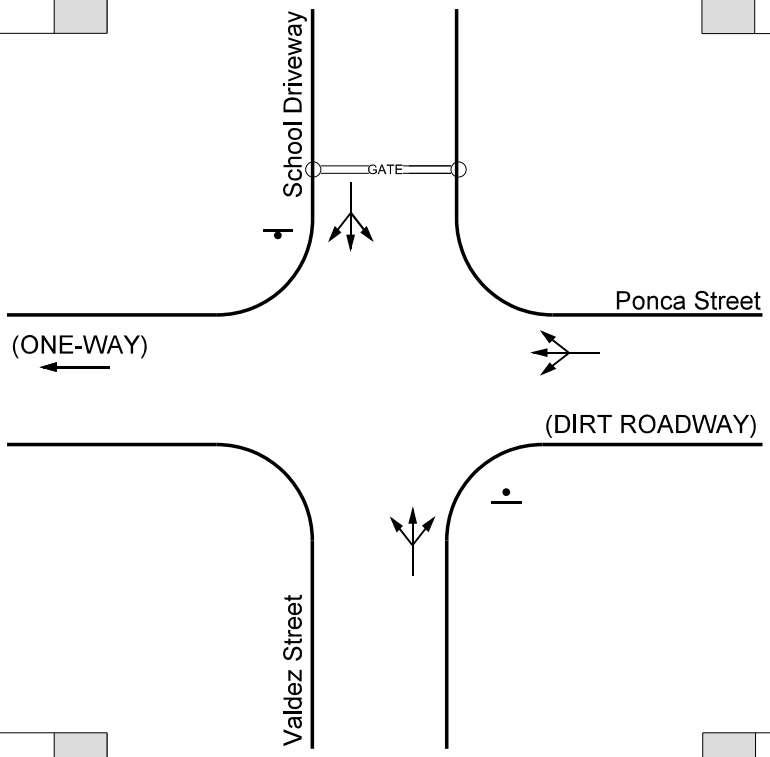
2015 EXISTING/
2020 FORECASTED
GEOMETRIC AND
TRAFFIC VOLUME
CONDITIONS

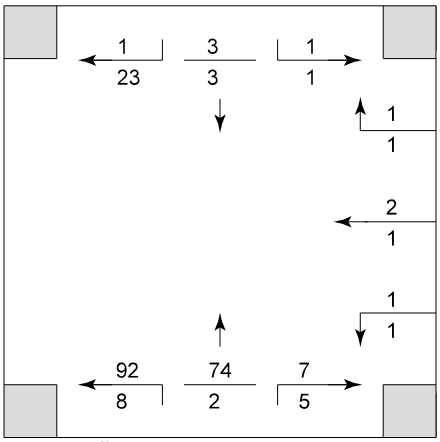
Traffic Volumes: 2015 Existing



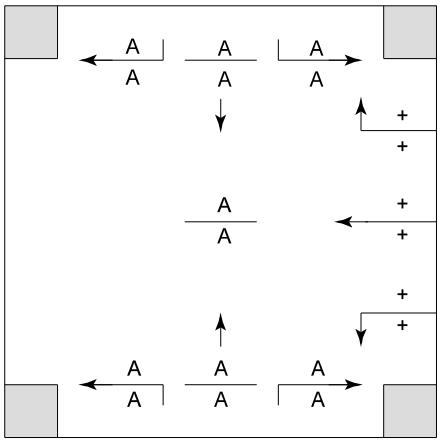
Service Measures: 2015 Existing







Traffic Volumes: 2020 Forecasted



Service Measures: 2020 Forecasted

LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

= Stop Sign

\+ Undefined Service Measure

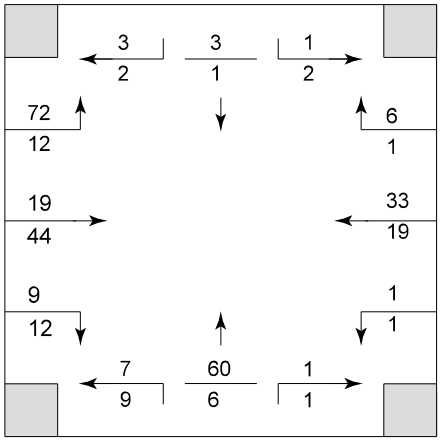
Unsignalized Intersection
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

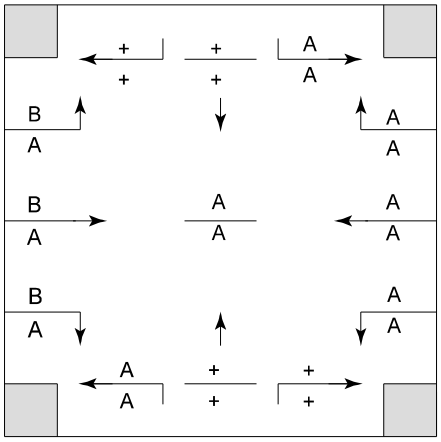
FIGURE 12

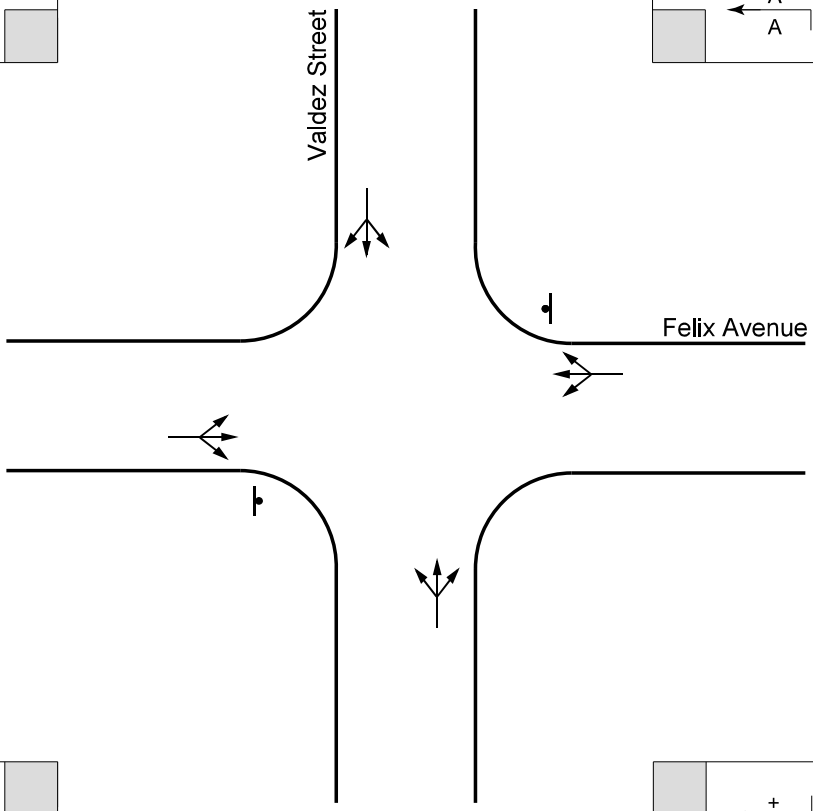
2015 EXISTING/
2020 FORECASTED
GEOMETRIC AND
TRAFFIC VOLUME
CONDITIONS

Traffic Volumes: 2015 Existing

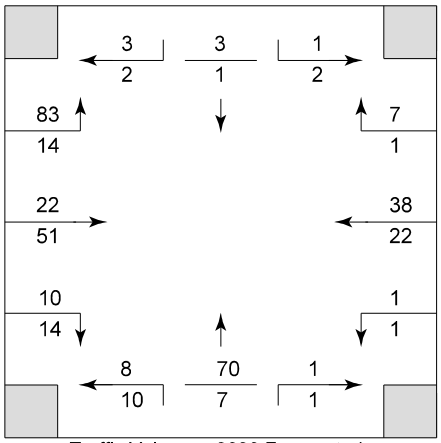


Service Measures: 2015 Existing

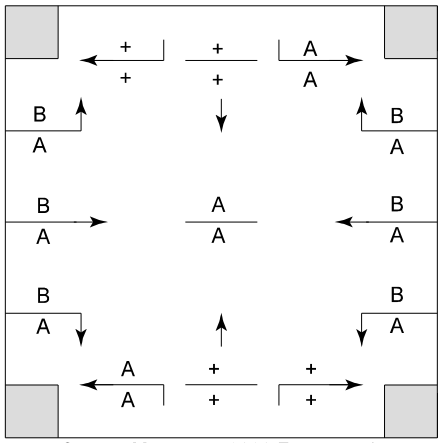




Traffic Volumes: 2020 Forecasted



Service Measures: 2020 Forecasted



LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

—● = Stop Sign

\+ Undefined Service Measure

Unsignalized Intersection
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

FIGURE 13

2015 EXISTING/
2020 FORECASTED
GEOMETRIC AND
TRAFFIC VOLUME
CONDITIONS

2020 Forecasted Conditions with Site Generated Traffic

The proposed Lenox Oaks development is anticipated to be completed in 2018 during construction of Bergstrom Expressway. Bergstrom Expressway is anticipated to be completed in 2020. The 2020 time frame was used to assess the major roadway effects and to facilitate the evaluation of potential improvements. The forecasted traffic was projected using available information. This process was facilitated by using trends established by prior data for the major roadways and intersections in the immediate vicinity of the project site.

Site Generated Traffic

Determining the site generated traffic, or the traffic that will be generated due to the development of the proposed project, was a major element of this analysis. Unadjusted total trips per day, as well as the peak hour traffic associated with the project, were estimated using recommendations and data contained in the ITE Trip Generation Manual (Ref. 8).

The proposed project will generate approximately 6,477 unadjusted daily trips upon build-out. The existing land uses generate approximately 278 unadjusted daily trips per day, resulting in a net increase of 6,199 unadjusted trips per day. Table 3 provides a detailed summary of traffic production, which is directly related to the assumed land use plan.

Table 3. Summary of Unadjusted Daily and Peak Hour Trip Generation

Land Use	Size	24-Hour Two Way Volume	AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit
Proposed Land Use						
Apartment	360 DU	2,305	36	144	140	75
Shopping Center	16,900 SF	2,138	33	20	87	95
Fast-Food Restaurant with Drive-Through	4,100 SF	2,034	95	91	70	64
Total		**6,477**	**164**	**255**	**297**	**234**
Existing Land Use						
Mobile Home Park	45 veh	152	9*	21*	8*	5*
Single-Family Detached Housing	10 DU	126	2*	8*	0*	1*
Total		**278**	**11**	**29**	**8**	**6**
Trip Increase		**6,199**	**153**	**226**	**289**	**228**

* Based on observed volume counts conducted in September 2015.

Analysis Assumptions

The traffic impact analysis process involves both the use of primary data and engineering judgment on transferable parameters. Specifically, engineering judgment is required for estimation of background traffic growth and pass-by capture.

Background Traffic

Traffic growth rates for the area were examined using previously collected traffic counts from TxDOT in the vicinity of the project site. Based on historical information presented in TxDOT Statewide Planning Maps (Ref. 1), a three (3) percent annual growth rate was assumed for this study.

Pass-By Capture

Studies have shown that retail land uses will capture between twenty and sixty percent of their traffic as pass-by trips, depending upon their size. It is well documented that many other land uses also experience significant pass-by trip capture, such as drive-in banks and restaurants. The amount of trip reduction that each tract may attribute to the pass by phenomenon will depend directly on the type of land use that is developed. Based on information contained in the ITE Trip Generation Handbook (Ref. 9), the following pass-by reductions were applied to the development

Table 4. Pass-By Capture Reductions

Land Use	Reduction	Peak Period
Shopping Center	34%	PM peak
Fast Food Restaurant with Drive-Through	49%	AM peak
	50%	PM peak

Internal Capture

Once the total build-out of proposed land uses occurs, there will be some interaction between the uses within this development. Internal capture is accounted for in two ways. First, to account for internal capture among similar retail land uses in adjacent areas, the sizes may be combined during the trip generation process. Because the equations used in trip generation estimations are logarithmic, the number of trips generated by a site does not increase in direct proportion to an increase in the square footage of a development. By combining retail projects in close proximity to each other, a lower number of trips will be estimated, thereby taking into account the internal capture factor. The second way to account for internal capture is to reduce the expected number of trips directly by some percentage, which reflects expected multipurpose trip-making among different types of land uses, which are in close proximity. As with pass-by trip reductions, internal capture depends on the type and quantity of land uses. A ten percent internal capture reduction was assumed for all land uses during both the AM and PM peak periods.

Multimodal Reduction

The site is serviced by the following Capital Metro Bus Routes, as shown in Figure 3:

- Local Service Route 4
- Local Service Route 350

Capital Metro Stop level data was reviewed for these routes in the vicinity of the project as well as pedestrian and bicycle count data and as a result, a five percent multimodal reduction was assumed for all land uses during both the AM and PM peak periods.

Table 5 provides a detailed summary of the adjusted traffic production for the site. The proposed project will generate approximately 4,366 adjusted daily trips upon build-out. The existing land uses generate approximately 278 adjusted daily trips per day, resulting in a net increase of 4,088 adjusted trips per day.

Table 5. Summary of Adjusted Daily and Peak Hour Trip Generation

Land Use	Size	24-Hour Two Way Volume	AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit
Proposed Land Use						
Apartment	360 DU	1,971	31	123	120	64
Shopping Center	16,900 SF	1,517	28	17	49	54
Fast-Food Restaurant with Drive-Through	4,100 SF	878	41	40	30	27
Total		**4,366**	**100**	**180**	**199**	**145**
Existing Land Use						
Mobile Home Park	45 veh	152	9*	21*	8*	5*
Single-Family Detached Housing	9 DU	126	2*	8*	0*	1*
Total		**278**	**11**	**29**	**8**	**6**
Trip Increase		**4,088**	**89**	**151**	**191**	**139**

* Based on observed volume counts conducted in September 2015.

Directional Distribution

The next step involved distribution of the site generated trips to appropriate geographic directions and logical connecting roadways. The major thoroughfares that have a direct bearing on the accessibility of the project have been previously identified. Traffic counts conducted during previous studies in the area provided the basis for the overall directional distribution of traffic approaching and departing the project site, as summarized in Table 5.

Table 6. Forecasted Overall Directional Distribution of Site Oriented Traffic

Direction/ Roadway	% Overall Distribution
North US 183	45
South US 183	45
West Montopolis Drive	5
West Vargas Road	5
Total	**100**

Given the total site generated traffic and the directional distribution by approach, the next step in the process is to assign the traffic destined to and from the project to the most likely travel paths. This step was performed by investigating a number of alternative travel patterns, as well as ingress/egress points along the project boundaries. Primary consideration was given to the traffic flow and safety of the major roadways.

Intersection Analysis

The total 2020 traffic demand will be the sum of traffic generated by the proposed project and changes in existing traffic. Build-out year roadway geometrics of the study area intersections are presented in Figures 14 through 29 along with forecasted turning movement counts and levels of service. The site plus forecasted condition level of service (LOS) assumes that all roadway and intersection improvements recommended in this TIA are constructed. Brief descriptions of the intersections follow.

Intersection LOS and delay results for 2015 existing, 2020 forecasted and 2020 site plus forecasted traffic volume conditions are presented in Table 6. 2020 site plus forecasted levels of service assume all improvements recommended and identified as part of this TIA.

Table 7. Intersection Level of Service and Delay (veh/sec)

Intersection	2015 Existing		2020 Forecasted		2020 Site + Forecasted	
	AM	PM	AM	PM	AM	PM
US 183 and Vargas Road	D (38.7)	F (88.2)	A (1.3)	B (11.5)	A (1.3)	C (15.6)
US 183 and Thompson Lane	F (100.1)	F (98.2)	C (19.6)	D (31.1)	C (22.7)	E (38.9)
Montopolis Drive and Ponca Street	A (3.2)	A (3.6)	A (4.5)	A (6.8)	A (5.3)	A (7.2)
US 183 and Callahan's Driveway/ Existing Driveway	C (24.4)	D (31.4)	--	--	--	--
US 183 NBFR and Callahan's Driveway	--	--	A (0.3)	A (0.8)	A (0.4)	A (0.8)
Vargas Road and Ponca Street	A (9.5)	A (8.0)	B (10.2)	A (8.2)	B (10.5)	A (8.8)
Vargas Road and Felix Avenue	B (11.2)	A (8.2)	B (13.2)	A (8.5)	B (13.6)	A (8.6)
Valdez Street and Ponca Street/Driveway A	A (0.2)	A (5.1)	A (0.2)	A (5.1)	A (0.2)	A (2.2)
Valdez Street and Felix Avenue	A (7.0)	A (8.3)	A (7.2)	A (8.6)	A (7.4)	A (8.8)
US 183 and Montopolis Drive	--	--	D (46.3)	D (48.6)	D (52.4)	D (49.8)
US 183 SBFR and Driveway B	--	--	--	--	A (1.0)	A (0.5)
US 183 SBFR and Driveway C	--	--	--	--	A (2.1)	B (11.5)

2020 Transportation System Recommendations

US 183 and Vargas Road

As shown in Figure 14, the signalized intersection of US 183 and Vargas Road will become a stop-controlled T-intersection with the conversion of US 183 to Bergstrom Expressway. The Vargas Road and US 183 southbound frontage road (SBFR) intersection will operate at LOS A and B under the 2020 forecasted traffic conditions during the AM and PM peak periods, respectively. The highest delay minor street approach (EB) operates at LOS C and F during the AM and PM peak periods, respectively.

As shown in Figure 15, the intersection will to operate at LOS A and C under 2020 site plus forecasted conditions during the AM and PM peak periods, respectively. The highest delay minor street approach (EB) operates at LOS C and F during the AM and PM peak periods, respectively. No improvements are recommended at this intersection. Site traffic comprises approximately 2 and 3 percent of the total traffic at this intersection during the AM and PM peak periods, respectively.

US 183 and Thompson Lane

As shown in Figure 16, the signalized intersection of US 183 and Thompson Lane will become a stop-controlled T-intersection with the conversion of US 183 to Bergstrom Expressway. The Thompson Lane and US 183 northbound frontage road (NBFR) intersection will operate at LOS C and D under the 2020 forecasted traffic conditions during the AM and PM peak periods, respectively. The highest delay minor street approach (WB) operates at LOS F during both the AM and PM peak periods.

As shown in Figure 17, the intersection will operate at LOS C and E under 2020 site plus forecasted conditions during the AM and PM peak periods, respectively. The highest delay minor street approach (WB) operates at LOS F during both the AM and PM peak periods. No improvements are recommended at this intersection. Site traffic comprises approximately 3 percent of total traffic at this intersection during both AM and PM peak periods.

Montopolis Drive and Ponca Street

As shown in Figure 18, this intersection will operate at LOS A under 2020 site plus forecasted traffic conditions during both the AM and PM peak periods. No improvements are recommended at this intersection. Site traffic comprises approximately 2 percent of total traffic at this intersection during both the AM and PM peak periods.

US 183 and Callahan's Driveway/Private Driveway

As shown in Figure 19, the intersection of US 183 and Callahan's Driveway will become a stop-controlled T-intersection with the conversion of US 183 to Bergstrom Expressway. The Callahan's Driveway and US 183 NBFR intersection will operate at LOS A under the 2020 forecasted traffic conditions during both the AM and PM peak periods. The highest delay minor street approach (WB) operates at LOS D and C during the AM and PM peak periods, respectively.

As shown in Figure 20, the intersection will continue to operate at LOS A under 2020 site plus forecasted conditions during both the AM and PM peak periods. The highest delay minor street approach (WB) operates at LOS D during both the AM and PM peak periods. No improvements are recommended at this intersection. Site traffic comprises approximately 4 and 5 percent of the total traffic at this intersection during the AM and PM peak periods, respectively.

Vargas Road and Ponca Street

As shown in Figure 21, this intersection will operate at LOS B and A under the 2020 site plus forecasted traffic conditions during the AM and PM peak periods, respectively. The highest delay minor street approach (NB) operates at LOS B and A during the AM and PM peak periods, respectively. No improvements are recommended at this intersection. Site traffic comprises approximately 4 and 9 percent of the total traffic at this intersection during the AM and PM peak periods, respectively.

Vargas Road and Felix Avenue

As shown in Figure 22, the intersection will operate at LOS B and A under the 2020 site plus forecasted traffic conditions during the AM and PM peak periods, respectively. The

highest delay minor street approach (NB) operates at LOS B and A during the AM and PM peak periods, respectively. No improvements are recommended at this intersection as part of this TIA. Site traffic comprises approximately 2 and 6 percent of the total traffic at this intersection during AM and PM peak periods, respectively.

Valdez Street and Ponca Street/Driveway A

As shown in Figure 23, this intersection operates at LOS A under the 2020 site plus forecasted traffic conditions during both the AM and PM peak periods. The highest delay minor street approach (NB) operates at LOS A during both the AM and PM peak periods. Driveway A should be constructed with a minimum 30' cross-section that aligns with Ponca Street and provides one inbound and one outbound lane. No additional improvements are recommended at this intersection. Site traffic comprises approximately 19 and 57 percent of the total traffic at this intersection during AM and PM peak period, respectively.

Valdez Street and Felix Avenue

As shown in Figure 24, this intersection operates at LOS A under the 2020 site plus forecasted traffic conditions during the AM and PM peak periods. The highest delay minor street approach (EB) operates at LOS B and A during the AM and PM peak periods, respectively. No improvements are recommended at this intersection. Site traffic comprises approximately 4 and 16 percent of the total traffic at this intersection during AM and PM peak period, respectively.

US 183 and Montopolis Drive

As shown in Figure 25, the existing US 183 and Montopolis Drive free-flowing interchange will become a signalized diamond interchange with the conversion of US 183 to Bergstrom Expressway. US 183 and Montopolis Drive will operate at LOS D under 2020 forecasted conditions.

As shown in Figure 26, the interchange will continue to operate at LOS D under 2020 site plus forecasted traffic conditions during the AM and PM peak periods, assuming the following improvements:

- Modify the eastbound approach of Montopolis Drive from the proposed Bergstrom Expressway lane configuration of two-through lanes and one right-turn lane to one through lane, one through/right-turn shared lane and one right-turn lane. This improvement is required due to the heavy right-turning volume in the PM peak period. It should be noted that this turning volume is based on projected traffic conditions and should be monitored in the field after completion of Bergstrom Expressway construction.

Site traffic comprises approximately 2 percent of total traffic at this intersection during the AM and PM peak periods.

US 183 SBFR and Driveway B

Driveway B will be constructed as the primary access to the apartment land use from US 183. Driveway B will form a stop-controlled intersection with US 183 SBFR and should

be constructed with a minimum 30' and maximum 45' pavement width to provide one inbound and one outbound lane.

As shown in Figure 27, this intersection will operate at LOS A under 2020 site plus forecasted traffic conditions during both the AM and PM peak periods. The highest delay minor street approach (EB) operates at LOS C and E during the AM and PM peak periods, respectively. Based on discussions with TxDOT and the Bergstrom Expressway project team, the outermost lane of the US 183 SBFR will operate as an acceleration/deceleration lane for driveways. No additional improvements are recommended at this intersection.

US 183 SBFR and Driveway C

Driveway C will be constructed as the access to the retail land and will provide future access to the adjacent tract, south of the site. Driveway C will form a stop-controlled intersection with US 183 SBFR and should be constructed with a minimum 30' and maximum 45' pavement width to provide one inbound and one outbound lane.

As shown in Figure 28, this intersection will operate at LOS A and B under 2020 site plus forecasted traffic conditions during the AM and PM peak periods, respectively. The highest delay minor street approach (EB) operates at LOS D and F during the AM and PM peak periods, respectively. Based on discussions with TxDOT and the Bergstrom Expressway project team, the outermost lane of the US 183 SBFR will operate as an acceleration/deceleration lane for driveways. No additional improvements are recommended at this intersection.

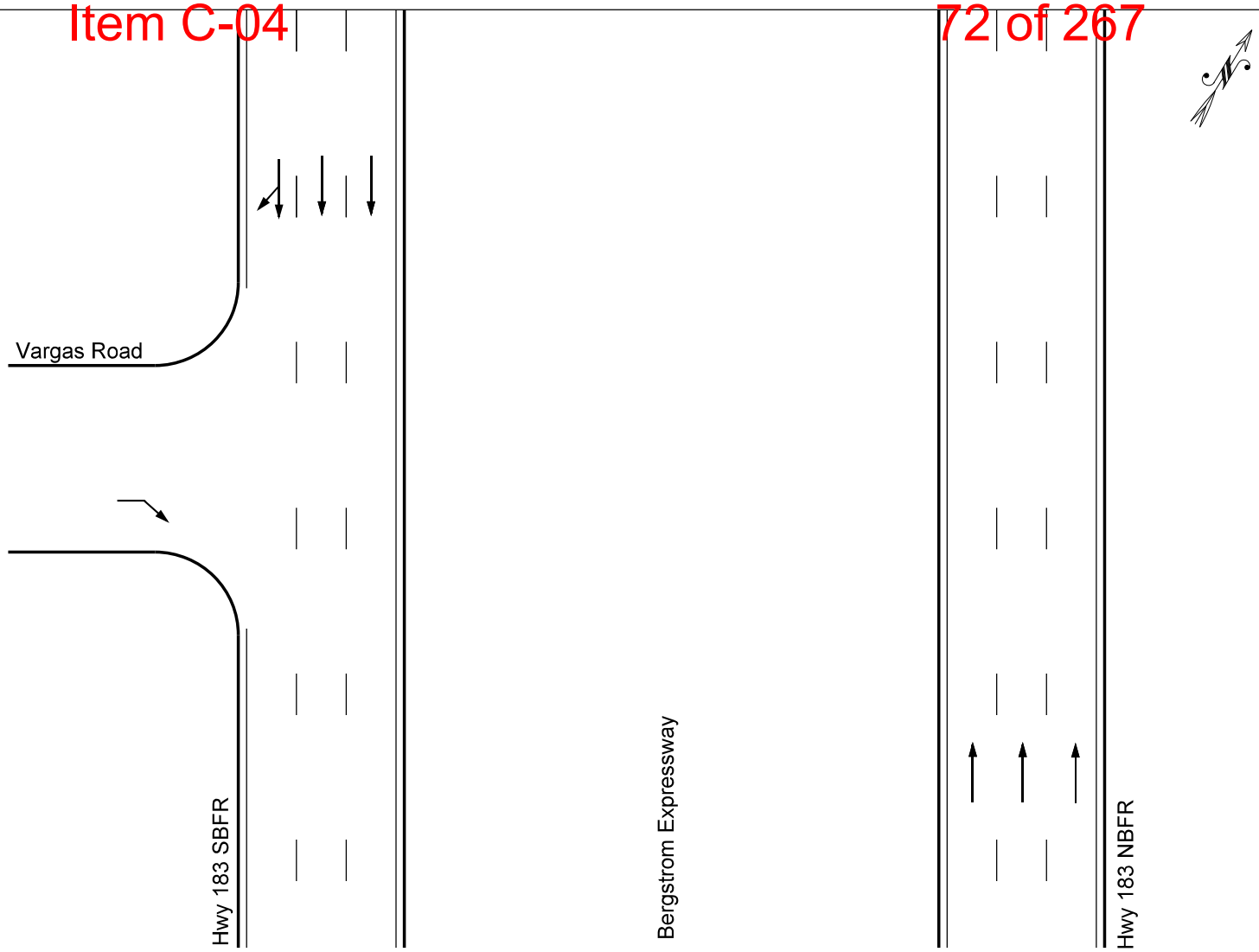
Table 7 provides a summary of all recommended improvements.

Pedestrian Facilities

Improvements to area pedestrian facilities including installation of sidewalks and curb ramps are recommended. Specific locations are identified in Table 7 and shown in Figure 29.

Bicycle Facilities

It is recommended that land be reserved for a shared-use path/trail between US 183 and adjacent property owned by the City of Austin. It is also recommended that the existing wide curb lanes on Vargas Road between US 183 and Ponca St be striped to provide eastbound and westbound bike lanes as identified in the 2014 Austin Bicycle Plan. This improvement is shown in Figure 29.



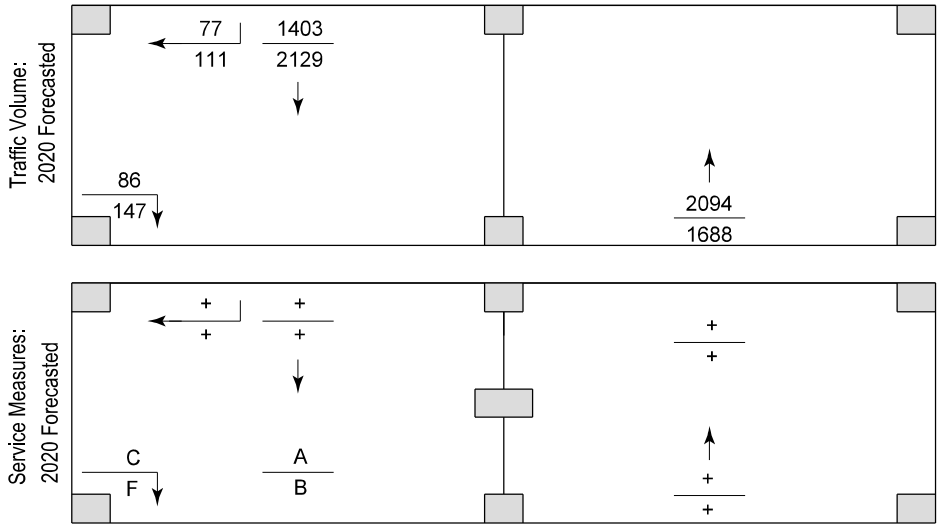
LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

= Stop Sign

+ = Undefined Service Measure



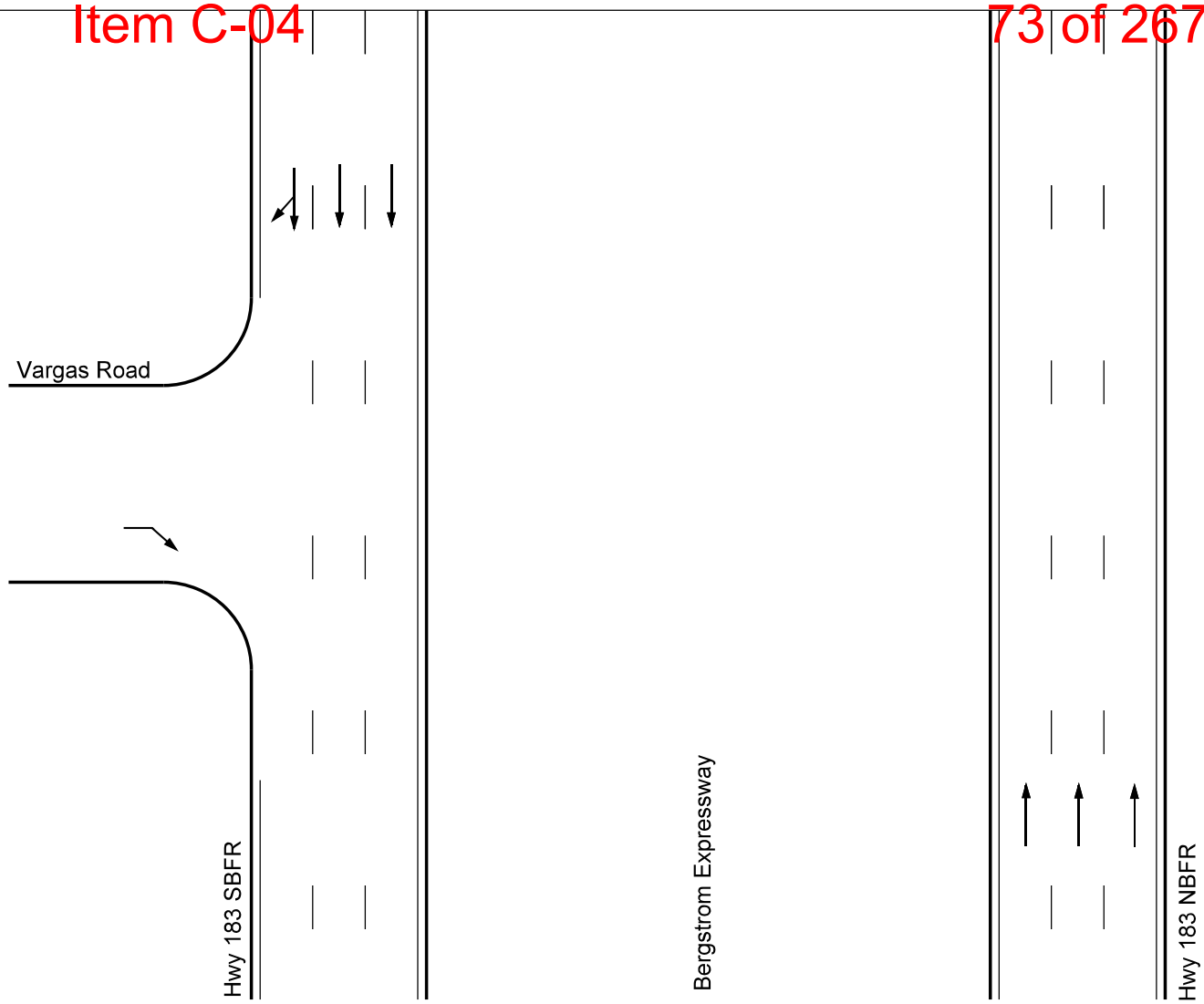
Note: Intersection geometry shown is conceptual and is not to scale.

LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

FIGURE 14

2020 FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS



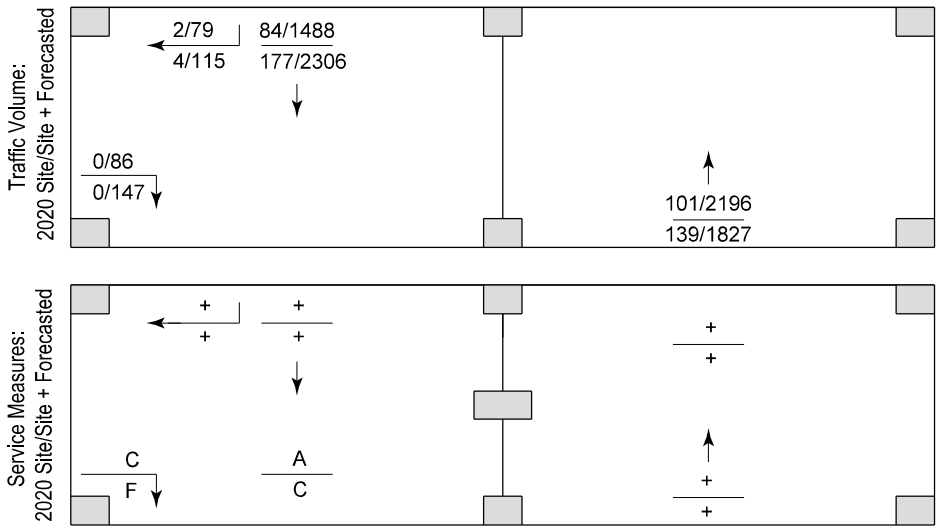
LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

= Stop Sign

+ = Undefined Service Measure



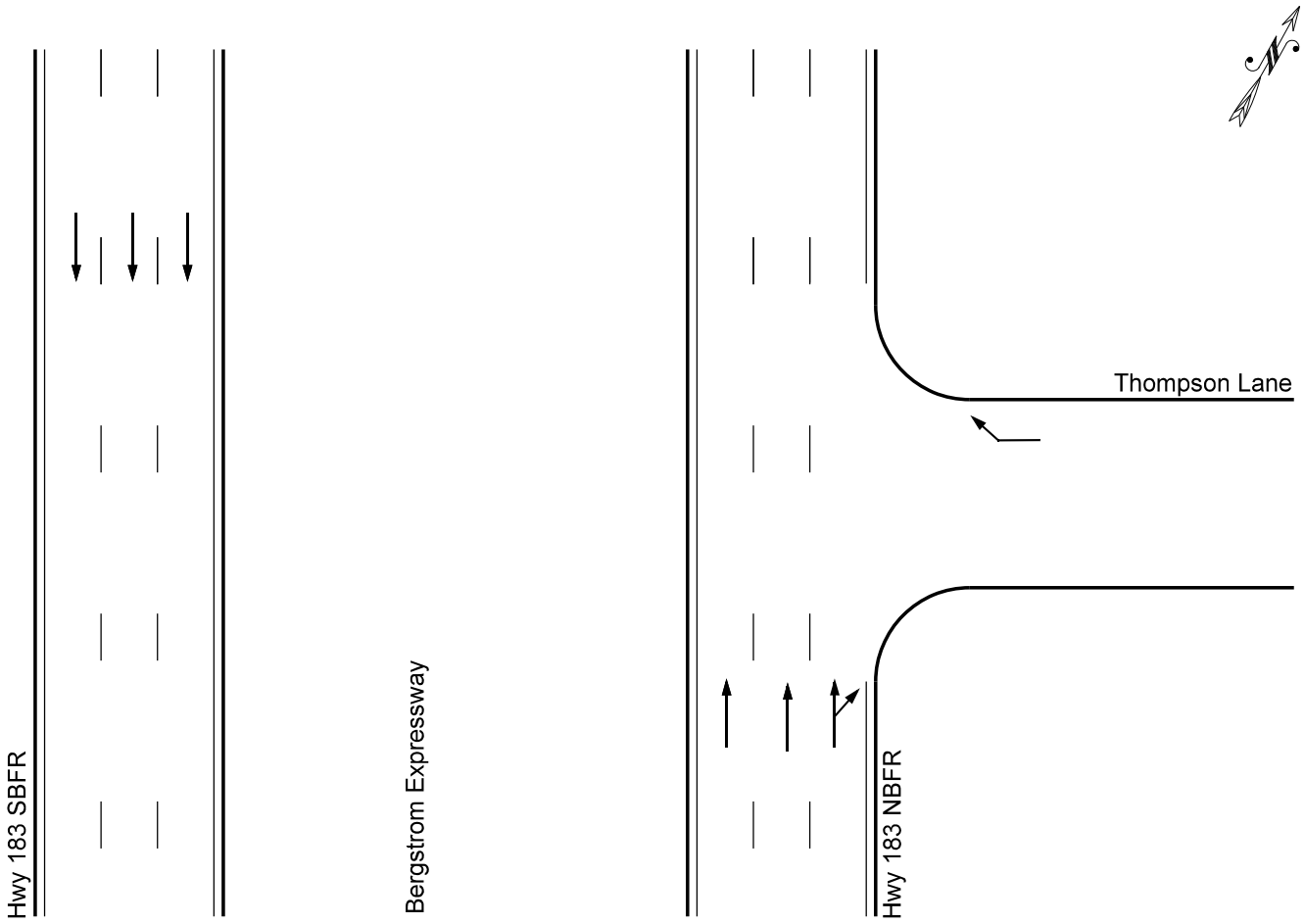
Note: Intersection geometry shown is conceptual and is not to scale.

LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

FIGURE 15

2020 SITE + FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS



LEGEND

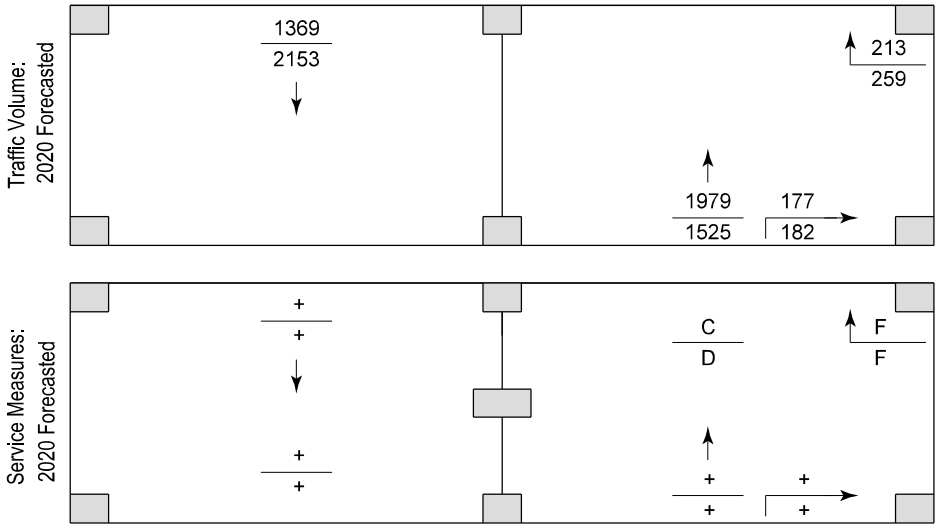
000/000 = AM/PM	Peak Hour Volume
X/X = AM/PM	Service Measures (LOS)

= Stop Sign

+ = Undefined Service Measure

LEVEL OF SERVICE (LOS)

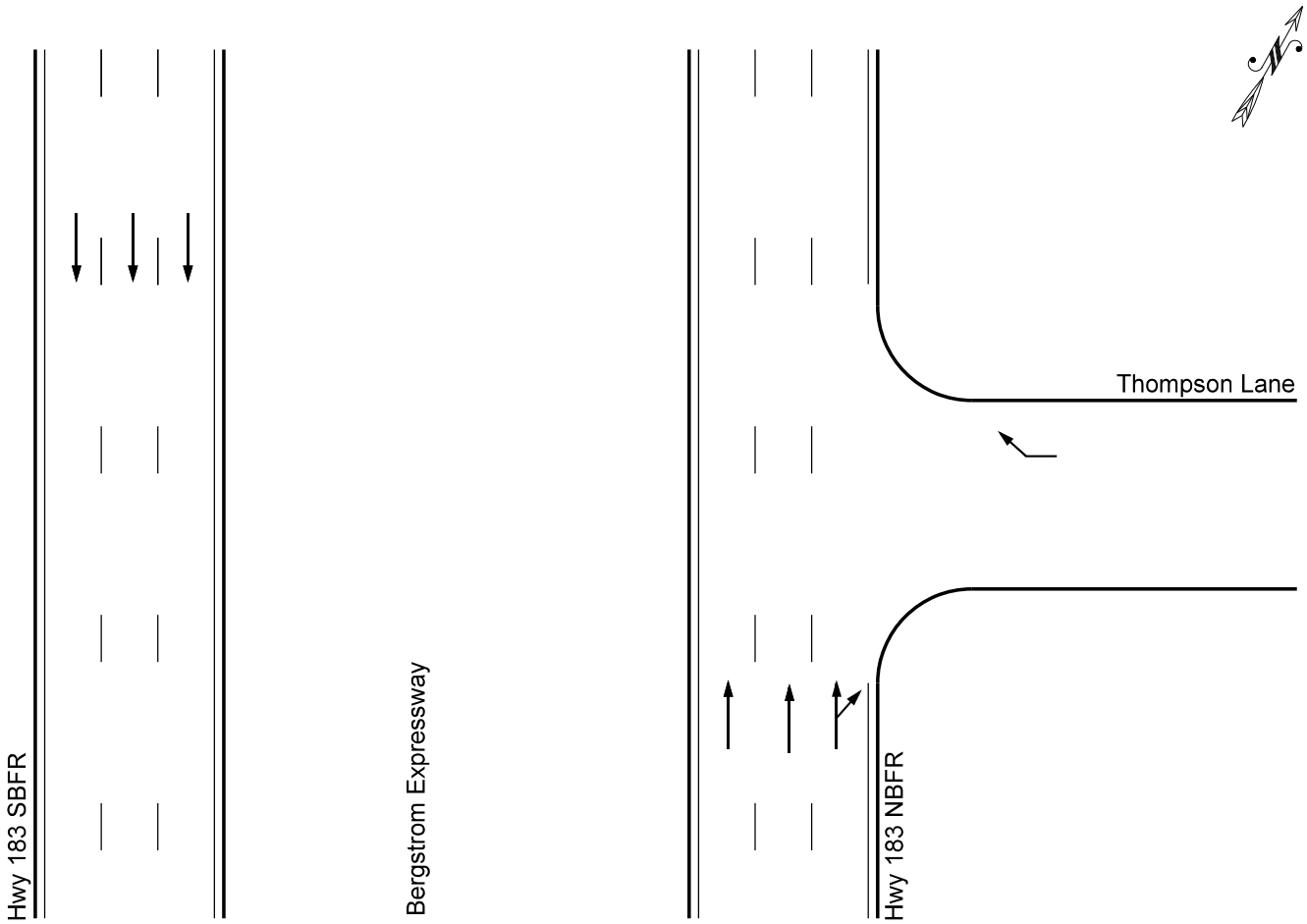
LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50



Note: Intersection geometry shown is conceptual and is not to scale.

FIGURE 16

2020 FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS



LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

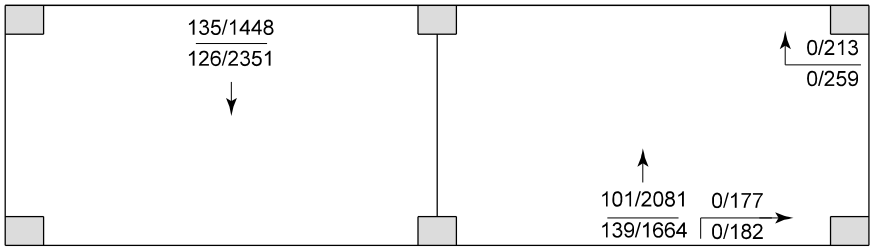
= Stop Sign

+ = Undefined Service Measure

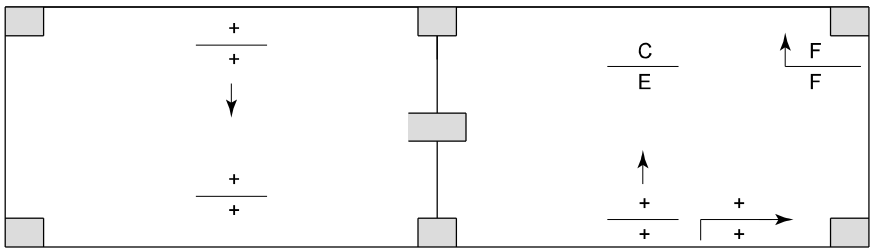
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

Traffic Volume: 2020 Site + Forecasted



Service Measures: 2020 Site + Forecasted

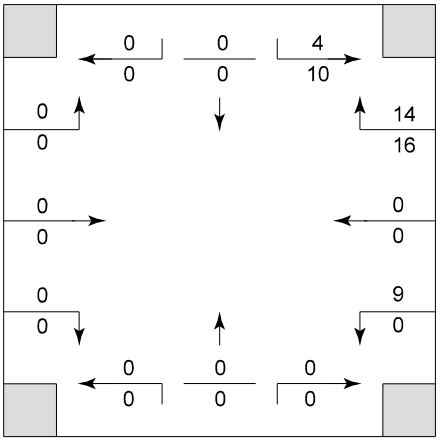


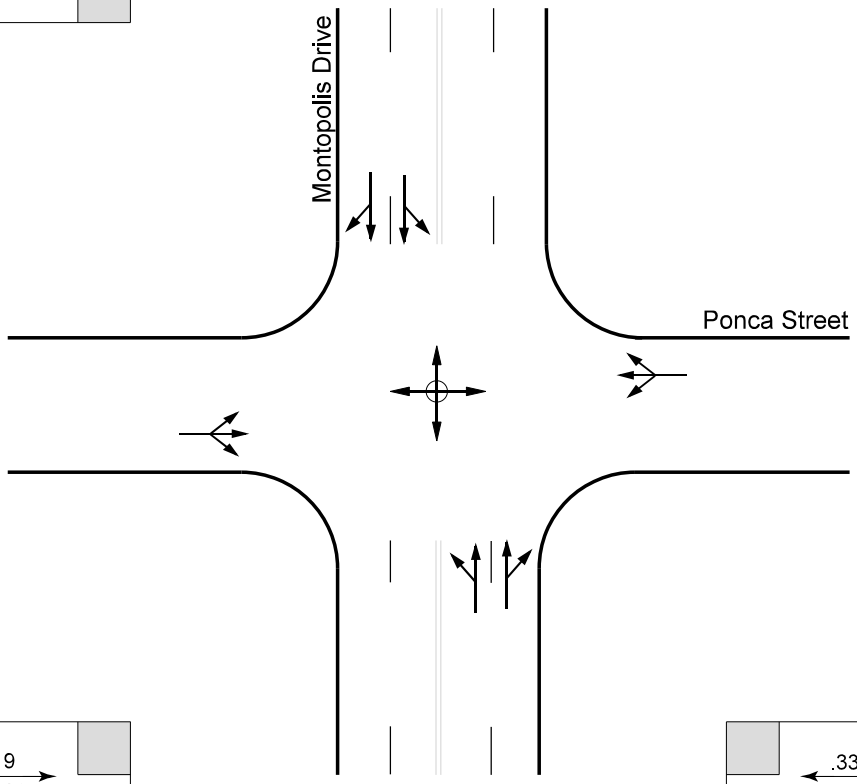
Note: Intersection geometry shown is conceptual and is not to scale.

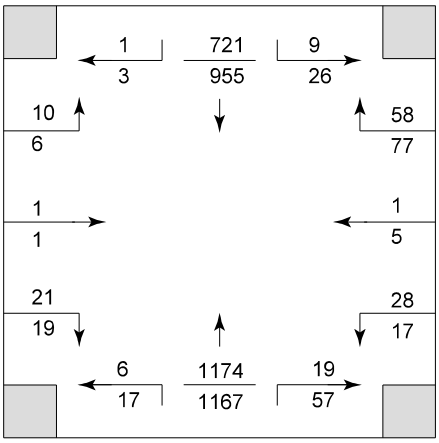
FIGURE 17

2020 SITE + FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS

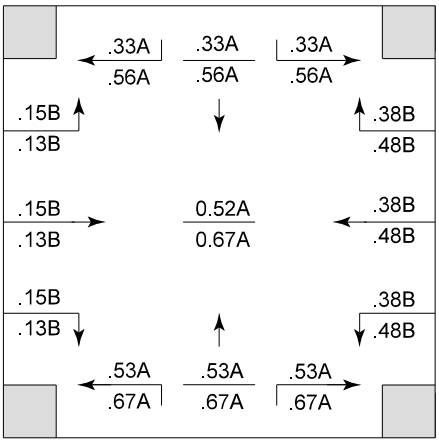
Traffic Volumes: 2020 Site







Traffic Volumes: 2020 Site + Forecasted



Service Measures: 2020 Site + Forecasted

LEGEND

000 AM / 000 PM = Peak Hour Volume

.00 X / .00 X = AM / PM Service Measures (V/C LOS)

= Traffic Signal

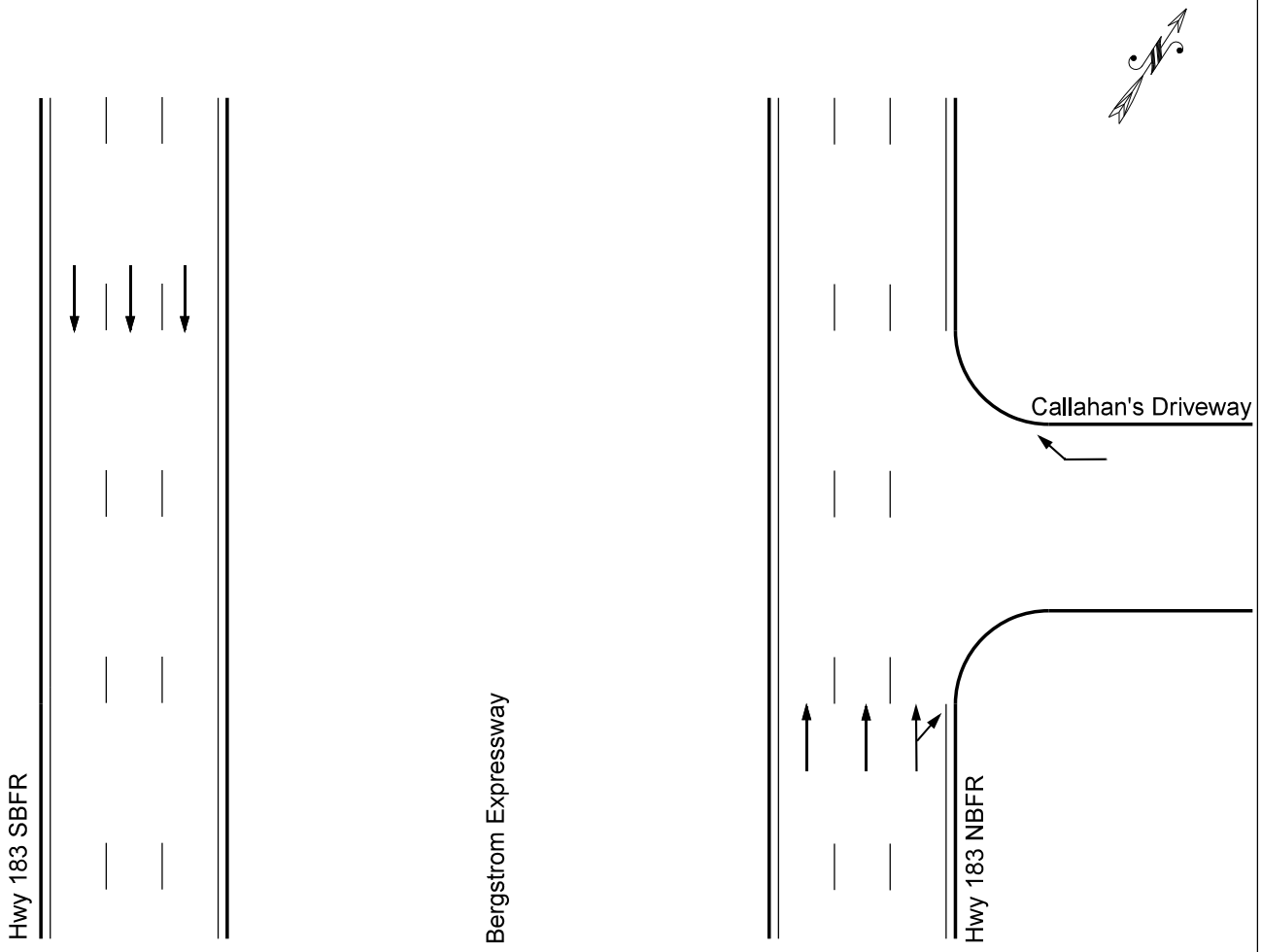
= Yield Sign

Signalized Intersection
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle (sec)
A	≤10
B	> 10 and ≤20
C	> 20 and ≤35
D	> 35 and ≤55
E	> 55 and ≤80
F	> 80

FIGURE 18

2020 SITE + FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS

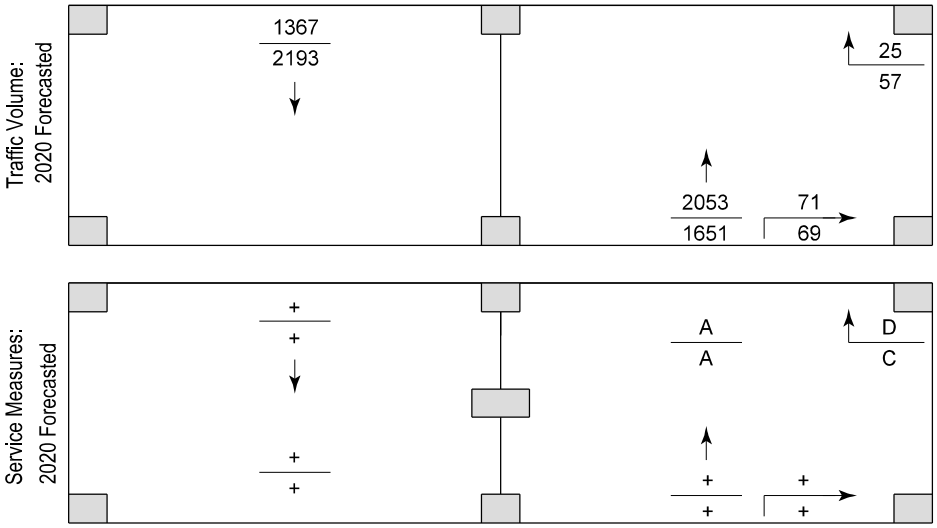


LEGEND

000/000	= AM/PM	Peak Hour Volume
X/X	= AM/PM	Service Measures (LOS)

= Stop Sign

+ = Undefined Service Measure



Note: Intersection geometry shown is conceptual and is not to scale.

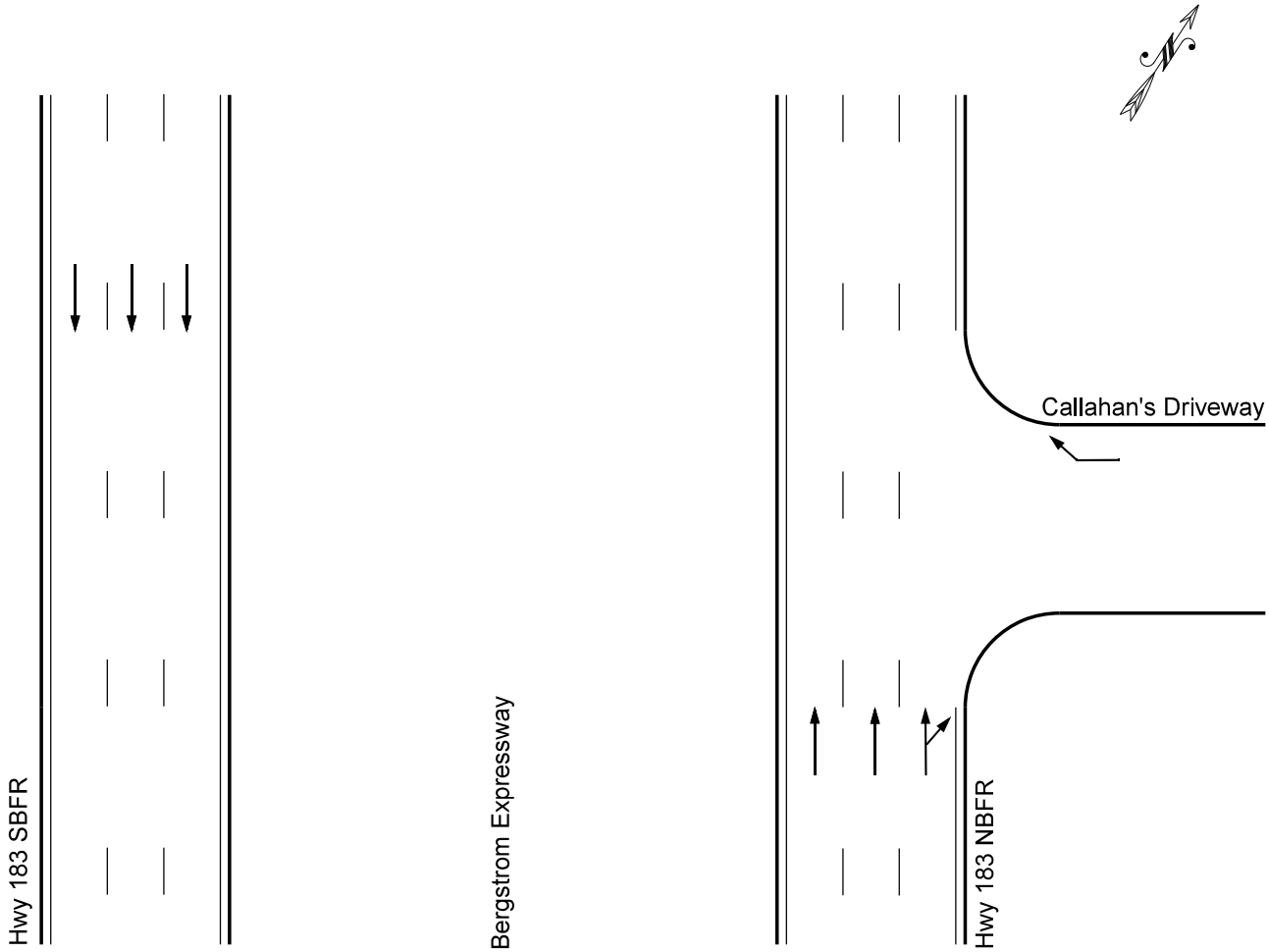
LEVEL OF SERVICE (LOS)

Unsignalized Intersection
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

FIGURE 19

2020 FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS

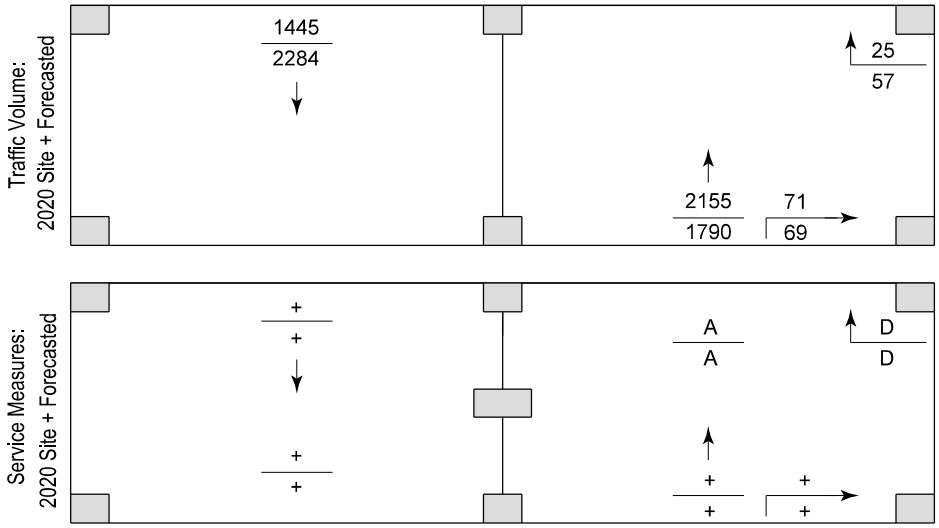


LEGEND

000/000	= AM/PM	Peak Hour Volume
X/X	= AM/PM	Service Measures (LOS)

= Stop Sign

\+ = Undefined Service Measure



Note: Intersection geometry shown is conceptual and is not to scale.

LEVEL OF SERVICE (LOS)

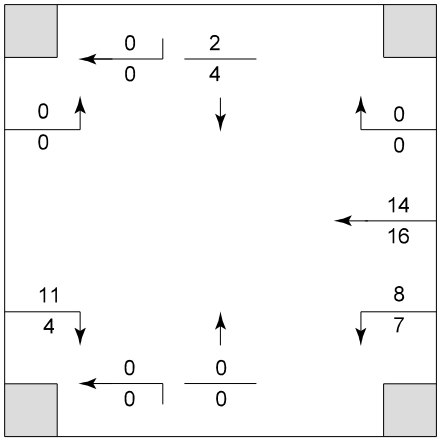
Unsignalized Intersection
LEVEL OF SERVICE (LOS)

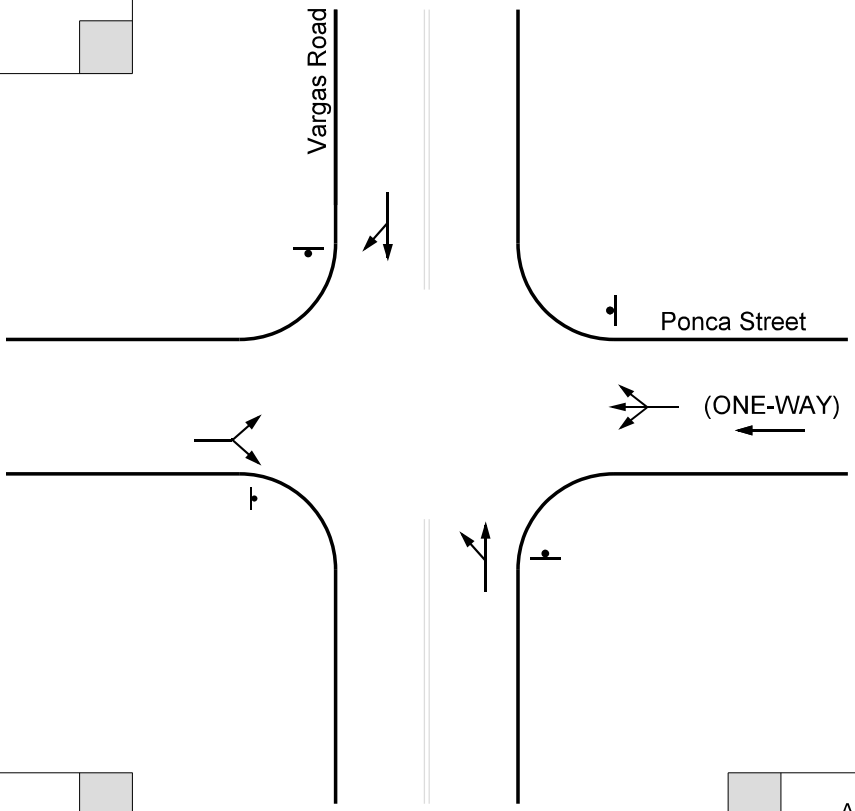
LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

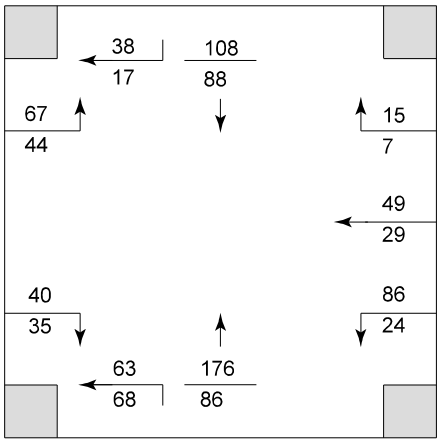
FIGURE 20

2020 SITE + FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS

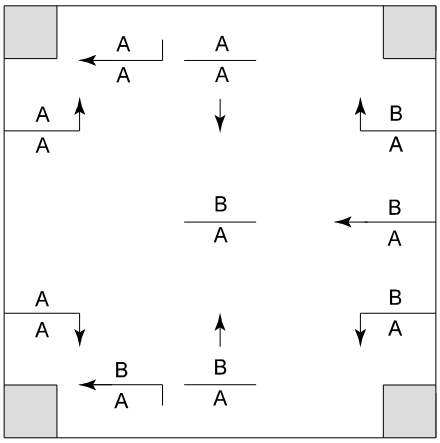
Traffic Volumes: 2020 Site







Traffic Volumes: 2020 Site + Forecasted



Service Measures: 2020 Site + Forecasted

LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

= Stop Sign

\+ Undefined Service Measure

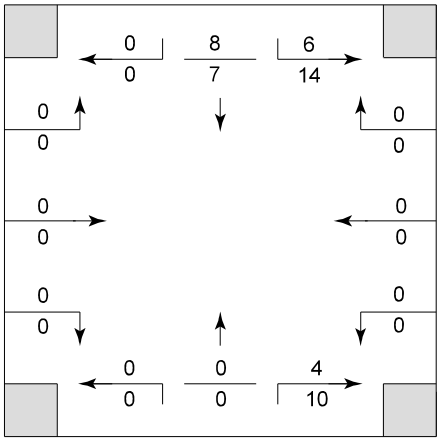
Unsignalized Intersection
LEVEL OF SERVICE (LOS)

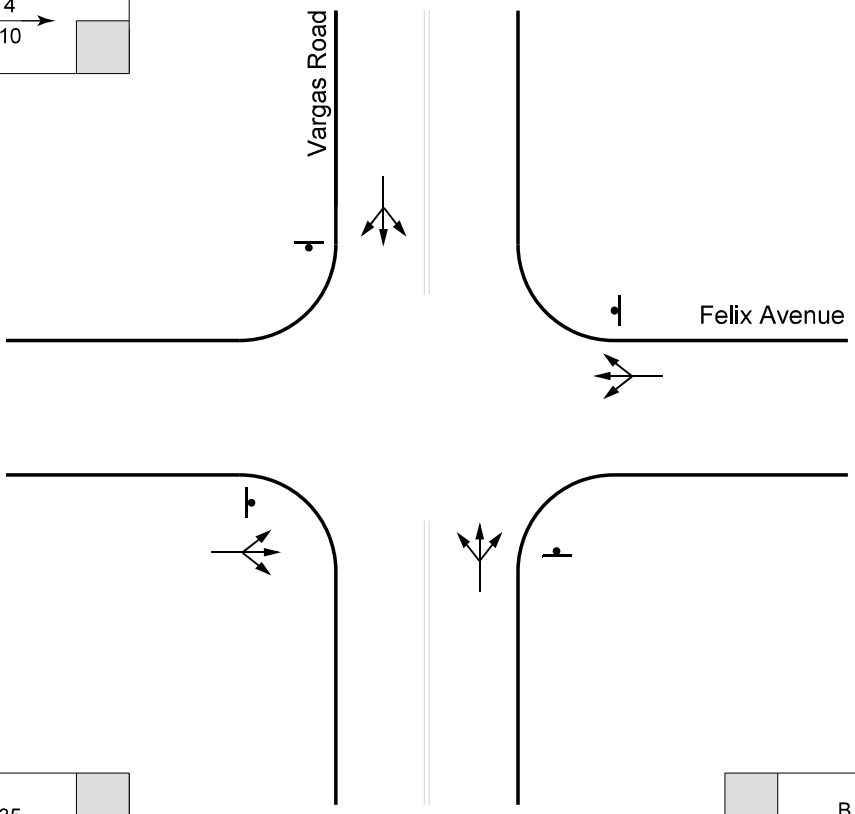
LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

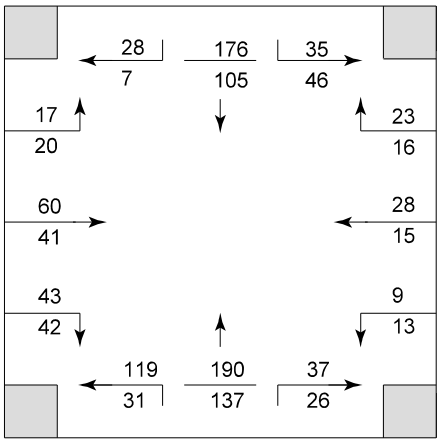
FIGURE 21

2020 SITE + FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS

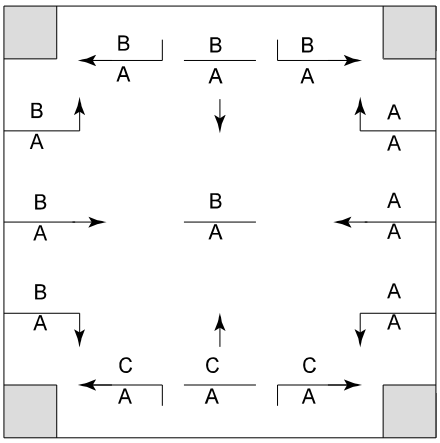
Traffic Volumes: 2020 Site







Traffic Volumes: 2020 Site + Forecasted



Service Measures: 2020 Site + Forecasted

LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

= Stop Sign

\+ Undefined Service Measure

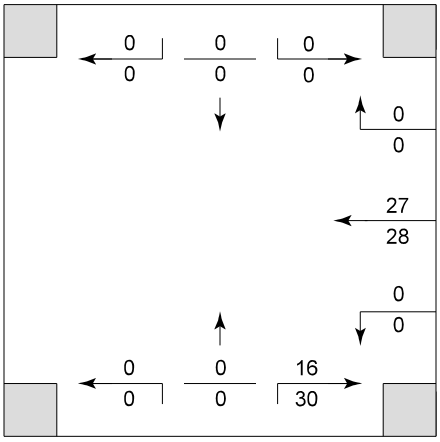
Unsignalized Intersection
LEVEL OF SERVICE (LOS)

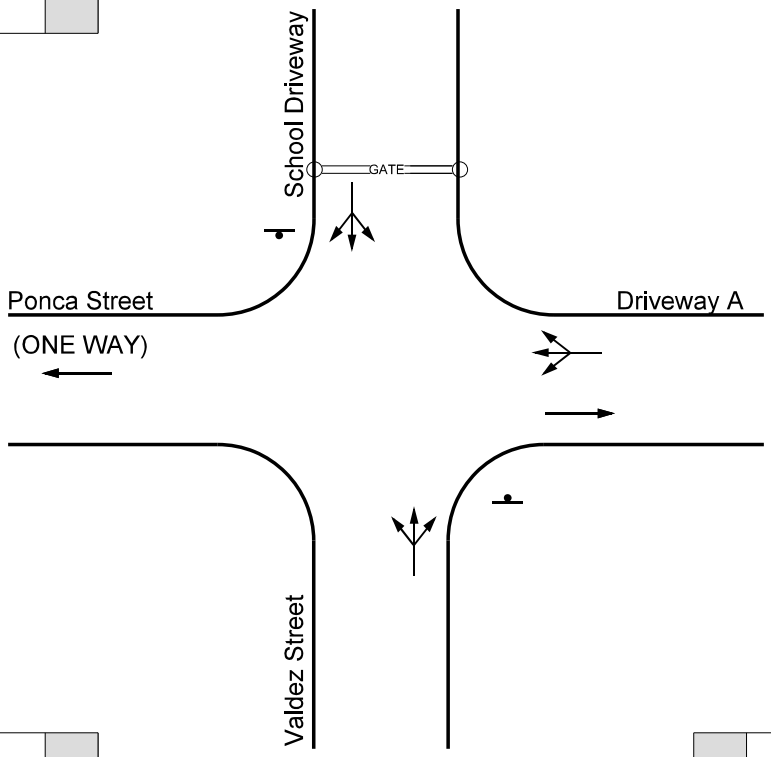
LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

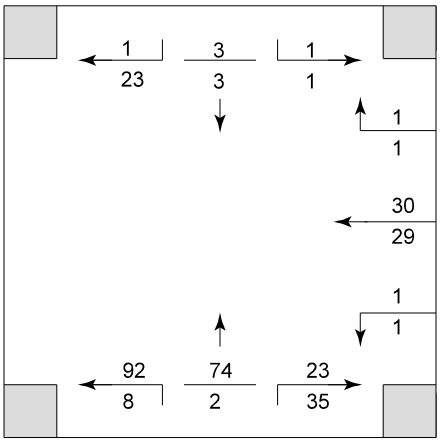
FIGURE 22

2020 SITE + FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS

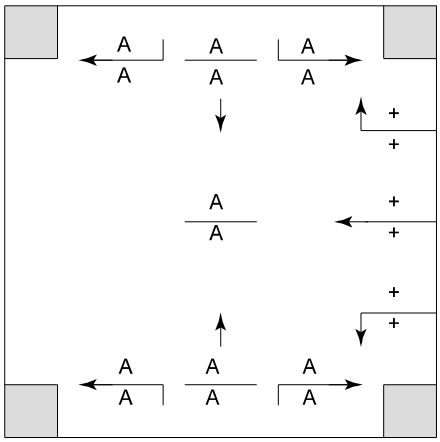
Traffic Volumes: 2020 Site







Traffic Volumes: 2020 Site + Forecasted



Service Measures: 2020 Site + Forecasted

LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

= Stop Sign

\+ Undefined Service Measure

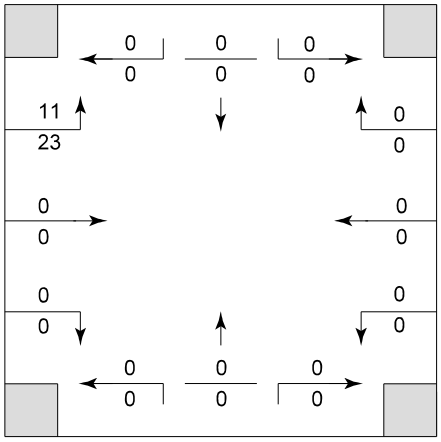
Unsignalized Intersection
LEVEL OF SERVICE (LOS)

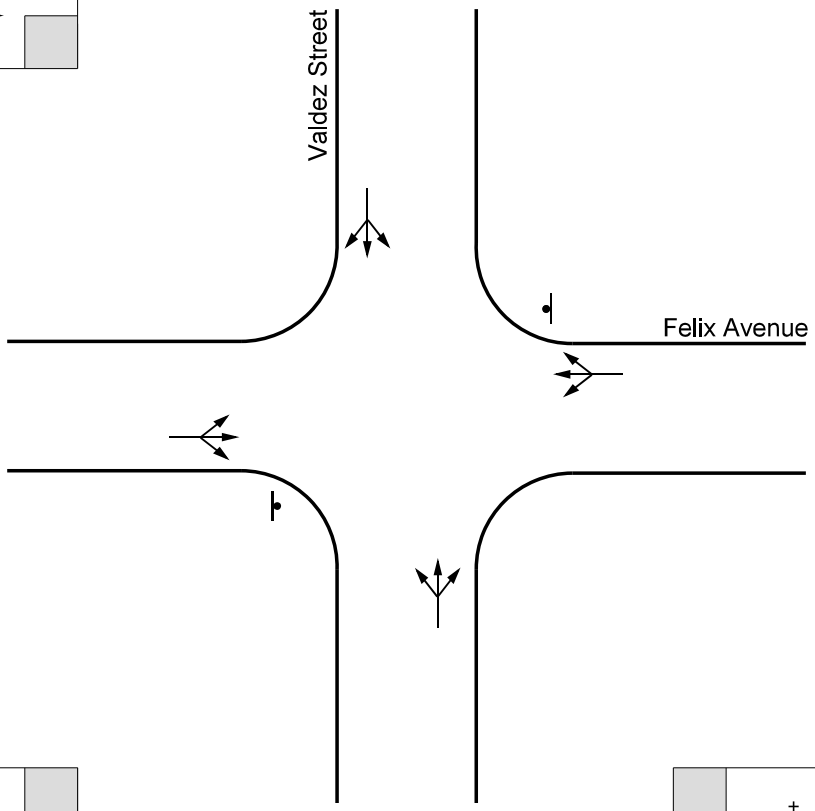
LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

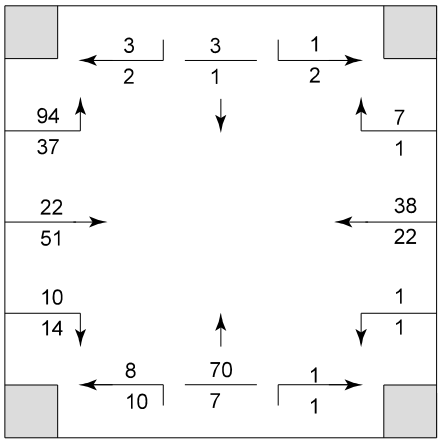
FIGURE 23

2020 SITE + FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS

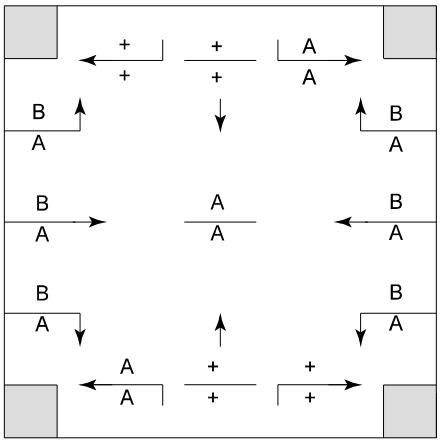
Traffic Volumes: 2020 Site







Traffic Volumes: 2020 Site + Forecasted



Service Measures: 2020 Site + Forecasted

LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

= Stop Sign

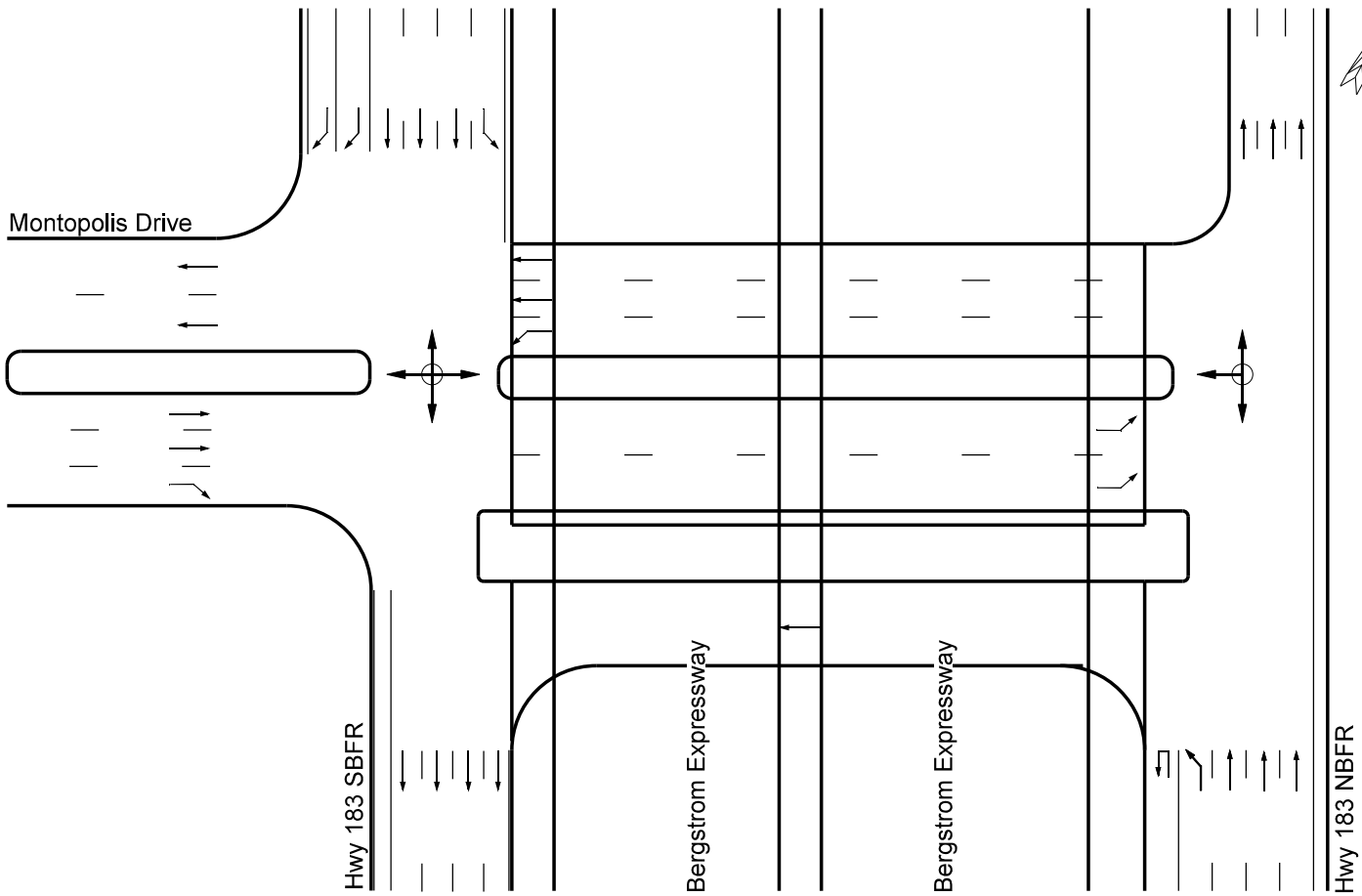
\+ Undefined Service Measure

Unsignalized Intersection
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

FIGURE 24

2020 SITE + FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS



LEGEND

000/000 = AM/PM Peak Hour Volume

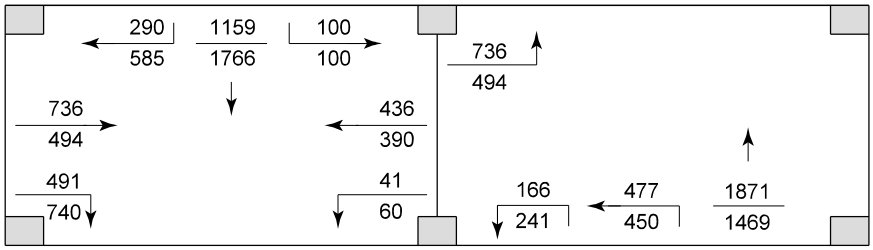
.00X/.00X = AM/PM Service Measures (V/C LOS)

= Traffic Signal

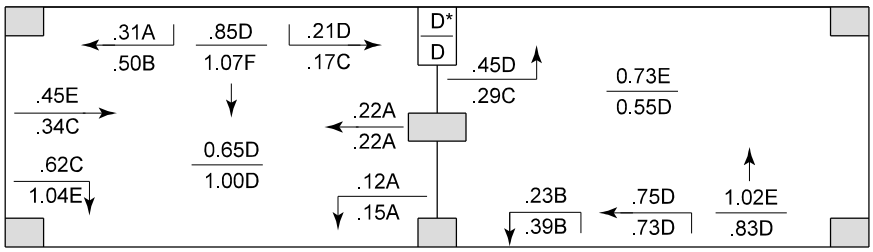
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle (sec)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Traffic Volume: 2020 Forecasted



Service Measures: 2020 Forecasted

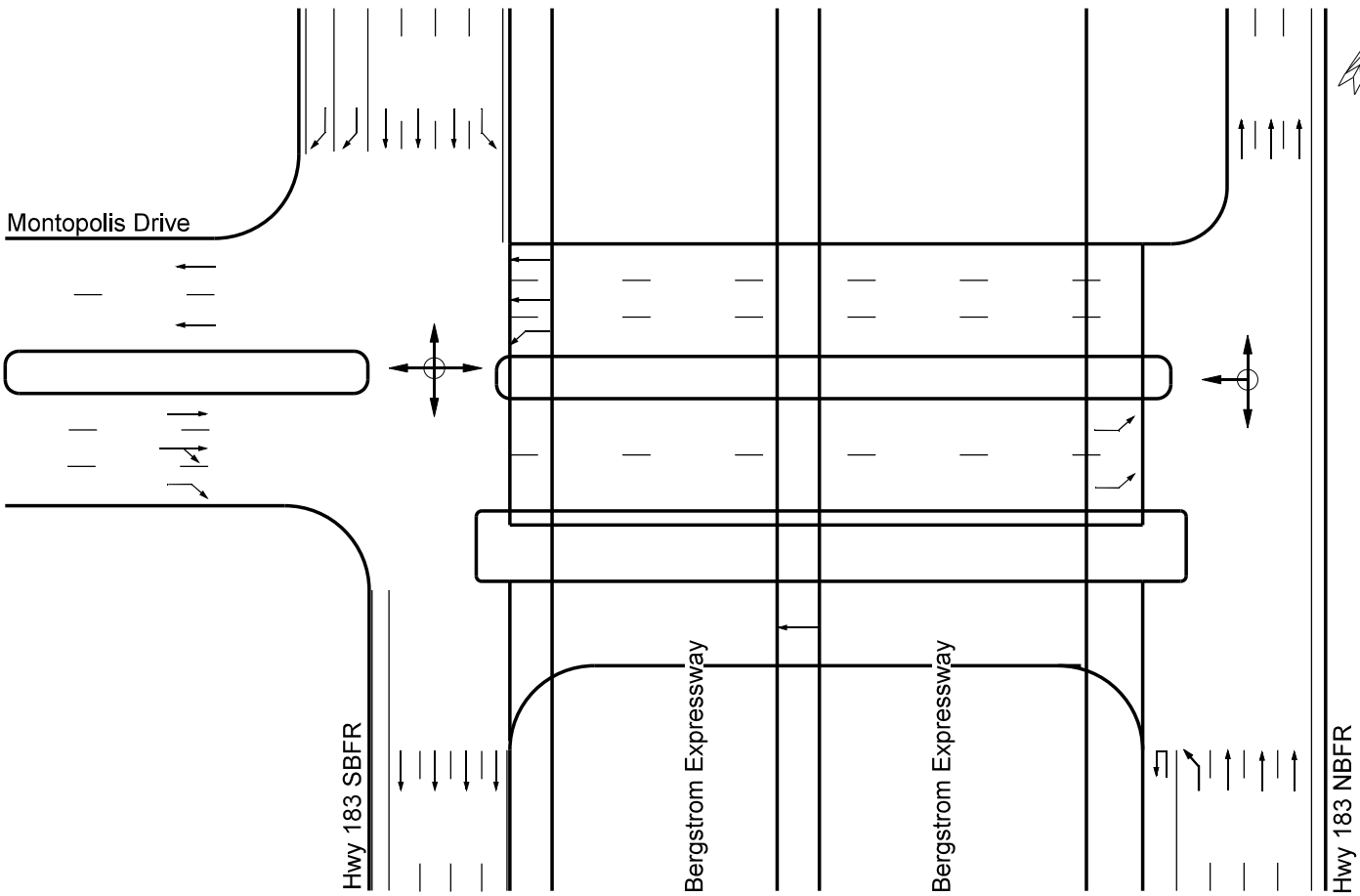


Note: Intersection geometry shown is conceptual and is not to scale.

*Overall Intersection LOS

FIGURE 25

2020 FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS



LEGEND

000/000 = AM/PM Peak Hour Volume

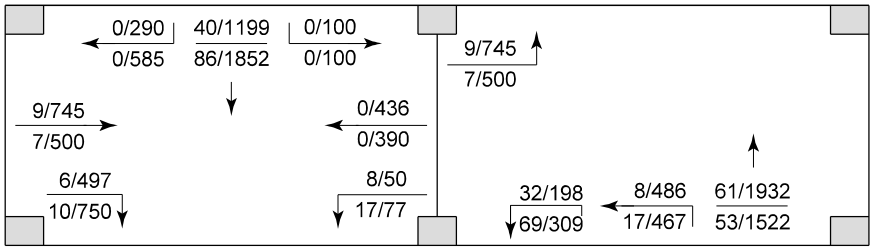
.00X/.00X = AM/PM Service Measures (V/C LOS)

= Traffic Signal

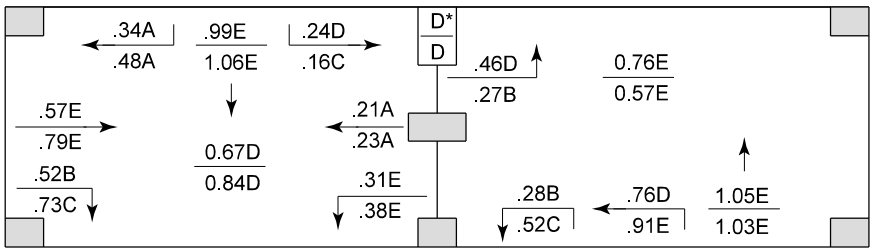
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle (sec)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Traffic Volume: 2020 Site/Site + Forecasted



Service Measures: 2020 Site + Forecasted

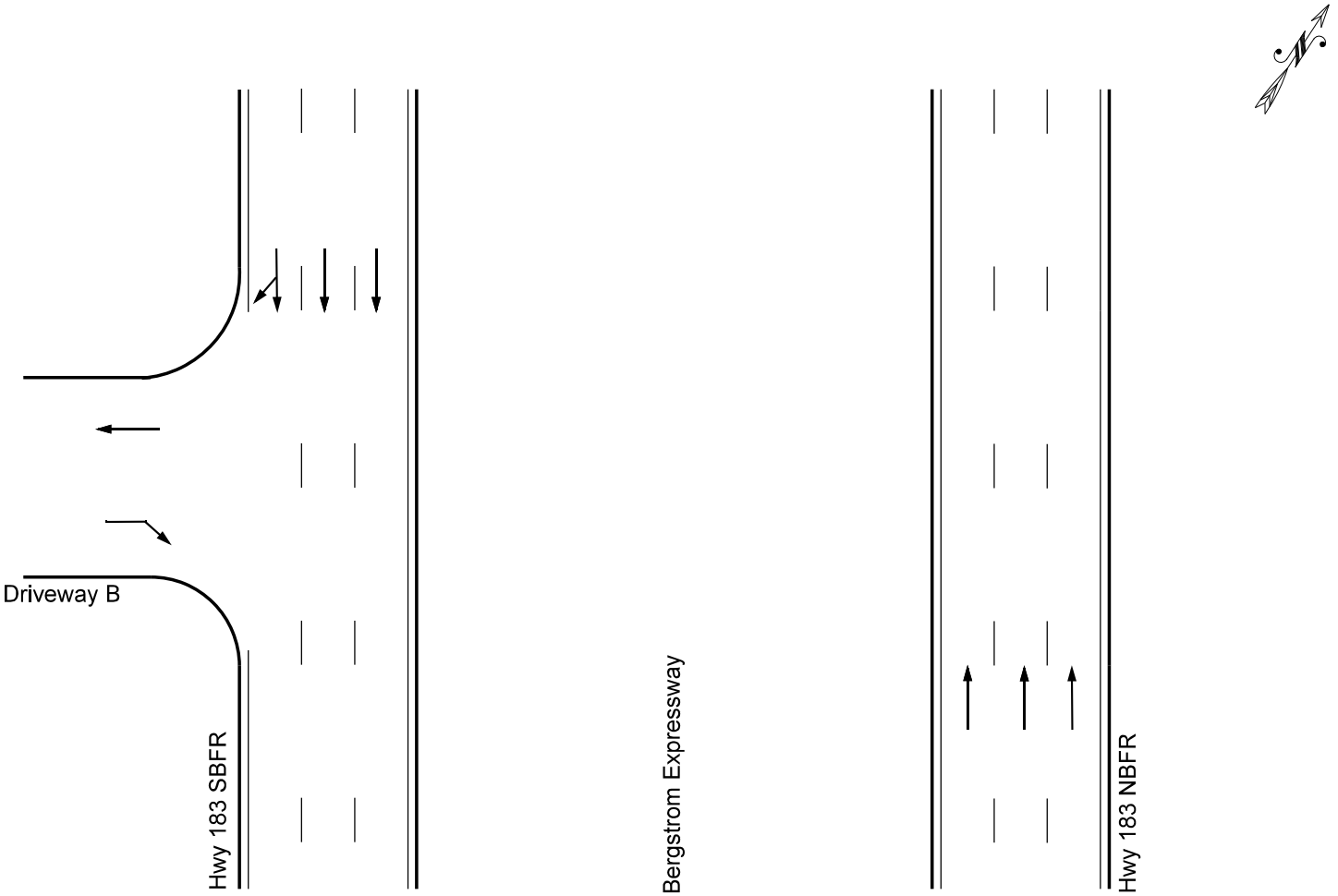


Note: Intersection geometry shown is conceptual and is not to scale.

*Overall Intersection LOS

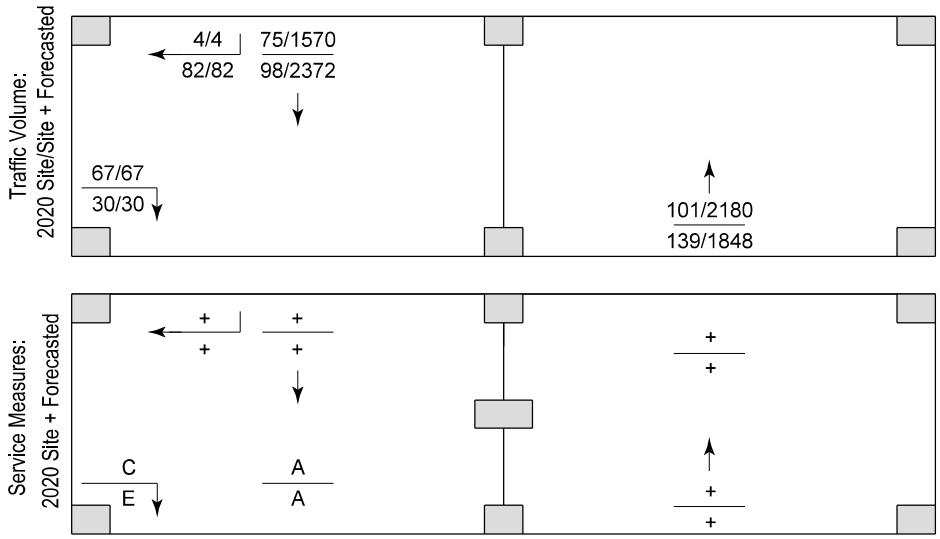
FIGURE 26

2020 SITE + FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS



LEGEND

000/000 = AM/PM		Peak Hour Volume
X/X = AM/PM		Service Measures (LOS)
= Stop Sign		
+ = Undefined Service Measure		



Note: Intersection geometry shown is conceptual and is not to scale.

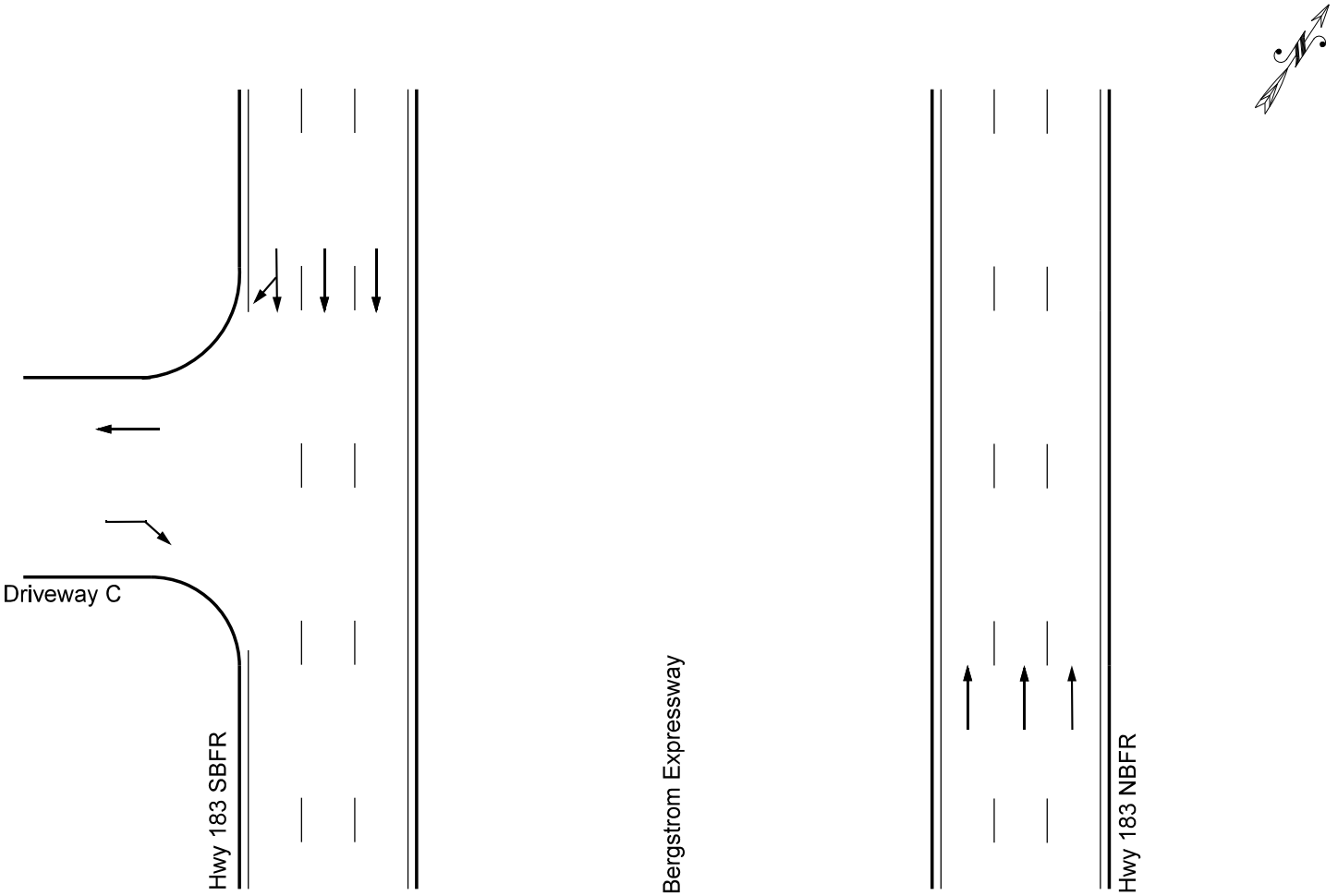
LEVEL OF SERVICE (LOS)

Unsignalized Intersection
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

FIGURE 27

2020 SITE + FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS



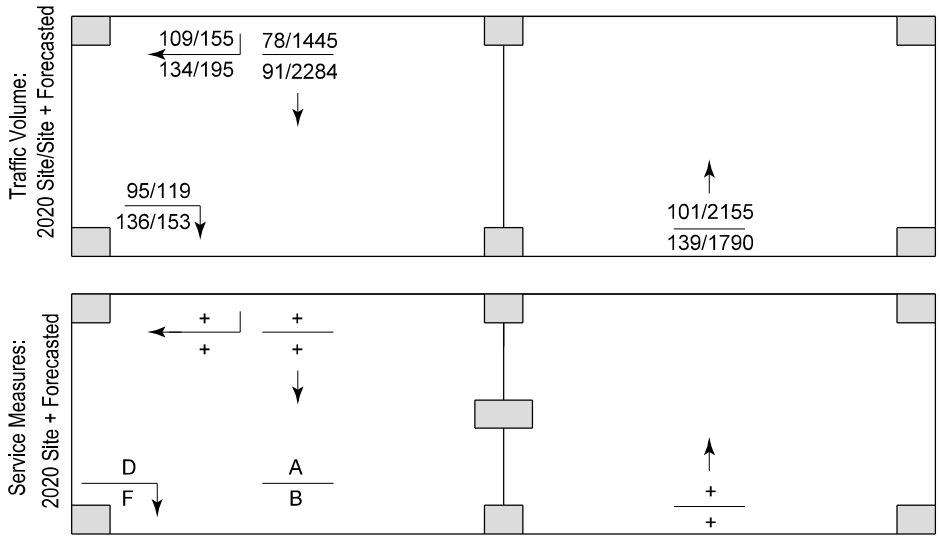
LEGEND

000/000 = AM/PM Peak Hour Volume

X/X = AM/PM Service Measures (LOS)

= Stop Sign

+ = Undefined Service Measure



Note: Intersection geometry shown is conceptual and is not to scale.

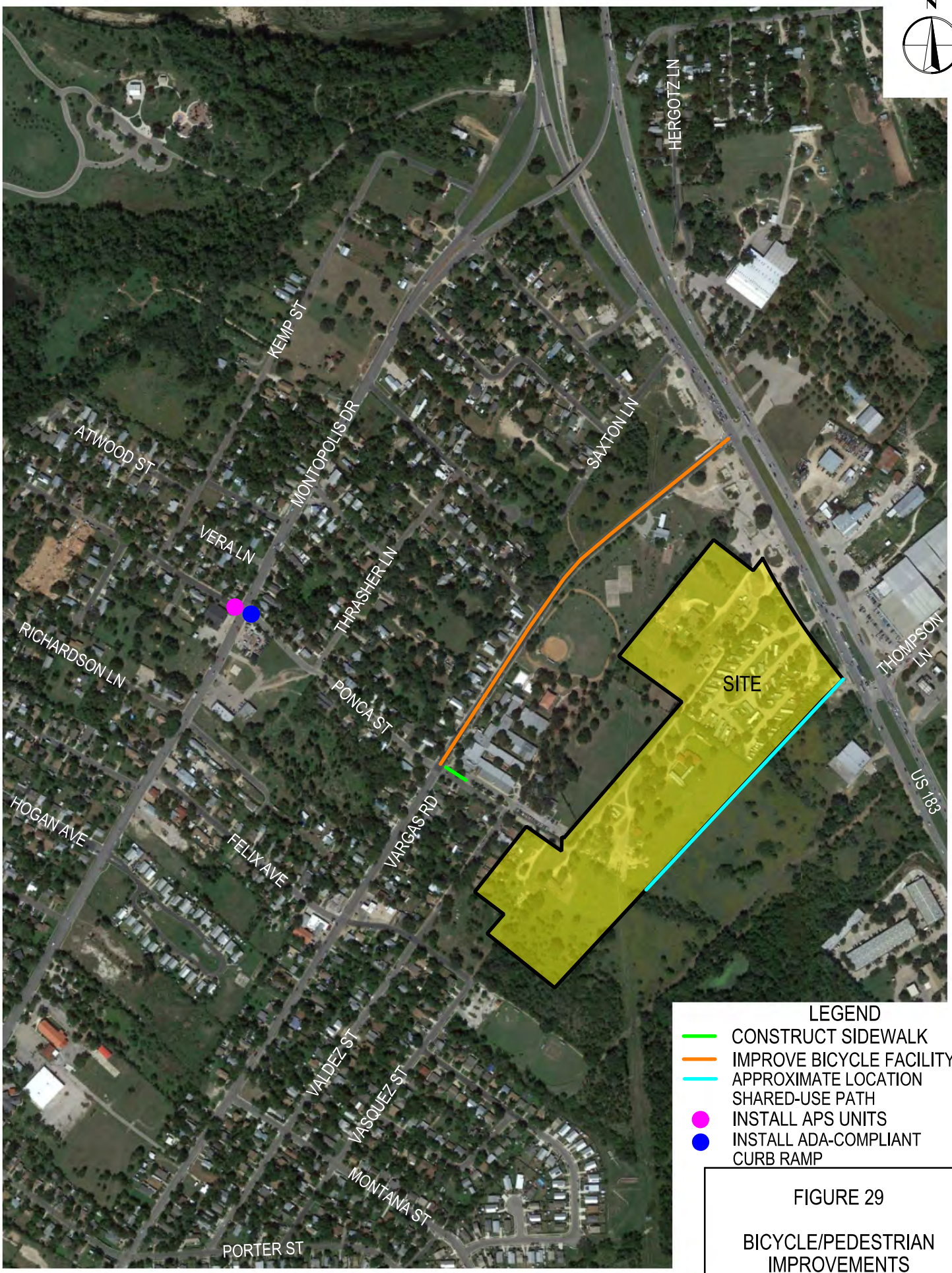
LEVEL OF SERVICE (LOS)

Unsignalized Intersection
LEVEL OF SERVICE (LOS)

LOS	Control Delay Per Vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

FIGURE 28

2020 SITE + FORECASTED GEOMETRIC AND TRAFFIC VOLUME CONDITIONS



Background Map Copyrighted by Google, 2015

FIGURE 29

BICYCLE/PEDESTRIAN IMPROVEMENTS

Table 8. Recommendations

Location	Recommendations
Intersection:	
US 183 and Vargas Road	No improvements
US 183 and Thompson Lane	No improvements
Montopolis Drive and Ponca Street	No improvements
US 183 and Callahan's Driveway	No improvements
Vargas Road and Ponca Street	No improvements
Vargas Road and Felix Avenue	No improvements
Valdez Street and Ponca Street/Driveway A	Construct Driveway A with a minimum 30' cross-section to provide one inbound and one outbound lane and align with Ponca Street
Valdez Street and Felix Avenue	No improvements
US 183 and Montopolis Drive	Restripe the eastbound approach lane to provide one through lane, one through/right-turn shared lane, and one right-turn lane
US 183 and Driveway B	Construct Driveway B with a minimum 30' and maximum 45' cross-section to provide one inbound and one outbound lane
US 183 and Driveway C	Construct Driveway C with a minimum 30' and maximum 45' cross-section to provide one inbound and one outbound lane
Bicycle Facilities:	Stripe a bike lane on Vargas Road from US 183 to Ponca Street
	Reserve land for a shared-use path/trail between US 183 and adjacent property owned by the City of Austin.
Pedestrian Facilities:	Install ~75' of sidewalk on the north side of Ponca Street from Vargas Road to the existing sidewalk to the east
	Install ADA-compliant curb ramps and accessible pedestrian signal (APS) units at the intersection of Montopolis Drive and Ponca Street

Neighborhood Traffic Analysis

A neighborhood traffic analysis was completed for Ponca Street, Felix Avenue, and Valdez Street to document the existing and projected traffic volumes and desirable operating thresholds of these roadways. All three roadways are local streets with a pavement width of 30'. According to traffic count data collected on September 9, 2015, the traffic volumes on these streets are as follows:

- Approximately 450 vehicles per day (vpd) on Ponca Street, east of Vargas Road.
- Approximately 1,300 vehicles per day (vpd) on Felix Avenue, east of Vargas Road.
- Approximately 550 vehicles per day (vpd) on Valdez Street, south of Ponca Street.

A comparison of traffic volumes and City of Austin established operational thresholds based on roadway classifications was completed. Tables 9 through 11 provide the average daily traffic volumes for existing, site, and site plus forecasted conditions for each roadway.

Table 9. Average Daily Traffic – Ponca Street (East of Vargas Road)

Traffic Volume Condition	Average Daily Traffic (vpd)
2015 Existing	450
2020 Forecasted	522
Site	528
2020 Site + Forecasted	**1,050**

Table 10. Average Daily Traffic – Felix Avenue (East of Vargas Road)

Traffic Volume Condition	Average Daily Traffic (vpd)
2015 Existing	1,300
2020 Forecasted	1,508
Site	411
2020 Site + Forecasted	**1,919**

Table 11. Average Daily Traffic – Valdez Street (South of Ponca Street)

Traffic Volume Condition	Average Daily Traffic (vpd)
2015 Existing	550
2020 Forecasted	638
Site	530
2020 Site + Forecasted	**1,168**

The City of Austin Land Development Code (25-6-116) states that for collector streets with a 30' pavement width the average daily traffic volumes should not exceed of 1,800 vehicles per day. Ponca Street, east of Vargas Road, and Valdez Street, south of Ponca Street, generate trips less than 1,800 vehicles per day. Felix Avenue, east of Vargas Road, slightly exceeds this threshold.

References

1. Texas Department of Transportation
   2015 TxDOT Statewide Planning Map, Austin, Texas

2. City of Austin
   2004 2025 Austin Metropolitan Area Transportation Plan, Austin, Texas

3. Capital Area Metropolitan Planning Organization
   2015 CAMPO 2040 Regional Transportation Plan, Travis County

4. Capital Metro Transit Authority
   2015 Capital Metro Schedules and Maps, Austin, Texas

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   2014 Austin Bicycle Plan, Austin, Texas

6. Transportation Research Board
   2010 Highway Capacity Manual, Washington, D.C.

7. Trafficware Ltd
   2012 Synchro 8, Sugar Land, Texas

8. Institute of Transportation Engineers
   2012 Trip Generation Manual, An Informational Report, 9th Edition, Washington D.C.

9. Institute of Transportation Engineers
   2012 Trip Generation Handbook, An ITE Proposed Recommended Practice, Washington D.C.

Appendix A. Technical Addendum

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General Information

TRAFFIC IMPACT ANALYSIS SCOPE AND STUDY AREA

Date:	July 27, 2015
Project Name:	Nassour 183 Tract TIA
Location:	West of US 183 at Thompson Lane, Austin, TX
Owner's Agent:	Leslie Pollack, P.E., PTOE, HDR Engineering, Inc.
Phone:	512-904-3700

Scope must be approved and signed off by COA staff prior to formal submittal of a Traffic Impact Analysis (TIA).

I. **Background Information:**

a. Completed TIA Determination Worksheet
b. Location/Study area map that specifies major roadways and intersections within study area
c. Identification of applicable existing planning efforts: this includes, but is not limited to the comprehensive plan, master thoroughfare plan, corridor studies, and neighborhood plans.

II. **Intersections Level of Service:** Calculations for a.m. and p.m. peak hours must be performed for the following intersections, showing (a) existing traffic conditions and (b) projected traffic conditions, identifying site, non-site, and total traffic:

1. US 183 and Vargas Road
2. US 183 and Thompson Lane
3. US 183 and Callahan's General Store Driveway
4. Montopolis Drive and Ponca Street
5. Montopolis Drive and US 183
6. Vargas Road and Ponca Street
7. Vargas Road and Felix Avenue
8. Valdez Street and Ponca Street
9. Valdez Street and Felix Avenue
10. All site driveways

Note: Existing signal timings shall be used for the intersection analyses in order to maintain adequate traffic progression, unless alternative timing proposals are approved by the Austin Transportation Department.

III. **Roadways.** A capacity analysis should be performed for the following roadway segments: N/A

IV. **Neighborhood Impacts.** Neighborhood traffic impacts should be evaluated for the following street segments, based upon the desirable operation levels described in Sec. 25-6-114 of the Land Development Code: Ponca St, Felix Avenue, and Valdez Street.

V. **Data Assumptions.** The following assumptions must be included in the analysis. Any change in these assumptions should be approved by the transportation planner prior to submittal of the TIA.

a) Background traffic: An average annual growth rate of up to 1.0 percent may be used. Please demonstrate the validity of the assumption.
b) Other projects to be included: To be provided by the City, if applicable.
c) Traffic distribution: To be determined based on existing and historical data. Journey to work data should be used for residential and office trips.
d) Internal trips: N/A
e) Pass-by trips: Shopping Center - 34% in the PM peak period
f) Transit trips, Bike, and Pedestrian: 10%. Please demonstrate the validity of these reductions in the TIA report.
g) Counts taken in the summer while school is not in session should be adjusted by a factor of at least 20% in the AM and 10% in the PM.
h) Existing land use trips for the Daily, AM, and PM Peak hour will be deducted from the proposed land use trips. These should be based on actual counts.
i) Each phase of the development will be analyzed separately, if proposed.

VI. Submittal Requirements:

a. City of Austin timing sheets to be included in the Appendix of the TIA
b. Copy of the signed scope and TIA determination worksheet must be included in the TIA report.
c. Synchro signal timing sheets to be included in the following format: existing conditions (am + pm on one sheet), future conditions (am background, am background + site on one sheet, pm background, pm background + site on one sheet)
d. All intersections must be modeled in one Synchro file, including unsignalized intersections
e. Submit a CD containing the following: electronic PDF of the TIA, Synchro Network for all conditions analyzed and background DXF or aerial format. Synchro files must be in real world coordinates.
f. A CAD file for the site plan, if available.

g. A map showing all bicycle routes, bus transit and bus stops within ½ mile of the site
h. A map showing all background projects and trip generation for each project,
i. A map showing all roadways and driveways analyzed (labeled and dimensioned)
j. An aerial map of all intersections with roadway improvements (dimensioned), including above ground utilities called out.

This scope and study is based upon the assumed development uses and intensities in the TIA Determination dated July 27, 2015. Any change in these assumptions may require a change in the scope. For more detailed guidelines on preparation of the TIA, please see Sec. 2 – Traffic Impact Analysis of the Transportation Criteria Manual. Staff may request a revision to the scope based on the analysis presented.

Prepared by: _____ Phone: 512-974-2219
Sangeeta Jain, AICP

Watershed Protection and Development Review Department
CITY OF AUSTIN

TRAFFIC IMPACT ANALYSIS (TIA) DETERMINATION WORKSHEET

APPLICANT MUST FILL IN WORKSHEET PRIOR TO SUBMITTING FOR TIA DETERMINATION

PROJECT NAME: Nassour 183 Tract TIA
LOCATION: West of US 183 at Thompson Lane, Austin, TX
APPLICANT: Leslie Pollack P.E.,PTOE, HDR Engineering, Inc. TELEPHONE NO.: (512) 904-3700
Fax: (512) 904-3773

APPLICATION STATUS: ☐ DEVELOPMENT ASSESSMENT ☒ ZONING ☐ SITE PLAN

EXISTING*: FOR OFFICE USE ONLY

TRACT NO.	TRACT ACRES	BUILDING SQ. FT.	ZONING	LAND USE	I.T.E. CODE	TRIP RATE	TRIPS PER DAY
1	3.740	8 DU	SF3-NP	Single Family			
2	4.786	45 Veh	CS-NP	Mobile Home Park			
3	12.260	1 DU	GO-NP	Single Family			
4	0.89	Vacant	SF2-NP	Vacant			

PROPOSED FOR OFFICE USE ONLY

TRACT NO.	TRACT ACRES	BUILDING SQ. FT.	ZONING	LAND USE	I.T.E. CODE	TRIP RATE	TRIPS PER DAY
1	21.676	360 DU	CS-MU	Apartments			2305
		10,000 SF		Shopping Center			1520

ABUTTING ROADWAYS FOR OFFICE USE ONLY

STREET NAME	PROPOSED ACCESS?	PAVEMENT WIDTH	CLASSIFICATION
Highway 183	Yes		
Ponca Street	Yes		

FOR OFFICE USE ONLY

✓ A traffic impact analysis is required. **The consultant preparing the study must meet with a transportation planner to discuss the scope and requirements of the study before beginning the study.**

____ **A traffic impact analysis is NOT required. The traffic generated by the proposal does not meet or exceed the thresholds established in the Land Development Code.**

____ **The traffic impact analysis has been waived for the following reason(s):**

____ **The traffic impact analysis has been waived because the applicant has agreed to limit the intensity to 2,000 vehicle trips per day.**

____ **A neighborhood traffic analysis will be performed by the City for this project. The applicant may have to collect existing traffic counts. See a transportation planner for information.**

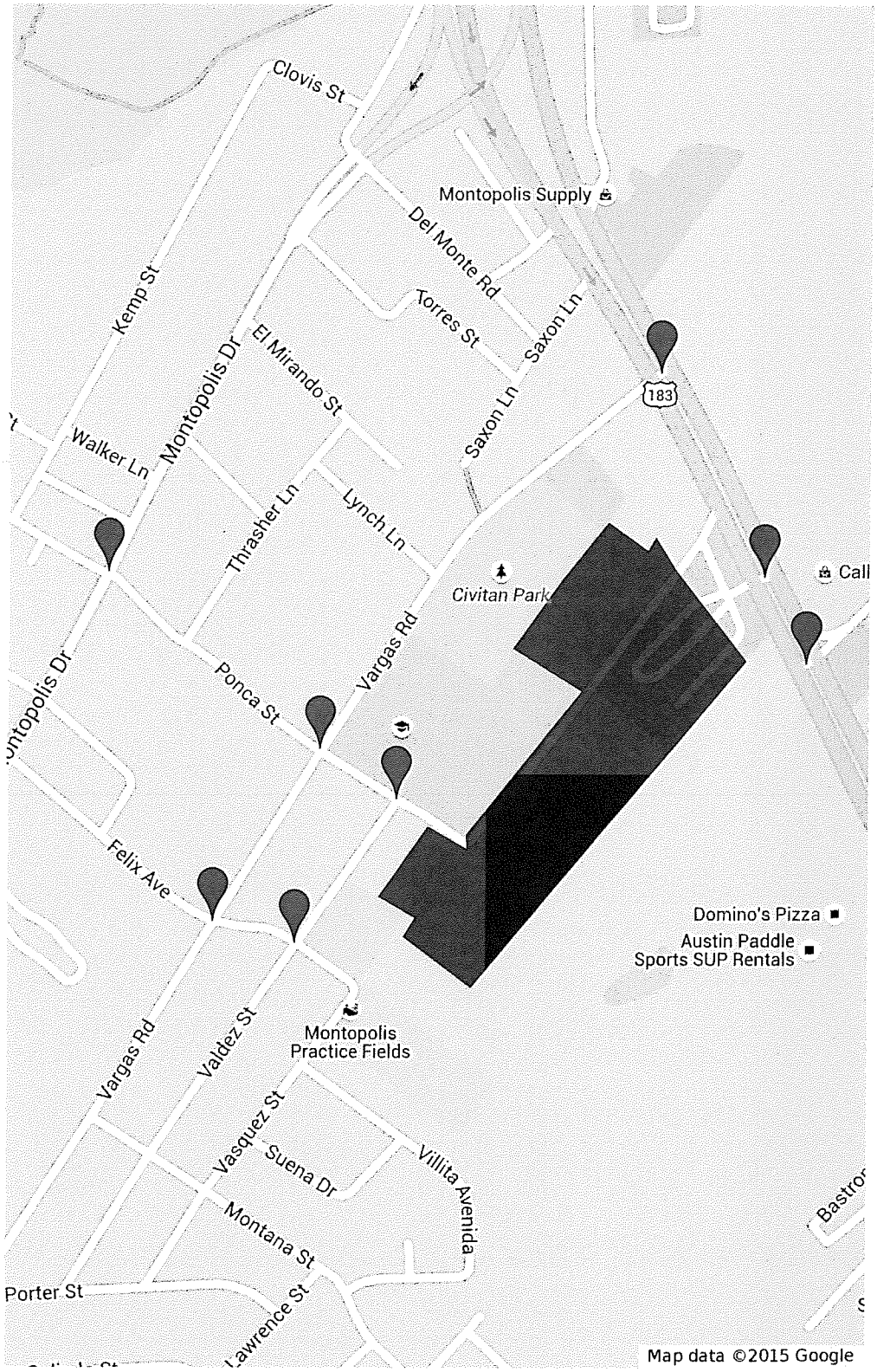
REVIEWED BY: Sapeeta DATE: 7/27/15

DISTRIBUTION: __ **FILE** _ **CAP. METRO** __ **TxDOT** **COPIES:**
TRANS. REV. **Travis Co./Williamson Co.** **TPSD**

NOTE: A TIA determination must be made prior to submittal of any zoning or site plan application to Planning; therefore, this completed and reviewed form must accompany any subsequent application for the IDENTICAL project. CHANGES to the proposed project will REQUIRE a new TIA determination to be made.

Nassour Tract

Nassour Tract
- TMC
- TMC
- TMC
- TMC
- TMC
- TMC
- TMC
- TMC
- SITE



Nassour Tract

Proposed Land Use

SUMMARY OF WEEKDAY SITE-GENERATED TRAFFIC

Per Equations and Rates Provided in ITE's Trip Generation, 9th Edition

ITE Code	Land Use	Variable	Size	24-Hour Two-Way		AM Peak Hour			PM Peak Hour		
				Rate/Eqn	Volume	Rate/Eqn	Enter	Exit	Rate/Eqn	Enter	Exit
220	Apartment	Dwelling Units	360.000	Equation	2305	Equation	36	144	Equation	140	75
820	Shopping Center	1000 SF Gross Leasable Area	16.900	Equation	2138	Equation	33	20	Equation	87	95
934	Fast-Food Restaurant with Drive-Through	1000 SF Gross Floor Area	4.100	Rate	2034	Rate	95	91	Rate	70	64
			TOTAL		**6477**		**164**	**255**		**297**	**234**

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Signal Timing Information

TRAFFIC SIGNAL INTERSECTION:	DATE:	GRP:	LOC:	VRS:	HUB:	ZONE:	SEC:	ENGINEER
Montopolis @ Ponca	7/28/2011		552C					

CITY OF AUSTIN
TRAFFIC SIGNAL TIMING & PHASING SHEETS

N

4 + 2 + RINGS		
PHASE 1	RING 1:	1, 2, a, 3, 4, b
	RING 2:	5, 6, a, 7, 8, b
PHASE 2	RING 1:	
	RING 2:	

4 + 2 + PHASEMODE	
STARTUP	2, 6
REDSTRT	1, 3, 4, 5, 7 - 20
PED	2, 4, 6, 8
YELFLASH	
FL / ENTRY	
FL / EXIT	

4 + 1 + ACT CONFIG	#1	#2	#3	#4	#5
PHASE	1	1			
OVERLAP	1	1			
PREEMPT	1	1			
CABINET	3	3			
DETECTOR	2	3			
COORD	1	1			

1 + ACTIVE CONTROL PARAMETERS				
CONTROL MODE:	SCHEDULE			
MAN PLN:	1	FREE PLN:	3	DFSCHED: 1

4 + 7 + MISC		4 + 2 + COORD CONFIG	
TRANSITION MODE:	3:30	START UP FLASH:	1
SYNCHRO MODE:	BEST	RED REVERT:	2
MAX DWELL TIME:	0	FLASH CLR:	6

2 + 3 + PL # + PLAN MODE

PL	PLAN MODE	MAX GRN	PH DATA	PH SEQ	OL DATA	ACT CONF	ENA	OFF	VAR	CYCLE	HOLD / YLD
1	COORD	MAX 1	1	1	1	1	A	15	5	50	2, 6
2	COORD	MAX 1	1	1	1	1	A	30	5	50	2, 6
3	COORD	MAX 1	1	1	1	1	A	33	5	50	2, 6
4	COORD	MAX 1	1	1	1	2	A	15	5	50	2, 6
5											
6											
7											
8											
9											
20	FREE	MAX 1	2	1	1	1					
21											

SCHEDULE

EV	ENA	HR	M	S	M	T	W	T	F	S	PL	SPECIAL FUNCTIONS 1	2	3	4	5	6	7	8	AUXILIARY 1	2	3	4
1	ENA	0	0	X	X	X	X	X	X	X	20												
2	ENA	6	30		X	X	X	X	X		2												
3	ENA	7	0	X						X	4												
4	ENA	9	0		X	X	X	X	X		1												
5	ENA	15	30		X	X	X	X	X		3												
6	ENA	19	0		X	X	X	X	X		4												
7																							
8																							
9																							
11																							
12																							

PRIORITY SEQUENCE

PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
TABLE 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TABLE 2																				
TABLE 3																				
TABLE 4																				

NOTE: ZERO DENOTES THE HIGHEST PRIORITY

PED PRAMS & FLAGS

PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ENABLE	X	X	X	X																
CALLPHAS	2	4	6	8																
OVERLAP																				

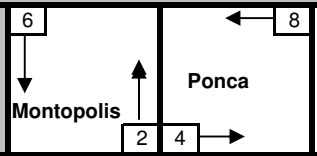
VEH PARAMETERS

DETECTORS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ENABLE	X	X	X	X	X	X	X	X	X	X	X	X								
CALL	X	X	X	X	X	X	X	X	X	X	X	X								
EXTEND	X	X	X	X	X	X	X	X	X	X	X	X								
ADD INIT																				
RED LOCK																				
YEL LOCK																				

VEH FLAG

CALL PHASE	1	5	2	6	3	7	4	8	2	6	4	8								
SWTCH PHAS																				
OVERLAP																				
DELAY			Table 2:			12	12													

SIGNAL PHASING DIAGRAM - (SECONDS)



PLAN		
1	32 + 4 + 1	8 + 4 + 1
2	32 + 4 + 1	8 + 4 + 1

3	32 + 4 + 1	8 + 4 + 1														
4	32 + 4 + 1	8 + 4 + 1														
PLAN								PLAN								

FLAGS	PHASES
OMITPHAS	1, 3, 5, 7, 8 - 20
OMIT PED	1, 3, 5, 7, 8 - 20
MIN RECAL	2, 6
MAXRECAL	
SOFT RCL	
CDT'L SRVC	
PED RECAL	2, 6
DUAL ETRY	2, 4, 6, 8
SIMGAP	
REDREST	
AUTO PED	2, 4, 6, 8
REST WALK	2, 6
PED RECY	
RED LOCK	
YEL LOCK	
NO EXT	
NO ADD INI	
NOGAPRED	
NOMAX LOK	1, 3 - 5, 7, 8

PHASE DATA TABLE # 1	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18
PHASE TIMING		NB MANOR		EB NORTHEAST		SB MANOR		WB NORTHEAST										
MIN GREEN		8.0		5.0		8.0		5.0										
PASSAGE		2.0		2.0		2.0		2.0										
MAXGRN 1		30.0		25.0		30.0		25.0										
MAXGRN 2		50.0		25.0		50.0		25.0										
CONDSERV		0.0		0.0		0.0		0.0										
YEL CHG		4.0		4.0		4.0		4.0										
RED CLR		1.0		1.0		1.0		1.0										
WALK		5.0		5.0		5.0		5.0										
PED CLR		11.0		14.0		11.0		14.0										
ADDED INI																		
TIME TO RED																		
TIME BEFOR																		
MAX INIT GRN																		

2+ 3 + PL # +	PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MIN SPLIT	PLAN	1		20		10		20		10											MIN	PLAN																				
NOM SPLIT	CYCLE	50		37		13		37		13											NOM	CYCLE																				
MAX SPLIT				50		25		50		25											MAX																					
NOTE: PLAN 20 = FREE MODE PLAN 33 = FLASH MODE	PLAN	2		20		10		20		10											MIN	PLAN																				
	CYCLE	50		37		13		37		13											NOM	CYCLE																				
				50		25		50		25											MAX																					
	PLAN	3		20		10		20		10											MIN	PLAN																				
	CYCLE	50		37		13		37		13											NOM	CYCLE																				
				50		25		50		25											MAX																					
	PLAN	4		20		10		20		10											MIN	PLAN																				
	CYCLE	50		37		13		37		13											NOM	CYCLE																				

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		50	25	50	25						MAX											
Change ONLY the following:		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
INPUT CHANNELS	FUNCTION TYPE																					
	FUNCTION INDEX																					
	UNIT																					
	CONNECTOR / BUI																					
	PIN																					
	CHANNEL IN 1																					
	CHANNEL IN 2																					
	LOGIC																					
OUTPUT CHANNELS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	FUNCTION TYPE																					
	FUNCTION INDEX																					
	CONNECTOR / BUI 1																					
	PIN 1																					
	CONNECTOR / BUI 2																					
	PIN 2																					
	CONNECTOR / BUI 3																					
	PIN 3																					

RIMARY S = SECONDARY M = MODIFIED

OVERLAP CONFIGURATION

PHASES	TYPE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
OVL A	2	P																		
	141	P																		
		S																		
		M																		
OVL B	2	P																		
	141	P																		
		S																		
		M																		
OVL C	2	P																		
	141	P																		
		S																		
		M																		
OVL D	2	P																		
	141	P																		
		S																		
		M																		
OVL E	2	P																		
OVL F	2	P																		
OVL G	2	P																		
OVL H	2	P																		
OVL I	2	P																		

OVERLAPS			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
OVERLAP SETTINGS	FLAGS / PARAM	ENABLE																
		PED OVERLAP																
		FLASH YELLOW																
		ALT FLASH HZ																
	FLAGS	RECALL PRIMARY																
		RECALL SEC																
		PED RECALL																
		PED RECYCLE																
		AUTO EXTEND																
	PARAMETERS	MIN GREEN																
		MAX GREEN																
		GREEN CLEAR																
		YEL CLEAR																
		RED CLEAR																
		WALK																
		PED CLEAR																
		RESERVICE																

	PRE - EMPT	1	3	4	5	6
LAGS	ENABLE					
	NO MEM LOK					
	MAN ENABLE					

	SETTINGS	1	3	4	5	6
TIMING	STRT MIN GRN					
	STRT WALK					
	STRT PED CLR					

P = P																																			
	OVL J	2	P																			PRE EMPT F	NO OVER FLSH						PHASE FLAGS	ENT 1 PHASE					
	OVL K	2	P																				NO OVER NEXT							ENT 2 PHASE					
	OVL L	2	P																				OMIT IN DELAY							DWELL PHASE					
	OVL M	2	P																				RE MAX PRES							INITIAL DWELL					
	OVL N	2	P																				PED NOT DARK							DWELL PED					
	OVL O	2	P																			TIME	MIN PRESENCE							RECAL PHASE					
	OVL P	2	P																				DELAY							EXIT PHASE					

FLAGS	PHASES	PHASE DATA TABLE # 2	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18
OMITPHAS	1, 3, 5, 7, 8 - 20																			
OMIT PED	1, 3, 5, 7, 8 - 20																			
MIN RECAL	2, 6	PHASE TIMING		NB MANOR		EB NORTHEAST		SB MANOR		WB NORTHEAST										
MAXRECAL																				
SOFT RCL																				
CDT'L SRVC																				
PED RECAL	2, 6	MIN GREEN		12.0		5.0		12.0		5.0										
DUAL ETRY	2, 4, 6, 8	PASSAGE		2.0		2.0		2.0		2.0										
SIMGAP	2, 4, 6, 8	MAXGRN 1		35.0		20.0		35.0		20.0										
REDREST		MAXGRN 2		50.0		25.0		50.0		25.0										
AUTO PED	2, 4, 6, 8	CONDSERV		0.0		0.0		0.0		0.0										
REST WALK	2, 6	YEL CHG		4.0		4.0		4.0		4.0										
PED RECY		RED CLR		1.0		1.0		1.0		1.0										
RED LOCK		WALK		5.0		5.0		5.0		5.0										
YEL LOCK		PED CLR		11.0		14.0		11.0		14.0										
NO EXT		ADDED INI																		
NO ADD INI		TIME TO RED																		
NOGAPRED		TIME BEFOR																		
NO RANGE		MIN GAP																		
NOMAX LOK	1, 3 - 5, 7, 8	MAX INIT GRN																		

FLAGS	PHASES	PHASE DATA TABLE # 3	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18
OMITPHAS																				
OMIT PED																				
MIN RECAL		PHASE TIMING																		
MAXRECAL																				
SOFT RCL																				
CDT'L SRVC																				
PED RECAL		MIN GREEN																		
DUAL ETRY		PASSAGE																		
SIMGAP		MAXGRN 1																		
REDREST		MAXGRN 2																		
AUTO PED		CONDSERV																		
REST WALK		YEL CHG																		
PED RECY		RED CLR																		

RED LOCK		WALK																		
YEL LOCK		PED CLR																		
NO EXT		ADDED INI																		
NO ADD INI		TIME TO RED																		
NOGAPRED		TIME BEFOR																		
NO RANGE		MIN GAP																		
NOMAX LOK		MAX INIT GRN																		

FLAGS	PHASES	PHASE DATA TABLE # 4	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18
OMITPHAS																				
OMIT PED																				
MIN RECAL		PHASE TIMING																		
MAXRECAL																				
SOFT RCL																				
CDT'L SRVC																				
PED RECAL		MIN GREEN																		
DUAL ETRY		PASSAGE																		
SIMGAP		MAXGRN 1																		
REDREST		MAXGRN 2																		
AUTO PED		CONDSERV																		
REST WALK		YEL CHG																		
PED RECY		RED CLR																		
RED LOCK		WALK																		
YEL LOCK		PED CLR																		
NO EXT		ADDED INI																		
NO ADD INI		TIME TO RED																		
NOGAPRED		TIME BEFOR																		
NO RANGE		MIN GAP																		
NOMAX LOK		MAX INIT GRN																		

NOTES:

TRAFFIC SIGNAL INTERSECTION:	DATE:	GRP:	LOC:	VRS:	HUB:	ZONE:	SEC:	ENGINEER:	CITY OF AUSTIN TRAFFIC SIGNAL TIMING & PHASING SHEETS
Thompson @ U.S. 183	6/30/2014		500C						N

4 + 2 + RINGS		
PHASE 1	RING 1:	1, 2, a, 3, 4, b
	RING 2:	5, 6, a, 7, 8, b
PHASE 2	RING 1:	
	RING 2:	

4 + 2 + PHASEMODE	
STARTUP	2, 6
REDSTRT	1, 3 - 5, 7 - 20
PED	2, 4, 6, 8
YELFLASH	
FLASH/ENT	
FLASH/EXIT	

4 + 1 + ACT CONFIG	#1	#2	#3	#4	#5
PHASE	1				
OVERLAP	1				
PREEMPT	1				
CABINET	2				
DETECTOR	2				
COORD	1				

1 + ACTIVE CONTROL PARAMETERS					
CONTROL MODE:	SCHEDULE				
MAN PLN:	1	FREE PLN:	1	DFSCHED:	1

4 + 7 + MISC		4 + 2 + COORD CONFIG	
TRANSITION MODE:	3:30	START UP FLASH:	0
SYNCHRO MODE:	BEST	RED REVERT:	2
MAX DWELL TIME:	0	FLASH CLR:	3

2 + 3 + PL # + **PLAN MODE**

PL	PLAN MODE	MAX GRN	PH DATA	PH SEQ	OL DATA	ACT CONF	ENA	OFF	VAR	CYCLE	HOLD / YLD
1	COORD	MAX 1	1	1	1	1	A	58	5	80	2,6
2	COORD	MAX 1	1	1	1	1	A	133	5	190	2,6
3	COORD	MAX 1	1	1	1	1	A	123	5	215	2,6
4	COORD	MAX 1	1	1	1	1	A	87	5	130	2,6
5											
6											
7											
8											
9											
10											
20	FREE	MAX 1	1	1	1	1	DIS	0	0	0	0
33											

SCHEDULE

EV	ENA	HR	M	S	M	T	W	T	F	S	PL	SPECIAL FUNCTIONS 1	2	3	4	5	6	7	8	AUXILIARY 1	2	3	4
1	ENA	0	0	X	X	X	X	X	X	X	1												
2	ENA	6	0		X	X	X	X	X		2												
3	ENA	9	0	X	X	X	X	X	X	X	4												
4	ENA	15	30		X	X	X	X	X		3												
5	ENA	19	0	X	X	X	X	X	X	X	1												
6																							
7																							
8																							
9																							
10																							
11																							
12																							

PRIORITY SEQUENCE

PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
TABLE 1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TABLE 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TABLE 3																				
TABLE 4																				

NOTE: ZERO DENOTES THE HIGHEST PRIORITY

PED PRAMS & FLAGS

PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ENABLE	X	X	X	X																
CALLPHAS																				
OVERLAP																				

VEH PARAMETERS

DETECTORS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ENABLE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CALL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EXTEND	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ADD INIT																				
RED LOCK																				
YEL LOCK																				

VEH FLAG

CALL PHASE																				
SWTCH PHAS																				
OVERLAP																				
DELAY																				

SIGNAL PHASING DIAGRAM - (SECONDS)

PLAN	6 U.S. 183 2	6 1	4 THOMPSON				PLAN					
1	35 + 5 + 2	11 + 5 + 2	14 + 4 + 2	+	+	+		+	+	+	+	+
2	130 + 5 + 2	20 + 5 + 2	20 + 4 + 2	+	+	+		+	+	+	+	+
3	134 + 5 + 2	33 + 5 + 2	28 + 4 + 2	+	+	+		+	+	+	+	+
4	70 + 5 + 2	16 + 5 + 2	24 + 4 + 2	+	+	+		+	+	+	+	+
PLAN							PLAN					
	+	+	+	+	+	+		+	+	+	+	+
	+	+	+	+	+	+		+	+	+	+	+

FLAGS	PHASES
OMITPHAS	3, 5, 7, 8

PHASE DATA TABLE	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18

		# 1	SB L/T	NB U.S.183		WB THOMPSON		SB U.S.183												
OMIT PED																				
MIN RECAL	2, 6																			
MAXRECAL		PHASE TIMING																		
SOFT RCL																				
CDT'L SRVC																				
PED RECAL		MIN GREEN	8.0	15.0		9.0		15.0												
DUAL ETRY		PASSAGE	2.0	3.0		4.5		3.0												
SIMGAP		MAXGRN 1	45.0	150.0		40.0		175.0												
REDREST		MAXGRN 2	45.0	150.0		40.0		175.0												
AUTO PED	2, 4, 6, 8	CONDSERV	0.0	0.0		0.0		0.0												
REST WALK	2	YEL CHG	5.0	5.0		4.0		5.0												
PED RECY		RED CLR	2.0	2.0		2.0		2.0												
RED LOCK		WALK		5.0		5.0														
YEL LOCK		PED CLR		12.0		30.0														
NO EXT		ADDED INI																		
NO ADD INI		TIME TO RED																		
NOGAPRED		TIME BEFOR																		
NOMAX LOK	1, 4, 5	MAX INIT GRN																		

2+ 3 + PL # +	PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MIN SPLIT	PLAN	1	15	30		15		30		15											MIN	PLAN																		
NOM SPLIT	CYCLE	80	18	42		20		60		20											NOM	CYCLE																		
MAX SPLIT			35	50		30		70		30											MAX																			
NOTE: PLAN 20 = FREE MODE PLAN 33 = FLASH MODE	PLAN	2	15	40		15		40		15											MIN	PLAN																		
	CYCLE	190	27	137		26		164		26											NOM	CYCLE																		
			40	150		36		175		36											MAX																			
	PLAN	3	15	40		15		40		15											MIN	PLAN																		
	CYCLE	215	40	141		34		181		34											NOM	CYCLE																		
			45	175		40		200		40											MAX																			
	PLAN	4	15	30		15		30													MIN	PLAN																		
	CYCLE	130	23	67		30		90													NOM	CYCLE																		
			30	80		35		95													MAX																			

Change ONLY the following:		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
INPUT CHANNELS	FUNCTION TYPE																					
	FUNCTION INDEX																					
	UNIT																					
	CONNECTOR / BUI																					
	PIN																					
	CHANNEL IN 1																					
	CHANNEL IN 2																					
	LOGIC																					
OUTPUT CHANNELS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	FUNCTION TYPE																					
	FUNCTION INDEX																					
	CONNECTOR / BUI 1																					
	PIN 1																					
	CONNECTOR / BUI 2																					
	PIN 2																					
	CONNECTOR / BUI 3																					
	PIN 3																					

PHASES		TYPE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	OVERLAPS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	OVL A	2	P																			FLAGS / PARAM: ENABLE																
		141	P																			PED OVERLAP																
			S																			FLASH YELLOW																

P = PRIMARY S = SECONDARY M = MODIFIED

OVERLAP CONFIGURATION

			M																																
OVL B	2		P																																
OVL B	141		P																																
OVL B	141		S																																
OVL B	141		M																																
OVL C	2		P																																
OVL C	141		P																																
OVL C	141		S																																
OVL C	141		M																																
OVL D	2		P																																
OVL D	141		P																																
OVL D	141		S																																
OVL D	141		M																																
OVL E	2		P																																
OVL F	2		P																																
OVL G	2		P																																
OVL H	2		P																																
OVL I	2		P																																
OVL J	2		P																																
OVL K	2		P																																
OVL L	2		P																																
OVL M	2		P																																
OVL N	2		P																																
OVL O	2		P																																
OVL P	2		P																																

OVERLAP SETTINGS

	ALT FLASH HZ																		
FLAGS	RECALL PRIMARY																		
FLAGS	RECALL SEC																		
FLAGS	PED RECALL																		
FLAGS	PED RECYCLE																		
FLAGS	AUTO EXTEND																		
PARAMETERS	MIN GREEN																		
PARAMETERS	MAX GREEN																		
PARAMETERS	GREEN CLEAR																		
PARAMETERS	YEL CLEAR	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
PARAMETERS	RED CLEAR	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARAMETERS	WALK																		
PARAMETERS	PED CLEAR																		
PARAMETERS	RESERVICE																		

	PRE - EMPT	1	3	4	5	6
PRE EMPT FLAGS	ENABLE					
PRE EMPT FLAGS	NO MEM LOK					
PRE EMPT FLAGS	MAN ENABLE					
PRE EMPT FLAGS	NO OVER FLSH					
PRE EMPT FLAGS	NO OVER NEXT					
PRE EMPT FLAGS	OMIT IN DELAY					
PRE EMPT FLAGS	RE MAX PRES					
PRE EMPT FLAGS	PED NOT DARK					
TIME	MIN PRESENCE					
TIME	DELAY					

	SETTINGS	1	3	4	5	6
TIMING	STRT MIN GRN					
TIMING	STRT WALK					
TIMING	STRT PED CLR					
PHASE FLAGS	ENT 1 PHASE					
PHASE FLAGS	ENT 2 PHASE					
PHASE FLAGS	DWELL PHASE					
PHASE FLAGS	INITIAL DWELL					
PHASE FLAGS	DWELL PED					
PHASE FLAGS	RECAL PHASE					
PHASE FLAGS	EXIT PHASE					

FLAGS	PHASES
OMITPHAS	3, 5, 7, 8
OMIT PED	
MIN RECAL	2, 6
MAXRECAL	2, 6
SOFT RCL	
CDT'L SRVC	
PED RECAL	
DUAL ETRY	
SIMGAP	2, 6
REDREST	
AUTO PED	2, 4, 6, 8
REST WALK	2
PED RECY	
RED LOCK	
YEL LOCK	
NO EXT	
NO ADD INI	
NOGAPRED	
NO RANGE	
NOMAX LOK	1, 4, 5

PHASE DATA TABLE # 2	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18
PHASE TIMING	SB L/T	NB U.S.183		WB THOMPSON		SB U.S.183												
MIN GREEN	8.0	15.0		9.0		15.0												
PASSAGE	2.0	3.0		4.5		3.0												
MAXGRN 1	45.0	150.0		40.0		175.0												
MAXGRN 2	45.0	150.0		40.0		175.0												
CONDSERV	0.0	0.0		0.0		0.0												
YEL CHG	5.0	5.0		4.0		5.0												
RED CLR	2.0	2.0		2.0		2.0												
WALK		5.0		5.0														
PED CLR		12.0		30.0														
ADDED INI																		
TIME TO RED																		
TIME BEFOR																		
MIN GAP																		
MAX INIT GRN																		

FLAGS	PHASES	PHASE DATA TABLE # 3	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18
OMITPHAS																				
OMIT PED																				
MIN RECAL		PHASE TIMING																		
MAXRECAL																				
SOFT RCL																				
CDT'L SRVC																				
PED RECAL		MIN GREEN																		
DUAL ETRY		PASSAGE																		
SIMGAP		MAXGRN 1																		
REDREST		MAXGRN 2																		
AUTO PED		CONDSERV																		
REST WALK		YEL CHG																		
PED RECY		RED CLR																		
RED LOCK		WALK																		
YEL LOCK		PED CLR																		
NO EXT		ADDED INI																		
NO ADD INI		TIME TO RED																		
NOGAPRED		TIME BEFOR																		
NO RANGE		MIN GAP																		
NOMAX LOK		MAX INIT GRN																		

FLAGS	PHASES	PHASE DATA TABLE # 4	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18
OMITPHAS																				
OMIT PED																				
MIN RECAL		PHASE TIMING																		
MAXRECAL																				
SOFT RCL																				
CDT'L SRVC																				
PED RECAL		MIN GREEN																		
DUAL ETRY		PASSAGE																		
SIMGAP		MAXGRN 1																		
REDREST		MAXGRN 2																		
AUTO PED		CONDSERV																		
REST WALK		YEL CHG																		
PED RECY		RED CLR																		
RED LOCK		WALK																		
YEL LOCK		PED CLR																		
NO EXT		ADDED INI																		
NO ADD INI		TIME TO RED																		
NOGAPRED		TIME BEFOR																		
NO RANGE		MIN GAP																		
NOMAX LOK		MAX INIT GRN																		

NOTES:

TRAFFIC SIGNAL INTERSECTION:	DATE:	GRP:	LOC:	VRS:	HUB:	ZONE:	SEC:	ENGINEER:
U. S. 183 @ Vargas	2/27/2014		498C					

CITY OF AUSTIN
TRAFFIC SIGNAL TIMING & PHASING SHEETS

N

4 + 2 + **RINGS**		
PHASE 1	RING 1:	1, 2, a, 3, 4, b
	RING 2:	5, 6, a, 7, 8, b
PHASE 2	RING 1:	
	RING 2:	

4 + 2 + **PHASEMODE**	
STARTUP	2, 6
REDSTRT	1, 3 - 5, 7 - 20
PED	2, 4, 6, 8
YELFLASH	
FLASH/ENT	
FLASH/EXIT	

4 + 1 + **ACT CONFIG**	#1	#2	#3	#4	#5
PHASE	1				
OVERLAP	1				
PREEMPT	1				
CABINET	2				
DETECTOR	2				
COORD	1				

1 + **ACTIVE CONTROL PARAMETERS**			
CONTROL MODE:	SCHEDULE		
MAN PLN:	3	FREE PLN: 20	DFSCHED: 1

4 + 7 + **MISC**		4 + 2 + **COORD CONFIG**	
TRANSITION MODE:	3:30	START UP FLASH:	1
SYNCHRO MODE:	BEST	RED REVERT:	2
MAX DWELL TIME:	0	FLASH CLR:	6

2 + 3 + PL # + **PLAN MODE**

PL	PLAN MODE	MAX GRN	PH DATA	PH SEQ	OL DATA	ACT CONF	ENA	OFF	VAR	CYCLE	HOLD / YLD
1	COORD	MAX 1	1	1	1	1	A	58	5	80	2,6
2	COORD	MAX 1	1	1	1	1	A	133	5	190	2,6
3	COORD	MAX 1	2	1	1	1	A	123	5	215	2,6
4	COORD	MAX 1	1	1	1	1	A	87	5	120	2,6
5											
6											
7											
8											
9											
10											
20	FREE	MAX 1	1	1	1	1					
33											

SCHEDULE

EV	ENA	HR	M	S	M	T	W	T	F	S	PL	SPECIAL FUNCTIONS 1	2	3	4	5	6	7	8	AUXILIARY 1	2	3	4
1	ENA	0	0	X	X	X	X	X	X	X	1												
2	ENA	6	30		X	X	X	X	X		2												
3	ENA	9	0	X	X	X	X	X	X	X	4												
4	ENA	15	30		X	X	X	X	X		3												
5	ENA	19	0	X	X	X	X	X	X	X	1												
6																							
7																							
8																							
9																							
10																							
11																							
12																							

PRIORITY SEQUENCE

PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
TABLE 1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TABLE 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TABLE 3																				
TABLE 4																				

NOTE: ZERO DENOTES THE HIGHEST PRIORITY

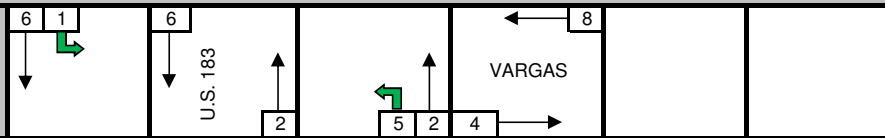
PED PRAMS & FLAGS

PHASES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ENABLE	X	X	X	X																
CALLPHAS																				
OVERLAP																				

VEH PARAMETERS / VEH FLAG

DETECTORS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ENABLE	X	X	X	X	X	X	X	X	X	X	X	X								
CALL	X	X	X	X	X	X	X	X	X	X	X	X								
EXTEND	X	X	X	X	X	X	X	X	X	X	X	X								
ADD INIT																				
RED LOCK																				
YEL LOCK																				
CALL PHASE	1	5	2	6	3	7	4	8	4	6	4	8								
SWTCH PHAS																				
OVERLAP																				
DELAY																				

SIGNAL PHASING DIAGRAM - (SECONDS)



PLAN						
1	9 + 5 + 2	21 + 5 + 2	9 + 5 + 2	14 + 4 + 2	+	+
2	9 + 5 + 2	127 + 5 + 2	10 + 5 + 2	17 + 4 + 2	+	+
3	15 + 5 + 2	142 + 5 + 2	15 + 5 + 2	16 + 4 + 2	+	+
4	13 + 5 + 2	58 + 5 + 2	13 + 5 + 2	19 + 4 + 2	+	+
P						

PLAN					
	+	+	+	+	+	+
	+	+	+	+	+	+
	+	+	+	+	+	+
	+	+	+	+	+	+
P						

PLAN							PLAN						
	+	+	+	+	+	+		+	+	+	+	+	+
	+	+	+	+	+	+		+	+	+	+	+	+

FLAGS	PHASES
OMITPHAS	3, 7, 9, 10
OMIT PED	1 - 3, 5, 7 - 10
MIN RECAL	2, 4, 6, 8
MAXRECAL	
SOFT RCL	
CDT'L SRVC	
PED RECAL	
DUAL ETRY	4, 8
SIMGAP	2, 6
REDREST	
AUTO PED	4, 6
REST WALK	6
PED RECY	
RED LOCK	
YEL LOCK	1, 4, 5, 8
NO EXT	
NO ADD INI	
NOGAPRED	
NOMAX LOK	1, 4, 5, 8

PHASE DATA TABLE # 1	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18
PHASE TIMING	SB L/T	NB U.S.183		EB VARGAS	NB L/T	SB U.S.183		WB DRIVE WAY										
MIN GREEN	8.0	15.0		11.0	8.0	15.0		11.0										
PASSAGE	1.5	2.0		5.0	1.5	2.0		5.0										
MAXGRN 1	30.0	160.0		35.0	30.0	160.0		35.0										
MAXGRN 2	30.0	160.0		35.0	30.0	160.0		35.0										
CONDSERV	0.0	0.0		0.0	0.0	0.0		0.0										
YEL CHG	5.0	5.0		4.0	5.0	5.0		4.0										
RED CLR	2.0	2.0		2.0	2.0	2.0		2.0										
WALK				6.0		6.0												
PED CLR				35.0		12.0												
ADDED INI																		
TIME TO RED																		
TIME BEFOR																		
MAX INIT GRN																		

2+ 3 + PL # +	PHASE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MIN SPLIT	PLAN	1	15	25		18	15	25		18											MIN	PLAN																		
NOM SPLIT	CYCLE	80	16	44		20	16	44		20											NOM	CYCLE																		
MAX SPLIT			30	55		30	30	55		30											MAX																			
NOTE: PLAN 20 = FREE MODE PLAN 33 = FLASH MODE	PLAN	2	15	35		18	15	35		18											MIN	PLAN																		
	CYCLE	190	16	151		23	17	150		23											NOM	CYCLE																		
			30	160		35	30	160		35											MAX																			
	PLAN	3	15	90		18	15	90		18											MIN	PLAN																		
	CYCLE	190	22	171		22	22	171		22											NOM	CYCLE																		
			30	190		30	30	190		30											MAX																			
	PLAN	4	15	25		18	15	25		18											MIN	PLAN																		
	CYCLE	120	20	85		25	20	85		25											NOM	CYCLE																		
			30	105		35	30	105		35											MAX																			

Change ONLY the following:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
INPUT CHANNELS FUNCTION TYPE																					
FUNCTION INDEX																					
UNIT																					
CONNECTOR / BUI																					
PIN																					
CHANNEL IN 1																					

C	CHANNEL IN 2																						
	LOGIC																						
OUTPUT CHANNELS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
	FUNCTION TYPE																						
	FUNCTION INDEX																						
	CONNECTOR / BUI 1																						
	PIN 1																						
	CONNECTOR / BUI 2																						
	PIN 2																						
	CONNECTOR / BUI 3																						
	PIN 3																						

PHASES		TYPE		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
OVERLAP CONFIGURATION (P = PRIMARY S = SECONDARY M = MODIFIED)	OVL A	2	P																		
		141	P																		
			S																		
			M																		
	OVL B	2	P																		
		141	P																		
			S																		
			M																		
	OVL C	2	P																		
		141	P																		
			S																		
			M																		
	OVL D	2	P																		
		141	P																		
			S																		
			M																		
	OVL E	2	P																		
	OVL F	2	P																		
	OVL G	2	P																		
	OVL H	2	P																		
	OVL I	2	P																		
	OVL J	2	P																		
	OVL K	2	P																		
	OVL L	2	P																		
	OVL M	2	P																		
	OVL N	2	P																		
	OVL O	2	P																		
	OVL P	2	P																		

OVERLAPS			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
OVERLAP SETTINGS	FLAGS / PARAM	ENABLE																
		PED OVERLAP																
		FLASH YELLOW																
		ALT FLASH HZ																
	FLAGS	RECALL PRIMARY																
		RECALL SEC																
		PED RECALL																
		PED RECYCLE																
		AUTO EXTEND																
	PARAMETERS	MIN GREEN																
		MAX GREEN																
		GREEN CLEAR																
		YEL CLEAR	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		RED CLEAR	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		WALK																
		PED CLEAR																
		RESERVICE																

PRE - EMPT		1	3	4	5	6
PRE EMPT FLAGS	ENABLE					
	NO MEM LOK					
	MAN ENABLE					
	NO OVER FLSH					
	NO OVER NEXT					
	OMIT IN DELAY					
	RE MAX PRES					
	PED NOT DARK					
TIME	MIN PRESENCE					
	DELAY					

SETTINGS		1	3	4	5	6
TIMING	STRT MIN GRN					
	STRT WALK					
	STRT PED CLR					
PHASE FLAGS	ENT 1 PHASE					
	ENT 2 PHASE					
	DWELL PHASE					
	INITIAL DWELL					
	DWELL PED					
	RECAL PHASE					
	EXIT PHASE					

FLAGS	PHASES
OMITPHAS	3, 7, 9, 10
OMIT PED	
MIN RECAL	2, 4, 6, 8
MAXRECAL	

PHASE DATA TABLE # 2

PHASE	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18
	B L/T	NB S.183		EB RGAS	B L/T	SB S.183		WB /E WAY										

SOFT RCL		TIMING	SI	U.		VA	NI	U.		DRI\										
CDT'L SRVC																				
PED RECAL		MIN GREEN	8.0	15.0		11.0	8.0	15.0		11.0										
DUAL ETRY	4, 8	PASSAGE	1.5	2.0		5.0	1.5	2.0		5.0										
SIMGAP	2, 6	MAXGRN 1	30.0	180.0		35.0	30.0	180.0		35.0										
REDREST		MAXGRN 2	30.0	160.0		35.0	30.0	160.0		35.0										
AUTO PED	4, 6	CONDSERV	0.0	0.0		0.0	0.0	0.0		0.0										
REST WALK	6	YEL CHG	5.0	5.0		4.0	5.0	5.0		4.0										
PED RECY		RED CLR	2.0	2.0		2.0	2.0	2.0		2.0										
RED LOCK		WALK				6.0		6.0												
YEL LOCK	1, 4, 5, 8	PED CLR				35.0		12.0												
NO EXT		ADDED INI																		
NO ADD INI		TIME TO RED																		
NOGAPRED		TIME BEFOR																		
NO RANGE		MIN GAP																		
NOMAX LOK	1, 4, 5, 8	MAX INIT GRN																		
FLAGS	PHASES	**PHASE DATA TABLE # 3**	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18
OMITPHAS																				
OMIT PED																				
MIN RECAL		PHASE TIMING																		
MAXRECAL																				
SOFT RCL																				
CDT'L SRVC																				
PED RECAL		MIN GREEN																		
DUAL ETRY		PASSAGE																		
SIMGAP		MAXGRN 1																		
REDREST		MAXGRN 2																		
AUTO PED		CONDSERV																		
REST WALK		YEL CHG																		
PED RECY		RED CLR																		
RED LOCK		WALK																		
YEL LOCK		PED CLR																		
NO EXT		ADDED INI																		
NO ADD INI		TIME TO RED																		
NOGAPRED		TIME BEFOR																		
NO RANGE		MIN GAP																		
NOMAX LOK		MAX INIT GRN																		
FLAGS	PHASES	**PHASE DATA TABLE # 4**	PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8	PH 9	PH 10	PH 11	PH 12	PH 13	PH 14	PH 15	PH 16	PH 17	PH 18
OMITPHAS																				
OMIT PED																				
MIN RECAL		PHASE TIMING																		
MAXRECAL																				
SOFT RCL																				
CDT'L SRVC																				
PED RECAL		MIN GREEN																		
DUAL ETRY		PASSAGE																		
SIMGAP		MAXGRN 1																		

REDREST		MAXGRN 2																		
AUTO PED		CONDSERV																		
REST WALK		YEL CHG																		
PED RECY		RED CLR																		
RED LOCK		WALK																		
YEL LOCK		PED CLR																		
NO EXT		ADDED INI																		
NO ADD INI		TIME TO RED																		
NOGAPRED		TIME BEFOR																		
NO RANGE		MIN GAP																		
NOMAX LOK		MAX INIT GRN																		

NOTES:

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Traffic Volume Counts

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1				Gram Traffic, Inc.										Page 1		
2				3751 FM 1105 Bldg A												
3				Georgetown, TX. 786												
4														Site Code:		
5														Station ID:		
6														Felix Ave		
7														East of Vargas Rd		
8														Latitude: 0' 0.0000 Undefined		
9																
10		09-Sep-15	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals					
11		Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon				
12	12:00		4	2			1	9								
13	12:15		3	7			2	11								
14	12:30		1	3			0	8								
15	12:45		3	12	11	24	0	12	3	40	14	64				
16	01:00		1	11			1	3								
17	01:15		1	3			0	4								
18	01:30		1	6			1	6								
19	01:45		0	12	3	32	1	8	3	21	6	53				
20	02:00		2	7			0	14								
21	02:15		0	9			1	9								
22	02:30		0	18			0	16								
23	02:45		0	20	2	54	1	22	2	61	4	115				
24	03:00		0	8			0	7								
25	03:15		1	9			0	11								
26	03:30		0	3			0	11								
27	03:45		3	5	4	25	1	4	1	33	5	58				
28	04:00		1	11			1	14								
29	04:15		1	5			0	16								
30	04:30		0	6			0	10								
31	04:45		0	11	2	33	3	10	4	50	6	83				
32	05:00		1	6			2	17								
33	05:15		2	12			5	7								
34	05:30		1	12			2	12								
35	05:45		1	14	5	44	2	1	11	37	16	81				
36	06:00		5	16			6	6								
37	06:15		7	17			7	15								
38	06:30		7	9			8	10								
39	06:45		3	6	22	48	13	8	34	39	56	87				
40	07:00		19	10			21	11								
41	07:15		20	9			32	14								
42	07:30		15	4			33	2								
43	07:45		13	10	67	33	12	5	98	32	165	65				
44	08:00		5	14			8	6								
45	08:15		10	10			13	9								
46	08:30		5	8			7	11								
47	08:45		8	11	28	43	7	13	35	39	63	82				
48	09:00		7	11			10	9								
49	09:15		5	7			3	11								
50	09:30		7	1			7	8								
51	09:45		11	10	30	29	6	8	26	36	56	65				
52	10:00		2	4			4	5								
53	10:15		5	5			6	1								
54	10:30		4	7			7	1								
55	10:45		3	7	14	23	5	3	22	10	36	33				
56	11:00		9	3			4	2								
57	11:15		4	0			5	6								
58	11:30		4	1			10	1								
59	11:45		4	0	21	4	7	0	26	9	47	13				
60	Total		209	392			265	407			474	799				
61	Percent		34.8%	65.2%			39.4%	60.6%			37.2%	62.8%				
63	Grand Total		209	392			265	407			474	799				
64	Percent		34.8%	65.2%			39.4%	60.6%			37.2%	62.8%				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1				Gram Traffic, Inc.										Page 1		
2				3751 FM 1105 Bldg A												
3				Georgetown, TX. 786												
4														Site Code:		
5														Station ID:		
6														Valdez St		
7														South of Ponca		
8														Latitude: 0' 0.0000 Undefined		
9																
10		09-Sep-15	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals					
11		Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon				
12	12:00		1	1			0	0								
13	12:15		2	1			0	1								
14	12:30		1	1			0	1								
15	12:45		0	0	4	3	0	1	0	3	4	6				
16	01:00		0	0			0	2								
17	01:15		0	0			0	2								
18	01:30		0	1			0	2								
19	01:45		3	2	3	3	0	15	0	21	3	24				
20	02:00		0	5			0	6								
21	02:15		2	3			0	16								
22	02:30		0	15			0	24								
23	02:45		0	28	2	51	0	23	0	69	2	120				
24	03:00		0	6			0	3								
25	03:15		0	4			0	3								
26	03:30		0	0			0	2								
27	03:45		1	2	1	12	0	1	0	9	1	21				
28	04:00		0	4			0	2								
29	04:15		1	3			0	2								
30	04:30		0	2			0	1								
31	04:45		1	5	2	14	0	3	0	8	2	22				
32	05:00		2	3			0	3								
33	05:15		1	4			1	2								
34	05:30		1	6			1	0								
35	05:45		1	3	5	16	0	1	2	6	7	22				
36	06:00		7	6			0	1								
37	06:15		2	7			0	0								
38	06:30		6	2			1	1								
39	06:45		11	4	26	19	1	0	2	2	28	21				
40	07:00		18	0			12	6								
41	07:15		2	0			52	2								
42	07:30		10	0			43	2								
43	07:45		8	3	38	3	7	2	114	12	152	15				
44	08:00		1	3			2	0								
45	08:15		0	2			0	0								
46	08:30		0	3			2	0								
47	08:45		0	4	1	12	2	2	6	2	7	14				
48	09:00		0	0			2	1								
49	09:15		0	0			3	4								
50	09:30		0	1			5	5								
51	09:45		0	3	0	4	4	2	14	12	14	16				
52	10:00		0	2			0	0								
53	10:15		0	1			1	2								
54	10:30		0	2			1	1								
55	10:45		1	1	1	6	2	0	4	3	5	9				
56	11:00		5	7			0	0								
57	11:15		2	1			3	0								
58	11:30		3	0			5	0								
59	11:45		5	0	15	8	3	0	11	0	26	8				
60	Total		98	151			153	147			251	298				
61	Percent		39.4%	60.6%			51.0%	49.0%			45.7%	54.3%				
63	Grand Total		98	151			153	147			251	298				
64	Percent		39.4%	60.6%			51.0%	49.0%			45.7%	54.3%				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1				Gram Traffic, Inc.										Page 1		
2				3751 FM 1105 Bldg A												
3				Georgetown, TX. 786												
4														Site Code:		
5														Station ID:		
6														Ponca - Westbound		
7														East of Vargas		
8														Latitude: 0' 0.0000 Undefined		
9																
10		09-Sep-15	Eastbound		Hour Totals											
11		Wed	Morning	Afternoon	Morning	Afternoon										
12	12:00		3	2												
13	12:15		1	1												
14	12:30		2	4												
15	12:45		0	4	6	11										
16	01:00		0	6												
17	01:15		0	2												
18	01:30		0	3												
19	01:45		3	7	3	18										
20	02:00		1	9												
21	02:15		2	8												
22	02:30		0	2												
23	02:45		0	54	3	73										
24	03:00		0	23												
25	03:15		0	6												
26	03:30		0	10												
27	03:45		1	5	1	44										
28	04:00		0	8												
29	04:15		2	13												
30	04:30		0	5												
31	04:45		1	8	3	34										
32	05:00		3	4												
33	05:15		3	6												
34	05:30		2	3												
35	05:45		1	1	9	14										
36	06:00		6	4												
37	06:15		1	10												
38	06:30		6	6												
39	06:45		5	3	18	23										
40	07:00		9	7												
41	07:15		23	3												
42	07:30		30	2												
43	07:45		27	5	89	17										
44	08:00		5	5												
45	08:15		1	2												
46	08:30		1	2												
47	08:45		2	7	9	16										
48	09:00		4	2												
49	09:15		1	7												
50	09:30		9	4												
51	09:45		2	2	16	15										
52	10:00		1	2												
53	10:15		1	0												
54	10:30		2	3												
55	10:45		3	1	7	6										
56	11:00		3	6												
57	11:15		3	1												
58	11:30		5	0												
59	11:45		4	0	15	7										
60	Total		179	278												
61	Percent		39.2%	60.8%												
63	Grand Total		179	278												
64	Percent		39.2%	60.8%												

Gram Traffic, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Montopolis-PoncaPM
Site Code : 00000032
Start Date : 7/2/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Montopolis Dr Southbound					Ponca St Westbound					Montopolis Dr Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
16:00	3	183	1	0	187	4	1	9	0	14	3	223	7	0	233	2	1	3	0	6	440
16:15	5	186	0	0	191	1	0	3	0	4	7	220	11	0	238	2	0	1	0	3	436
16:30	3	189	0	0	192	5	2	3	0	10	3	240	12	0	255	0	0	6	0	6	463
16:45	2	191	1	0	194	3	1	4	0	8	0	232	15	0	247	1	0	5	0	6	455
Total	13	749	2	0	764	13	4	19	0	36	13	915	45	0	973	5	1	15	0	21	1794
17:00	4	213	3	0	220	6	0	5	0	11	6	250	4	0	260	2	1	4	0	7	498
17:15	2	213	0	0	215	4	0	3	0	7	6	241	10	0	257	1	1	9	0	11	490
17:30	2	206	1	0	209	6	1	5	0	12	6	224	8	0	238	0	2	6	0	8	467
17:45	2	208	5	0	215	6	1	0	0	7	4	203	9	0	216	1	1	8	0	10	448
Total	10	840	9	0	859	22	2	13	0	37	22	918	31	0	971	4	5	27	0	36	1903
Grand Total	23	1589	11	0	1623	35	6	32	0	73	35	1833	76	0	1944	9	6	42	0	57	3697
Apprch %	1.4	97.9	0.7	0		47.9	8.2	43.8	0		1.8	94.3	3.9	0		15.8	10.5	73.7	0		
Total %	0.6	43	0.3	0	43.9	0.9	0.2	0.9	0	2	0.9	49.6	2.1	0	52.6	0.2	0.2	1.1	0	1.5	
Autos	23	1587	11	0	1621	35	6	32	0	73	35	1829	76	0	1940	9	6	42	0	57	3691
% Autos	100	99.9	100	0	99.9	100	100	100	0	100	100	99.8	100	0	99.8	100	100	100	0	100	99.8
Heavy Vehicles	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
% Heavy Vehicles	0	0.1	0	0	0.1	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0.2

	Montopolis Dr Southbound					Ponca St Westbound					Montopolis Dr Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	2	191	1	0	194	3	**1**	4	0	8	0	232	**15**	0	247	1	0	5	0	6	455
17:00	**4**	**213**	**3**	0	**220**	**6**	0	**5**	0	11	**6**	**250**	4	0	**260**	**2**	1	4	0	7	**498**
17:15	2	213	0	0	215	4	0	3	0	7	6	241	10	0	257	1	1	**9**	0	**11**	490
17:30	2	206	1	0	209	6	1	5	0	**12**	6	224	8	0	238	0	**2**	6	0	8	467
Total Volume	10	823	5	0	838	19	2	17	0	38	18	947	37	0	1002	4	4	24	0	32	1910
% App. Total	1.2	98.2	0.6	0		50	5.3	44.7	0		1.8	94.5	3.7	0		12.5	12.5	75	0		
PHF	.625	.966	.417	.000	.952	.792	.500	.850	.000	.792	.750	.947	.617	.000	.963	.500	.500	.667	.000	.727	.959

Gram Traffic, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Montopolis-PoncaPM
Site Code : 00000032
Start Date : 7/2/2015
Page No : 2

	Montopolis Dr Southbound					Ponca St Westbound					Montopolis Dr Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	17:00					16:45					16:30					17:00					
+0 mins.	**4**	**213**	3	0	**220**	3	**1**	4	0	8	3	240	12	0	255	**2**	1	4	0	7	
+15 mins.	2	213	0	0	215	**6**	0	**5**	0	11	0	232	**15**	0	247	1	1	**9**	0	**11**	
+30 mins.	2	206	1	0	209	4	0	3	0	7	**6**	**250**	4	0	**260**	0	**2**	6	0	8	
+45 mins.	2	208	**5**	0	215	6	1	5	0	**12**	6	241	10	0	257	1	1	8	0	10	
Total Volume	10	840	9	0	859	19	2	17	0	38	15	963	41	0	1019	4	5	27	0	36	
% App. Total	1.2	97.8	1	0		50	5.3	44.7	0		1.5	94.5	4	0		11.1	13.9	75	0		
PHF	.625	.986	.450	.000	.976	.792	.500	.850	.000	.792	.625	.963	.683	.000	.980	.500	.625	.750	.000	.818	

Gram Traffic, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Montopolis-PoncaAM
Site Code : 00000032
Start Date : 7/2/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Montopolis Dr Southbound					Ponca St Westbound					Montopolis Dr Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	104	0	0	104	2	0	2	0	4	1	171	2	0	174	0	0	0	0	0	282
07:15	0	135	0	0	135	8	1	4	0	13	1	214	4	0	219	2	0	4	0	6	373
07:30	2	135	0	0	137	8	0	1	0	9	1	237	3	0	241	3	1	5	0	9	396
07:45	1	144	1	0	146	2	0	5	0	7	1	222	5	0	228	2	0	6	0	8	389
Total	3	518	1	0	522	20	1	12	0	33	4	844	14	0	862	7	1	15	0	23	1440
08:00	0	140	0	0	140	7	0	4	0	11	2	192	5	0	199	1	0	5	0	6	356
08:15	1	121	0	0	122	1	0	7	0	8	2	173	5	0	180	5	0	3	0	8	318
08:30	0	148	1	0	149	4	0	5	0	9	2	164	2	0	168	1	0	4	0	5	331
08:45	0	125	2	0	127	6	0	2	0	8	2	159	3	0	164	1	0	1	0	2	301
Total	1	534	3	0	538	18	0	18	0	36	8	688	15	0	711	8	0	13	0	21	1306
Grand Total	4	1052	4	0	1060	38	1	30	0	69	12	1532	29	0	1573	15	1	28	0	44	2746
Apprch %	0.4	99.2	0.4	0		55.1	1.4	43.5	0		0.8	97.4	1.8	0		34.1	2.3	63.6	0		
Total %	0.1	38.3	0.1	0	38.6	1.4	0	1.1	0	2.5	0.4	55.8	1.1	0	57.3	0.5	0	1	0	1.6	
Autos	4	1046	4	0	1054	38	1	30	0	69	12	1521	29	0	1562	15	1	28	0	44	2729
% Autos	100	99.4	100	0	99.4	100	100	100	0	100	100	99.3	100	0	99.3	100	100	100	0	100	99.4
Heavy Vehicles	0	6	0	0	6	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	17
% Heavy Vehicles	0	0.6	0	0	0.6	0	0	0	0	0	0	0.7	0	0	0.7	0	0	0	0	0	0.6

	Montopolis Dr Southbound					Ponca St Westbound					Montopolis Dr Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	135	0	0	135	**8**	**1**	4	0	**13**	1	214	4	0	219	2	0	4	0	6	373
07:30	**2**	135	0	0	137	8	0	1	0	9	1	**237**	3	0	**241**	**3**	**1**	5	0	**9**	**396**
07:45	1	**144**	**1**	0	**146**	2	0	**5**	0	7	1	222	**5**	0	228	2	0	**6**	0	8	389
08:00	0	140	0	0	140	7	0	4	0	11	**2**	192	5	0	199	1	0	5	0	6	356
Total Volume	3	554	1	0	558	25	1	14	0	40	5	865	17	0	887	8	1	20	0	29	1514
% App. Total	0.5	99.3	0.2	0		62.5	2.5	35	0		0.6	97.5	1.9	0		27.6	3.4	69	0		
PHF	.375	.962	.250	.000	.955	.781	.250	.700	.000	.769	.625	.912	.850	.000	.920	.667	.250	.833	.000	.806	.956

Gram Traffic, Inc.

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Georgetown, TX 78626
512-832-8650

File Name : Montopolis-PoncaAM
Site Code : 00000032
Start Date : 7/2/2015
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	Montopolis Dr Southbound					Ponca St Westbound					Montopolis Dr Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:15					07:15					07:15					07:30					
+0 mins.	0	135	0	0	135	**8**	**1**	4	0	**13**	1	214	4	0	219	3	**1**	5	0	**9**	
+15 mins.	**2**	135	0	0	137	8	0	1	0	9	1	**237**	3	0	**241**	2	0	**6**	0	8	
+30 mins.	1	**144**	**1**	0	**146**	2	0	**5**	0	7	1	222	**5**	0	228	1	0	5	0	6	
+45 mins.	0	140	0	0	140	7	0	4	0	11	**2**	192	5	0	199	**5**	0	3	0	8	
Total Volume	3	554	1	0	558	25	1	14	0	40	5	865	17	0	887	11	1	19	0	31	
% App. Total	0.5	99.3	0.2	0		62.5	2.5	35	0		0.6	97.5	1.9	0		35.5	3.2	61.3	0		
PHF	.375	.962	.250	.000	.955	.781	.250	.700	.000	.769	.625	.912	.850	.000	.920	.550	.250	.792	.000	.861	

Gram Traffic, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : US183-CallahansAM
Site Code : 00000025
Start Date : 7/1/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	US 183 Southbound					Callahans Westbound					US 183 Northbound					Callahans Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	7	535	0	0	542	5	1	1	0	7	9	811	0	0	820	0	1	2	0	3	1372
07:15	11	541	0	0	552	1	0	5	0	6	7	944	0	0	951	1	1	4	0	6	1515
07:30	7	619	0	0	626	2	0	2	0	4	6	909	6	0	921	1	0	6	0	7	1558
07:45	8	597	0	0	605	0	0	1	0	1	10	867	10	0	887	1	0	0	0	1	1494
Total	33	2292	0	0	2325	8	1	9	0	18	32	3531	16	0	3579	3	2	12	0	17	5939
08:00	10	628	0	0	638	1	0	9	0	10	7	738	5	0	750	3	0	4	0	7	1405
08:15	10	642	2	0	654	1	0	4	0	5	9	746	0	0	755	0	0	0	0	0	1414
08:30	9	631	0	0	640	0	0	10	0	10	6	887	1	0	894	1	0	3	0	4	1548
08:45	13	592	0	0	605	0	0	3	0	3	6	742	1	0	749	1	0	2	0	3	1360
Total	42	2493	2	0	2537	2	0	26	0	28	28	3113	7	0	3148	5	0	9	0	14	5727
Grand Total	75	4785	2	0	4862	10	1	35	0	46	60	6644	23	0	6727	8	2	21	0	31	11666
Apprch %	1.5	98.4	0	0		21.7	2.2	76.1	0		0.9	98.8	0.3	0		25.8	6.5	67.7	0		
Total %	0.6	41	0	0	41.7	0.1	0	0.3	0	0.4	0.5	57	0.2	0	57.7	0.1	0	0.2	0	0.3	
Autos	75	4610	2	0	4687	10	1	35	0	46	60	6420	23	0	6503	8	2	21	0	31	11267
% Autos	100	96.3	100	0	96.4	100	100	100	0	100	100	96.6	100	0	96.7	100	100	100	0	100	96.6
Heavy Vehicles	0	175	0	0	175	0	0	0	0	0	0	224	0	0	224	0	0	0	0	0	399
% Heavy Vehicles	0	3.7	0	0	3.6	0	0	0	0	0	0	3.4	0	0	3.3	0	0	0	0	0	3.4

	US 183 Southbound					Callahans Westbound					US 183 Northbound					Callahans Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	**11**	541	0	0	552	1	0	5	0	6	7	**944**	0	0	**951**	1	**1**	4	0	6	1515
07:30	7	619	0	0	626	**2**	0	2	0	4	6	909	6	0	921	1	0	**6**	0	**7**	**1558**
07:45	8	597	0	0	605	0	0	1	0	1	**10**	867	**10**	0	887	1	0	0	0	1	1494
08:00	10	**628**	0	0	**638**	1	0	**9**	0	**10**	7	738	5	0	750	**3**	0	4	0	7	1405
Total Volume	36	2385	0	0	2421	4	0	17	0	21	30	3458	21	0	3509	6	1	14	0	21	5972
% App. Total	1.5	98.5	0	0		19	0	81	0		0.9	98.5	0.6	0		28.6	4.8	66.7	0		
PHF	.818	.949	.000	.000	.949	.500	.000	.472	.000	.525	.750	.916	.525	.000	.922	.500	.250	.583	.000	.750	.958

Gram Traffic, Inc.

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	US 183 Southbound					Callahans Westbound					US 183 Northbound					Callahans Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:45					08:00					07:00					07:15					
+0 mins.	8	597	0	0	605	**1**	0	9	0	**10**	9	811	0	0	820	1	**1**	4	0	6	
+15 mins.	**10**	628	0	0	638	1	0	4	0	5	7	**944**	0	0	**951**	1	0	**6**	0	**7**	
+30 mins.	10	**642**	**2**	0	**654**	0	0	**10**	0	10	6	909	6	0	921	1	0	0	0	1	
+45 mins.	9	631	0	0	640	0	0	3	0	3	**10**	867	**10**	0	887	**3**	0	4	0	7	
Total Volume	37	2498	2	0	2537	2	0	26	0	28	32	3531	16	0	3579	6	1	14	0	21	
% App. Total	1.5	98.5	0.1	0		7.1	0	92.9	0		0.9	98.7	0.4	0		28.6	4.8	66.7	0		
PHF	.925	.973	.250	.000	.970	.500	.000	.650	.000	.700	.800	.935	.400	.000	.941	.500	.250	.583	.000	.750	

Gram Traffic, Inc.

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Georgetown, TX 78626
512-832-8650

File Name : US183-CallahansPM
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Groups Printed- Autos - Heavy Vehicles

	US 183 Southbound					Callahans Westbound					US 183 Northbound					Callahans Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
16:00	13	1045	1	1	1060	4	2	4	0	10	4	772	1	0	777	0	0	1	0	1	1848
16:15	14	979	5	0	998	7	0	6	0	13	13	703	1	0	717	1	0	5	0	6	1734
16:30	17	1039	4	0	1060	3	0	7	0	10	5	770	0	0	775	0	0	3	0	3	1848
16:45	7	944	0	0	951	3	1	8	0	12	13	731	0	0	744	0	1	2	0	3	1710
Total	51	4007	10	1	4069	17	3	25	0	45	35	2976	2	0	3013	1	1	11	0	13	7140
17:00	13	938	1	0	952	2	0	3	0	5	6	730	1	0	737	0	0	0	0	0	1694
17:15	7	944	2	0	953	0	0	8	0	8	4	637	1	0	642	0	0	1	0	1	1604
17:30	21	1023	2	0	1046	0	0	4	0	4	8	648	0	0	656	0	0	4	0	4	1710
17:45	12	995	1	0	1008	1	0	15	0	16	5	631	2	0	638	1	0	4	0	5	1667
Total	53	3900	6	0	3959	3	0	30	0	33	23	2646	4	0	2673	1	0	9	0	10	6675
Grand Total	104	7907	16	1	8028	20	3	55	0	78	58	5622	6	0	5686	2	1	20	0	23	13815
Apprch %	1.3	98.5	0.2	0		25.6	3.8	70.5	0		1	98.9	0.1	0		8.7	4.3	87	0		
Total %	0.8	57.2	0.1	0	58.1	0.1	0	0.4	0	0.6	0.4	40.7	0	0	41.2	0	0	0.1	0	0.2	
Autos	104	7779	16	1	7900	20	3	53	0	76	58	5440	6	0	5504	2	1	20	0	23	13503
% Autos	100	98.4	100	100	98.4	100	100	96.4	0	97.4	100	96.8	100	0	96.8	100	100	100	0	100	97.7
Heavy Vehicles	0	128	0	0	128	0	0	2	0	2	0	182	0	0	182	0	0	0	0	0	312
% Heavy Vehicles	0	1.6	0	0	1.6	0	0	3.6	0	2.6	0	3.2	0	0	3.2	0	0	0	0	0	2.3

	US 183 Southbound					Callahans Westbound					US 183 Northbound					Callahans Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	13	**1045**	1	**1**	**1060**	4	**2**	4	0	10	4	**772**	**1**	0	**777**	0	0	1	0	1	**1848**
16:15	14	979	**5**	0	998	**7**	0	6	0	**13**	**13**	703	1	0	717	**1**	0	**5**	0	**6**	1734
16:30	**17**	1039	4	0	1060	3	0	7	0	10	5	770	0	0	775	0	0	3	0	3	1848
16:45	7	944	0	0	951	3	1	**8**	0	12	13	731	0	0	744	0	**1**	2	0	3	1710
Total Volume	51	4007	10	1	4069	17	3	25	0	45	35	2976	2	0	3013	1	1	11	0	13	7140
% App. Total	1.3	98.5	0.2	0		37.8	6.7	55.6	0		1.2	98.8	0.1	0		7.7	7.7	84.6	0		
PHF	.750	.959	.500	.250	.960	.607	.375	.781	.000	.865	.673	.964	.500	.000	.969	.250	.250	.550	.000	.542	.966

Gram Traffic, Inc.

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Georgetown, TX 78626
512-832-8650

File Name : US183-CallahansPM
Site Code : 00000025
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	US 183 Southbound					Callahans Westbound					US 183 Northbound					Callahans Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	16:00					16:00					16:00					16:00					
+0 mins.	13	**1045**	1	**1**	**1060**	4	**2**	4	0	10	4	**772**	**1**	0	**777**	0	0	1	0	1	
+15 mins.	14	979	**5**	0	998	**7**	0	6	0	**13**	**13**	703	1	0	717	**1**	0	**5**	0	**6**	
+30 mins.	**17**	1039	4	0	1060	3	0	7	0	10	5	770	0	0	775	0	0	3	0	3	
+45 mins.	7	944	0	0	951	3	1	**8**	0	12	13	731	0	0	744	0	**1**	2	0	3	
Total Volume	51	4007	10	1	4069	17	3	25	0	45	35	2976	2	0	3013	1	1	11	0	13	
% App. Total	1.3	98.5	0.2	0		37.8	6.7	55.6	0		1.2	98.8	0.1	0		7.7	7.7	84.6	0		
PHF	.750	.959	.500	.250	.960	.607	.375	.781	.000	.865	.673	.964	.500	.000	.969	.250	.250	.550	.000	.542	

Gram Traffic, Inc.

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Georgetown, TX 78626
512-832-8650

File Name : US183-ThompsonAM
Site Code : 00000025
Start Date : 7/2/2015
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Groups Printed- Autos - Heavy Vehicles

	US 183 Southbound					Thompson Ln Westbound					US 183 Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	22	511	0	0	533	25	0	14	0	39	0	880	5	0	885	0	0	0	0	0	1457
07:15	24	577	0	0	601	21	0	22	0	43	0	897	6	1	904	0	0	0	0	0	1548
07:30	17	532	0	0	549	16	0	17	0	33	0	846	14	0	860	0	0	0	0	0	1442
07:45	11	596	0	0	607	21	0	17	0	38	0	855	28	0	883	0	0	0	0	0	1528
Total	74	2216	0	0	2290	83	0	70	0	153	0	3478	53	1	3532	0	0	0	0	0	5975
08:00	26	545	0	0	571	22	0	34	0	56	0	732	11	0	743	0	0	0	0	0	1370
08:15	28	572	0	0	600	31	0	25	0	56	0	724	9	0	733	0	0	0	0	0	1389
08:30	24	590	0	0	614	28	0	21	0	49	0	744	10	0	754	0	0	0	0	0	1417
08:45	14	580	0	0	594	16	0	16	0	32	0	747	4	0	751	0	0	0	0	0	1377
Total	92	2287	0	0	2379	97	0	96	0	193	0	2947	34	0	2981	0	0	0	0	0	5553
Grand Total	166	4503	0	0	4669	180	0	166	0	346	0	6425	87	1	6513	0	0	0	0	0	11528
Apprch %	3.6	96.4	0	0		52	0	48	0		0	98.6	1.3	0		0	0	0	0		
Total %	1.4	39.1	0	0	40.5	1.6	0	1.4	0	3	0	55.7	0.8	0	56.5	0	0	0	0	0	
Autos	95	4352	0	0	4447	91	0	76	0	167	0	6242	59	1	6302	0	0	0	0	0	10916
% Autos	57.2	96.6	0	0	95.2	50.6	0	45.8	0	48.3	0	97.2	67.8	100	96.8	0	0	0	0	0	94.7
Heavy Vehicles	71	151	0	0	222	89	0	90	0	179	0	183	28	0	211	0	0	0	0	0	612
% Heavy Vehicles	42.8	3.4	0	0	4.8	49.4	0	54.2	0	51.7	0	2.8	32.2	0	3.2	0	0	0	0	0	5.3

	US 183 Southbound					Thompson Ln Westbound					US 183 Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	22	511	0	0	533	**25**	0	14	0	39	0	880	5	0	885	0	0	0	0	0	1457
07:15	**24**	577	0	0	601	21	0	**22**	0	**43**	0	**897**	6	**1**	**904**	0	0	0	0	0	**1548**
07:30	17	532	0	0	549	16	0	17	0	33	0	846	14	0	860	0	0	0	0	0	1442
07:45	11	**596**	0	0	**607**	21	0	17	0	38	0	855	**28**	0	883	0	0	0	0	0	1528
Total Volume	74	2216	0	0	2290	83	0	70	0	153	0	3478	53	1	3532	0	0	0	0	0	5975
% App. Total	3.2	96.8	0	0		54.2	0	45.8	0		0	98.5	1.5	0		0	0	0	0		
PHF	.771	.930	.000	.000	.943	.830	.000	.795	.000	.890	.000	.969	.473	.250	.977	.000	.000	.000	.000	.000	.965

Gram Traffic, Inc.

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File Name : US183-ThompsonAM
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	US 183 Southbound					Thompson Ln Westbound					US 183 Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:45					07:45					07:00					07:00					
+0 mins.	11	**596**	0	0	607	21	0	17	0	38	0	880	5	0	885	0	0	0	0	0	
+15 mins.	26	545	0	0	571	22	0	**34**	0	**56**	0	**897**	6	**1**	**904**	0	0	0	0	0	
+30 mins.	**28**	572	0	0	600	**31**	0	25	0	56	0	846	14	0	860	0	0	0	0	0	
+45 mins.	24	590	0	0	**614**	28	0	21	0	49	0	855	**28**	0	883	0	0	0	0	0	
Total Volume	89	2303	0	0	2392	102	0	97	0	199	0	3478	53	1	3532	0	0	0	0	0	
% App. Total	3.7	96.3	0	0		51.3	0	48.7	0		0	98.5	1.5	0		0	0	0	0		
PHF	.795	.966	.000	.000	.974	.823	.000	.713	.000	.888	.000	.969	.473	.250	.977	.000	.000	.000	.000	.000	

Gram Traffic, Inc.

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File Name : US183-ThompsonPM
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Groups Printed- Autos - Heavy Vehicles

	US 183 Southbound					Thompson Ln Westbound					US 183 Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
16:00	23	890	0	0	913	35	0	17	0	52	0	653	18	0	671	0	0	0	0	0	1636
16:15	22	1007	0	0	1029	36	0	16	1	53	0	706	22	0	728	0	0	0	0	0	1810
16:30	21	974	0	0	995	33	0	16	0	49	0	766	14	0	780	0	0	0	0	0	1824
16:45	17	972	0	0	989	38	0	12	0	50	0	728	6	0	734	0	0	0	0	0	1773
Total	83	3843	0	0	3926	142	0	61	1	204	0	2853	60	0	2913	0	0	0	0	0	7043
17:00	14	982	0	0	996	30	0	24	0	54	0	666	7	0	673	0	0	0	0	0	1723
17:15	17	963	0	0	980	49	0	19	0	68	0	640	9	0	649	0	0	0	0	0	1697
17:30	15	913	0	0	928	17	0	7	0	24	0	667	4	0	671	0	0	0	0	0	1623
17:45	10	908	0	0	918	28	0	14	0	42	0	573	41	1	615	0	0	0	0	0	1575
Total	56	3766	0	0	3822	124	0	64	0	188	0	2546	61	1	2608	0	0	0	0	0	6618
Grand Total	139	7609	0	0	7748	266	0	125	1	392	0	5399	121	1	5521	0	0	0	0	0	13661
Apprch %	1.8	98.2	0	0		67.9	0	31.9	0.3		0	97.8	2.2	0		0	0	0	0		
Total %	1	55.7	0	0	56.7	1.9	0	0.9	0	2.9	0	39.5	0.9	0	40.4	0	0	0	0	0	
Autos	102	7516	0	0	7618	201	0	71	0	272	0	5271	98	1	5370	0	0	0	0	0	13260
% Autos	73.4	98.8	0	0	98.3	75.6	0	56.8	0	69.4	0	97.6	81	100	97.3	0	0	0	0	0	97.1
Heavy Vehicles	37	93	0	0	130	65	0	54	1	120	0	128	23	0	151	0	0	0	0	0	401
% Heavy Vehicles	26.6	1.2	0	0	1.7	24.4	0	43.2	100	30.6	0	2.4	19	0	2.7	0	0	0	0	0	2.9

	US 183 Southbound					Thompson Ln Westbound					US 183 Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:15																					
16:15	**22**	**1007**	0	0	**1029**	36	0	16	**1**	53	0	706	**22**	0	728	0	0	0	0	0	1810
16:30	21	974	0	0	995	33	0	16	0	49	0	**766**	14	0	**780**	0	0	0	0	0	**1824**
16:45	17	972	0	0	989	**38**	0	12	0	50	0	728	6	0	734	0	0	0	0	0	1773
17:00	14	982	0	0	996	30	0	**24**	0	**54**	0	666	7	0	673	0	0	0	0	0	1723
Total Volume	74	3935	0	0	4009	137	0	68	1	206	0	2866	49	0	2915	0	0	0	0	0	7130
% App. Total	1.8	98.2	0	0		66.5	0	33	0.5		0	98.3	1.7	0		0	0	0	0		
PHF	.841	.977	.000	.000	.974	.901	.000	.708	.250	.954	.000	.935	.557	.000	.934	.000	.000	.000	.000	.000	.977

Gram Traffic, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : US183-ThompsonPM
Site Code : 00000025
Start Date : 7/2/2015
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	US 183 Southbound					Thompson Ln Westbound					US 183 Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	16:15					16:30					16:15					16:00					
+0 mins.	**22**	**1007**	0	0	**1029**	33	0	16	0	49	0	706	**22**	0	728	0	0	0	0	0	
+15 mins.	21	974	0	0	995	38	0	12	0	50	0	**766**	14	0	**780**	0	0	0	0	0	
+30 mins.	17	972	0	0	989	30	0	**24**	0	54	0	728	6	0	734	0	0	0	0	0	
+45 mins.	14	982	0	0	996	**49**	0	19	0	**68**	0	666	7	0	673	0	0	0	0	0	
Total Volume	74	3935	0	0	4009	150	0	71	0	221	0	2866	49	0	2915	0	0	0	0	0	
% App. Total	1.8	98.2	0	0		67.9	0	32.1	0		0	98.3	1.7	0		0	0	0	0		
PHF	.841	.977	.000	.000	.974	.765	.000	.740	.000	.813	.000	.935	.557	.000	.934	.000	.000	.000	.000	.000	

Gram Traffic, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : US183-VargasAM
Site Code : 00000041
Start Date : 7/1/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	US 183 Southbound					Vargas Rd Westbound					US 183 Northbound					Vargas Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	3	536	7	0	546	0	0	0	0	0	4	845	0	0	849	13	0	10	0	23	1418
07:15	4	601	5	0	610	0	0	0	0	0	6	957	0	0	963	11	0	7	0	18	1591
07:30	4	620	12	0	636	2	0	0	0	2	6	892	0	0	898	11	0	6	0	17	1553
07:45	1	629	6	0	636	0	0	0	0	0	9	877	0	0	886	13	0	10	0	23	1545
Total	12	2386	30	0	2428	2	0	0	0	2	25	3571	0	0	3596	48	0	33	0	81	6107
08:00	7	580	5	0	592	0	0	0	0	0	5	784	0	0	789	14	0	7	0	21	1402
08:15	4	669	14	0	687	0	0	1	0	1	5	809	1	0	815	10	0	10	0	20	1523
08:30	4	580	6	0	590	0	1	0	0	1	7	789	0	0	796	16	0	8	0	24	1411
08:45	4	595	8	0	607	0	0	0	0	0	11	712	0	0	723	14	0	14	0	28	1358
Total	19	2424	33	0	2476	0	1	1	0	2	28	3094	1	0	3123	54	0	39	0	93	5694
Grand Total	31	4810	63	0	4904	2	1	1	0	4	53	6665	1	0	6719	102	0	72	0	174	11801
Apprch %	0.6	98.1	1.3	0		50	25	25	0		0.8	99.2	0	0		58.6	0	41.4	0		
Total %	0.3	40.8	0.5	0	41.6	0	0	0	0	0	0.4	56.5	0	0	56.9	0.9	0	0.6	0	1.5	
Autos	31	4580	63	0	4674	2	1	1	0	4	53	6410	1	0	6464	101	0	72	0	173	11315
% Autos	100	95.2	100	0	95.3	100	100	100	0	100	100	96.2	100	0	96.2	99	0	100	0	99.4	95.9
Heavy Vehicles	0	230	0	0	230	0	0	0	0	0	0	255	0	0	255	1	0	0	0	1	486
% Heavy Vehicles	0	4.8	0	0	4.7	0	0	0	0	0	0	3.8	0	0	3.8	1	0	0	0	0.6	4.1

	US 183 Southbound					Vargas Rd Westbound					US 183 Northbound					Vargas Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	3	536	7	0	546	0	0	0	0	0	4	845	0	0	849	**13**	0	**10**	0	**23**	1418
07:15	**4**	601	5	0	610	0	0	0	0	0	6	**957**	0	0	**963**	11	0	7	0	18	**1591**
07:30	4	620	**12**	0	**636**	**2**	0	0	0	**2**	6	892	0	0	898	11	0	6	0	17	1553
07:45	1	**629**	6	0	636	0	0	0	0	0	**9**	877	0	0	886	13	0	10	0	23	1545
Total Volume	12	2386	30	0	2428	2	0	0	0	2	25	3571	0	0	3596	48	0	33	0	81	6107
% App. Total	0.5	98.3	1.2	0		100	0	0	0		0.7	99.3	0	0		59.3	0	40.7	0		
PHF	.750	.948	.625	.000	.954	.250	.000	.000	.000	.250	.694	.933	.000	.000	.934	.923	.000	.825	.000	.880	.960

Gram Traffic, Inc.

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Georgetown, TX 78626
512-832-8650

File Name : US183-VargasAM
Site Code : 00000041
Start Date : 7/1/2015
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	US 183 Southbound					Vargas Rd Westbound					US 183 Northbound					Vargas Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:30					07:30					07:00					08:00					
+0 mins.	4	620	12	0	636	**2**	0	0	0	**2**	4	845	0	0	849	14	0	7	0	21	
+15 mins.	1	629	6	0	636	0	0	0	0	0	6	**957**	0	0	**963**	10	0	10	0	20	
+30 mins.	**7**	580	5	0	592	0	0	0	0	0	6	892	0	0	898	**16**	0	8	0	24	
+45 mins.	4	**669**	**14**	0	**687**	0	0	**1**	0	1	**9**	877	0	0	886	14	0	**14**	0	**28**	
Total Volume	16	2498	37	0	2551	2	0	1	0	3	25	3571	0	0	3596	54	0	39	0	93	
% App. Total	0.6	97.9	1.5	0		66.7	0	33.3	0		0.7	99.3	0	0		58.1	0	41.9	0		
PHF	.571	.933	.661	.000	.928	.250	.000	.250	.000	.375	.694	.933	.000	.000	.934	.844	.000	.696	.000	.830	

Gram Traffic, Inc.

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Georgetown, TX 78626
512-832-8650

File Name : US183-VargasPM
Site Code : 00000041
Start Date : 7/1/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	US 183 Southbound					Vargas Rd Westbound					US 183 Northbound					Vargas Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
16:00	12	998	13	0	1023	0	0	0	0	0	5	753	0	0	758	16	1	16	0	33	1814
16:15	12	991	14	0	1017	0	0	0	0	0	11	778	0	0	789	8	0	20	0	28	1834
16:30	7	937	9	0	953	0	0	0	0	0	15	740	0	0	755	26	0	24	0	50	1758
16:45	8	1012	12	0	1032	0	0	0	0	0	8	720	0	0	728	22	0	11	0	33	1793
Total	39	3938	48	0	4025	0	0	0	0	0	39	2991	0	0	3030	72	1	71	0	144	7199
17:00	12	989	9	0	1010	1	2	1	0	4	4	686	0	0	690	16	0	13	0	29	1733
17:15	6	1005	12	0	1023	1	0	0	0	1	17	727	0	0	744	12	0	17	0	29	1797
17:30	2	944	15	0	961	1	0	0	0	1	13	727	0	0	740	12	0	19	0	31	1733
17:45	8	918	14	0	940	0	0	1	0	1	13	566	0	0	579	15	0	16	0	31	1551
Total	28	3856	50	0	3934	3	2	2	0	7	47	2706	0	0	2753	55	0	65	0	120	6814
Grand Total	67	7794	98	0	7959	3	2	2	0	7	86	5697	0	0	5783	127	1	136	0	264	14013
Apprch %	0.8	97.9	1.2	0		42.9	28.6	28.6	0		1.5	98.5	0	0		48.1	0.4	51.5	0		
Total %	0.5	55.6	0.7	0	56.8	0	0	0	0	0	0.6	40.7	0	0	41.3	0.9	0	1	0	1.9	
Autos	67	7668	97	0	7832	3	2	2	0	7	81	5510	0	0	5591	127	1	136	0	264	13694
% Autos	100	98.4	99	0	98.4	100	100	100	0	100	94.2	96.7	0	0	96.7	100	100	100	0	100	97.7
Heavy Vehicles	0	126	1	0	127	0	0	0	0	0	5	187	0	0	192	0	0	0	0	0	319
% Heavy Vehicles	0	1.6	1	0	1.6	0	0	0	0	0	5.8	3.3	0	0	3.3	0	0	0	0	0	2.3

	US 183 Southbound					Vargas Rd Westbound					US 183 Northbound					Vargas Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	**12**	998	13	0	1023	0	0	0	0	0	5	753	0	0	758	16	**1**	16	0	33	1814
16:15	12	991	**14**	0	1017	0	0	0	0	0	11	**778**	0	0	**789**	8	0	20	0	28	**1834**
16:30	7	937	9	0	953	0	0	0	0	0	**15**	740	0	0	755	**26**	0	**24**	0	**50**	1758
16:45	8	**1012**	12	0	**1032**	0	0	0	0	0	8	720	0	0	728	22	0	11	0	33	1793
Total Volume	39	3938	48	0	4025	0	0	0	0	0	39	2991	0	0	3030	72	1	71	0	144	7199
% App. Total	1	97.8	1.2	0		0	0	0	0		1.3	98.7	0	0		50	0.7	49.3	0		
PHF	.813	.973	.857	.000	.975	.000	.000	.000	.000	.000	.650	.961	.000	.000	.960	.692	.250	.740	.000	.720	.981

Gram Traffic, Inc.

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512-832-8650

File Name : US183-VargasPM
Site Code : 00000041
Start Date : 7/1/2015
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	US 183 Southbound					Vargas Rd Westbound					US 183 Northbound					Vargas Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	16:45					17:00					16:00					16:00					
+0 mins.	8	**1012**	12	0	**1032**	**1**	**2**	**1**	0	**4**	5	753	0	0	758	16	**1**	16	0	33	
+15 mins.	**12**	989	9	0	1010	1	0	0	0	1	11	**778**	0	0	**789**	8	0	20	0	28	
+30 mins.	6	1005	12	0	1023	1	0	0	0	1	**15**	740	0	0	755	**26**	0	**24**	0	**50**	
+45 mins.	2	944	**15**	0	961	0	0	1	0	1	8	720	0	0	728	22	0	11	0	33	
Total Volume	28	3950	48	0	4026	3	2	2	0	7	39	2991	0	0	3030	72	1	71	0	144	
% App. Total	0.7	98.1	1.2	0		42.9	28.6	28.6	0		1.3	98.7	0	0		50	0.7	49.3	0		
PHF	.583	.976	.800	.000	.975	.750	.250	.500	.000	.438	.650	.961	.000	.000	.960	.692	.250	.740	.000	.720	

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Valdez-FelixAM
Site Code : 00000032
Start Date : 9/9/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Valdez St Southbound					Felix Ave Westbound					Valdez St Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	0	0	0	0	0	11	0	1	12	1	10	0	1	12	21	4	0	2	27	51
07:15	0	0	1	0	1	1	8	2	0	11	2	28	0	0	30	27	4	4	2	37	79
07:30	0	1	1	1	3	0	6	4	0	10	3	19	1	0	23	21	7	2	0	30	66
07:45	1	2	1	0	4	0	8	0	1	9	1	3	0	1	5	3	4	3	2	12	30
Total	1	3	3	1	8	1	33	6	2	42	7	60	1	2	70	72	19	9	6	106	226
08:00	0	0	1	0	1	0	6	0	0	6	3	0	0	0	3	1	4	1	0	6	16
08:15	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	3	6	1	0	10	18
08:30	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	0	3	0	0	3	8
08:45	0	0	0	0	0	1	5	1	0	7	1	0	0	0	1	3	4	0	0	7	15
Total	0	0	1	0	1	1	21	2	0	24	6	0	0	0	6	7	17	2	0	26	57
Grand Total	1	3	4	1	9	2	54	8	2	66	13	60	1	2	76	79	36	11	6	132	283
Apprch %	11.1	33.3	44.4	11.1		3	81.8	12.1	3		17.1	78.9	1.3	2.6		59.8	27.3	8.3	4.5		
Total %	0.4	1.1	1.4	0.4	3.2	0.7	19.1	2.8	0.7	23.3	4.6	21.2	0.4	0.7	26.9	27.9	12.7	3.9	2.1	46.6	
Autos	1	3	4	0	8	2	54	8	0	64	13	60	1	0	74	79	36	11	0	126	272
% Autos	100	100	100	0	88.9	100	100	100	0	97	100	100	100	0	97.4	100	100	100	0	95.5	96.1
Heavy Vehicles	0	0	0	1	1	0	0	0	2	2	0	0	0	2	2	0	0	0	6	6	11
% Heavy Vehicles	0	0	0	100	11.1	0	0	0	100	3	0	0	0	100	2.6	0	0	0	100	4.5	3.9

	Valdez St Southbound					Felix Ave Westbound					Valdez St Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	0	0	0	0	0	**11**	0	**1**	**12**	1	10	0	**1**	12	21	4	0	**2**	27	51
07:15	0	0	**1**	0	1	**1**	8	2	0	11	2	**28**	0	0	**30**	**27**	4	**4**	2	**37**	**79**
07:30	0	1	1	**1**	3	0	6	**4**	0	10	**3**	19	**1**	0	23	21	**7**	2	0	30	66
07:45	**1**	**2**	1	0	**4**	0	8	0	1	9	1	3	0	1	5	3	4	3	2	12	30
Total Volume	1	3	3	1	8	1	33	6	2	42	7	60	1	2	70	72	19	9	6	106	226
% App. Total	12.5	37.5	37.5	12.5		2.4	78.6	14.3	4.8		10	85.7	1.4	2.9		67.9	17.9	8.5	5.7		
PHF	.250	.375	.750	.250	.500	.250	.750	.375	.500	.875	.583	.536	.250	.500	.583	.667	.679	.563	.750	.716	.715

GRAM Traffic Counting, Inc.

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Georgetown, TX 78626
512-832-8650

File Name : Valdez-FelixAM
Site Code : 00000032
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	Valdez St Southbound					Felix Ave Westbound					Valdez St Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:15					07:00					07:00					07:00					
+0 mins.	0	0	**1**	0	1	0	**11**	0	**1**	**12**	1	10	0	**1**	12	21	4	0	**2**	27	
+15 mins.	0	1	1	**1**	3	**1**	8	2	0	11	2	**28**	0	0	**30**	**27**	4	**4**	2	**37**	
+30 mins.	**1**	**2**	1	0	**4**	0	6	**4**	0	10	**3**	19	**1**	0	23	21	**7**	2	0	30	
+45 mins.	0	0	1	0	1	0	8	0	1	9	1	3	0	1	5	3	4	3	2	12	
Total Volume	1	3	4	1	9	1	33	6	2	42	7	60	1	2	70	72	19	9	6	106	
% App. Total	11.1	33.3	44.4	11.1		2.4	78.6	14.3	4.8		10	85.7	1.4	2.9		67.9	17.9	8.5	5.7		
PHF	.250	.375	1.000	.250	.563	.250	.750	.375	.500	.875	.583	.536	.250	.500	.583	.667	.679	.563	.750	.716	

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Valdez-FelixPM
Site Code : 00000032
Start Date : 9/9/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Valdez St Southbound					Felix Ave Westbound					Valdez St Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
16:00	0	0	0	2	2	0	1	0	3	4	3	3	0	1	7	1	7	4	4	16	29
16:15	1	0	0	0	1	0	6	0	1	7	1	0	0	0	1	5	10	4	0	19	28
16:30	0	0	2	0	2	0	9	0	0	9	4	1	0	0	5	3	9	1	0	13	29
16:45	1	0	0	0	1	0	3	0	1	4	1	2	0	0	3	3	18	3	0	24	32
Total	2	0	2	2	6	0	19	0	5	24	9	6	0	1	16	12	44	12	4	72	118
17:00	0	0	1	1	2	0	2	1	1	4	4	0	0	0	4	5	11	1	1	18	28
17:15	0	2	0	1	3	0	8	2	2	12	0	0	0	0	0	3	9	5	0	17	32
17:30	0	0	1	0	1	1	4	0	0	5	2	2	0	0	4	1	8	4	1	14	24
17:45	0	0	0	0	0	1	3	1	0	5	2	2	1	0	5	7	4	2	0	13	23
Total	0	2	2	2	6	2	17	4	3	26	8	4	1	0	13	16	32	12	2	62	107
Grand Total	2	2	4	4	12	2	36	4	8	50	17	10	1	1	29	28	76	24	6	134	225
Apprch %	16.7	16.7	33.3	33.3		4	72	8	16		58.6	34.5	3.4	3.4		20.9	56.7	17.9	4.5		
Total %	0.9	0.9	1.8	1.8	5.3	0.9	16	1.8	3.6	22.2	7.6	4.4	0.4	0.4	12.9	12.4	33.8	10.7	2.7	59.6	
Autos	2	2	4	0	8	2	36	4	0	42	16	10	1	0	27	28	76	24	0	128	205
% Autos	100	100	100	0	66.7	100	100	100	0	84	94.1	100	100	0	93.1	100	100	100	0	95.5	91.1
Heavy Vehicles	0	0	0	4	4	0	0	0	8	8	1	0	0	1	2	0	0	0	6	6	20
% Heavy Vehicles	0	0	0	100	33.3	0	0	0	100	16	5.9	0	0	100	6.9	0	0	0	100	4.5	8.9

	Valdez St Southbound					Felix Ave Westbound					Valdez St Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	0	**2**	0	2	0	**9**	0	0	9	**4**	1	0	0	**5**	3	9	1	0	13	29
16:45	**1**	0	0	0	1	0	3	0	1	4	1	**2**	0	0	3	3	**18**	3	0	**24**	**32**
17:00	0	0	1	**1**	2	0	2	1	1	4	4	0	0	0	4	**5**	11	1	**1**	18	28
17:15	0	**2**	0	1	**3**	0	8	**2**	**2**	**12**	0	0	0	0	0	3	9	**5**	0	17	32
Total Volume	1	2	3	2	8	0	22	3	4	29	9	3	0	0	12	14	47	10	1	72	121
% App. Total	12.5	25	37.5	25		0	75.9	10.3	13.8		75	25	0	0		19.4	65.3	13.9	1.4		
PHF	.250	.250	.375	.500	.667	.000	.611	.375	.500	.604	.563	.375	.000	.000	.600	.700	.653	.500	.250	.750	.945

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Valdez-FelixPM
Site Code : 00000032
Start Date : 9/9/2015
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	Valdez St Southbound					Felix Ave Westbound					Valdez St Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	16:30					16:30					16:00					16:15					
+0 mins.	0	0	**2**	0	2	0	**9**	0	0	9	3	**3**	0	**1**	**7**	**5**	10	**4**	0	19	
+15 mins.	**1**	0	0	0	1	0	3	0	1	4	1	0	0	0	1	3	9	1	0	13	
+30 mins.	0	0	1	**1**	2	0	2	1	1	4	**4**	1	0	0	5	3	**18**	3	0	**24**	
+45 mins.	0	**2**	0	1	**3**	0	8	**2**	**2**	**12**	1	2	0	0	3	5	11	1	**1**	18	
Total Volume	1	2	3	2	8	0	22	3	4	29	9	6	0	1	16	16	48	9	1	74	
% App. Total	12.5	25	37.5	25		0	75.9	10.3	13.8		56.2	37.5	0	6.2		21.6	64.9	12.2	1.4		
PHF	.250	.250	.375	.500	.667	.000	.611	.375	.500	.604	.563	.500	.000	.250	.571	.800	.667	.563	.250	.771	

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Valdez-PoncaAM
Site Code : 00000021
Start Date : 9/9/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Valdez Southbound					Ponca Westbound					Valdez Northbound					Ponca Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	0	0	1	1	0	0	0	0	0	17	16	0	0	33	0	0	0	0	0	34
07:15	0	0	0	0	0	0	1	0	0	1	26	29	1	0	56	0	0	0	0	0	57
07:30	0	0	0	0	0	0	0	0	0	0	33	15	3	0	51	0	0	0	0	0	51
07:45	0	3	1	0	4	1	1	0	0	2	3	4	2	0	9	0	0	0	0	0	15
Total	0	3	1	1	5	1	2	0	0	3	79	64	6	0	149	0	0	0	0	0	157
08:00	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	3
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
08:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	2	0	0	2	1	2	1	0	4	0	0	0	0	0	6
Grand Total	0	3	1	1	5	1	4	0	0	5	80	66	7	0	153	0	0	0	0	0	163
Apprch %	0	60	20	20		20	80	0	0		52.3	43.1	4.6	0		0	0	0	0		
Total %	0	1.8	0.6	0.6	3.1	0.6	2.5	0	0	3.1	49.1	40.5	4.3	0	93.9	0	0	0	0	0	
Autos	0	3	1	1	5	1	4	0	0	5	80	66	7	0	153	0	0	0	0	0	163
% Autos	0	100	100	100	100	100	100	0	0	100	100	100	100	0	100	0	0	0	0	0	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Valdez Southbound					Ponca Westbound					Valdez Northbound					Ponca Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	0	0	**1**	1	0	0	0	0	0	17	16	0	0	33	0	0	0	0	0	34
07:15	0	0	0	0	0	0	**1**	0	0	1	26	**29**	1	0	**56**	0	0	0	0	0	**57**
07:30	0	0	0	0	0	0	0	0	0	0	**33**	15	**3**	0	51	0	0	0	0	0	51
07:45	0	**3**	**1**	0	**4**	**1**	1	0	0	**2**	3	4	2	0	9	0	0	0	0	0	15
Total Volume	0	3	1	1	5	1	2	0	0	3	79	64	6	0	149	0	0	0	0	0	157
% App. Total	0	60	20	20		33.3	66.7	0	0		53	43	4	0		0	0	0	0		
PHF	.000	.250	.250	.250	.313	.250	.500	.000	.000	.375	.598	.552	.500	.000	.665	.000	.000	.000	.000	.000	.689

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Valdez-PoncaAM
Site Code : 00000021
Start Date : 9/9/2015
Page No : 2

	Valdez Southbound					Ponca Westbound					Valdez Northbound					Ponca Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:00					07:15					07:00					07:00					
+0 mins.	0	0	0	**1**	1	0	1	0	0	1	17	16	0	0	33	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	26	**29**	1	0	**56**	0	0	0	0	0	
+30 mins.	0	0	0	0	0	**1**	1	0	0	**2**	**33**	15	**3**	0	51	0	0	0	0	0	
+45 mins.	0	**3**	**1**	0	**4**	0	**2**	0	0	2	3	4	2	0	9	0	0	0	0	0	
Total Volume	0	3	1	1	5	1	4	0	0	5	79	64	6	0	149	0	0	0	0	0	
% App. Total	0	60	20	20		20	80	0	0		53	43	4	0		0	0	0	0		
PHF	.000	.250	.250	.250	.313	.250	.500	.000	.000	.625	.598	.552	.500	.000	.665	.000	.000	.000	.000	.000	

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Valdez-PoncaPM
Site Code : 00000021
Start Date : 9/9/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Valdez Southbound					Ponca Westbound					Valdez Northbound					Ponca Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
16:00	0	3	6	0	9	0	1	0	0	1	1	1	0	0	2	0	0	1	0	1	13
16:15	0	0	7	0	7	0	0	0	0	0	2	1	1	0	4	0	0	0	0	0	11
16:30	0	0	0	0	0	1	0	0	0	1	3	0	1	0	4	0	0	1	0	1	6
16:45	0	0	7	0	7	0	0	0	0	0	1	0	2	0	3	0	0	0	0	0	10
Total	0	3	20	0	23	1	1	0	0	2	7	2	4	0	13	0	0	2	0	2	40
17:00	0	0	4	0	4	0	1	0	0	1	1	1	1	0	3	0	0	1	0	1	9
17:15	0	1	4	0	5	0	0	0	0	0	7	0	0	0	7	0	1	0	0	1	13
17:30	0	0	4	0	4	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	8
17:45	0	0	0	0	0	0	0	0	0	0	3	0	2	0	5	0	0	1	0	1	6
Total	0	1	12	0	13	0	1	0	0	1	14	2	3	0	19	0	1	2	0	3	36
Grand Total	0	4	32	0	36	1	2	0	0	3	21	4	7	0	32	0	1	4	0	5	76
Apprch %	0	11.1	88.9	0		33.3	66.7	0	0		65.6	12.5	21.9	0		0	20	80	0		
Total %	0	5.3	42.1	0	47.4	1.3	2.6	0	0	3.9	27.6	5.3	9.2	0	42.1	0	1.3	5.3	0	6.6	
Autos	0	1	32	0	33	1	2	0	0	3	21	4	7	0	32	0	0	1	0	1	69
% Autos	0	25	100	0	91.7	100	100	0	0	100	100	100	100	0	100	0	0	25	0	20	90.8
Heavy Vehicles	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	7
% Heavy Vehicles	0	75	0	0	8.3	0	0	0	0	0	0	0	0	0	0	0	100	75	0	80	9.2

	Valdez Southbound					Ponca Westbound					Valdez Northbound					Ponca Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	0	**3**	6	0	**9**	0	**1**	0	0	**1**	1	**1**	0	0	2	0	0	**1**	0	**1**	**13**
16:15	0	0	**7**	0	7	0	0	0	0	0	2	1	1	0	**4**	0	0	0	0	0	11
16:30	0	0	0	0	0	**1**	0	0	0	1	**3**	0	1	0	4	0	0	1	0	1	6
16:45	0	0	7	0	7	0	0	0	0	0	1	0	**2**	0	3	0	0	0	0	0	10
Total Volume	0	3	20	0	23	1	1	0	0	2	7	2	4	0	13	0	0	2	0	2	40
% App. Total	0	13	87	0		50	50	0	0		53.8	15.4	30.8	0		0	0	100	0		
PHF	.000	.250	.714	.000	.639	.250	.250	.000	.000	.500	.583	.500	.500	.000	.813	.000	.000	.500	.000	.500	.769

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Valdez-PoncaPM
Site Code : 00000021
Start Date : 9/9/2015
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	Valdez Southbound					Ponca Westbound					Valdez Northbound					Ponca Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	16:00					16:00					17:00					16:30					
+0 mins.	0	**3**	6	0	**9**	0	**1**	0	0	**1**	1	**1**	1	0	3	0	0	**1**	0	**1**	
+15 mins.	0	0	**7**	0	7	0	0	0	0	0	**7**	0	0	0	**7**	0	0	0	0	0	
+30 mins.	0	0	0	0	0	**1**	0	0	0	1	3	1	0	0	4	0	0	1	0	1	
+45 mins.	0	0	7	0	7	0	0	0	0	0	3	0	**2**	0	5	0	**1**	0	0	1	
Total Volume	0	3	20	0	23	1	1	0	0	2	14	2	3	0	19	0	1	2	0	3	
% App. Total	0	13	87	0		50	50	0	0		73.7	10.5	15.8	0		0	33.3	66.7	0		
PHF	.000	.250	.714	.000	.639	.250	.250	.000	.000	.500	.500	.500	.375	.000	.679	.000	.250	.500	.000	.750	

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Vargas-FelixAM
Site Code : 00000025
Start Date : 9/9/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Vargas Rd Southbound					Felix Ave Westbound					Vargas Rd Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	5	24	7	1	37	2	5	8	2	17	14	34	10	4	62	6	12	6	0	24	140
07:15	7	44	5	1	57	3	6	5	1	15	32	60	9	11	112	4	19	12	2	37	221
07:30	8	40	8	0	56	1	7	4	0	12	44	39	7	4	94	5	18	8	1	32	194
07:45	5	37	4	4	50	2	6	3	0	11	13	31	2	1	47	0	3	11	1	15	123
Total	25	145	24	6	200	8	24	20	3	55	103	164	28	20	315	15	52	37	4	108	678
08:00	3	22	1	0	26	1	3	5	0	9	11	20	1	0	32	2	3	5	0	10	77
08:15	8	7	2	3	20	0	7	4	0	11	11	23	0	0	34	1	2	3	0	6	71
08:30	0	7	2	5	14	1	1	2	1	5	9	15	0	1	25	5	3	2	1	11	55
08:45	5	8	2	1	16	0	5	2	2	9	11	20	2	0	33	3	1	5	0	9	67
Total	16	44	7	9	76	2	16	13	3	34	42	78	3	1	124	11	9	15	1	36	270
Grand Total	41	189	31	15	276	10	40	33	6	89	145	242	31	21	439	26	61	52	5	144	948
Apprch %	14.9	68.5	11.2	5.4		11.2	44.9	37.1	6.7		33	55.1	7.1	4.8		18.1	42.4	36.1	3.5		
Total %	4.3	19.9	3.3	1.6	29.1	1.1	4.2	3.5	0.6	9.4	15.3	25.5	3.3	2.2	46.3	2.7	6.4	5.5	0.5	15.2	
Autos	41	189	31	15	276	9	40	33	6	88	145	242	31	21	439	26	60	52	5	143	946
% Autos	100	100	100	100	100	90	100	100	100	98.9	100	100	100	100	100	100	98.4	100	100	99.3	99.8
Heavy Vehicles	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	2
% Heavy Vehicles	0	0	0	0	0	10	0	0	0	1.1	0	0	0	0	0	0	1.6	0	0	0.7	0.2

	Vargas Rd Southbound					Felix Ave Westbound					Vargas Rd Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	5	24	7	1	37	2	5	**8**	**2**	**17**	14	34	**10**	4	62	**6**	12	6	0	24	140
07:15	7	**44**	5	1	**57**	**3**	6	5	1	15	32	**60**	9	**11**	**112**	4	**19**	**12**	**2**	**37**	**221**
07:30	**8**	40	**8**	0	56	1	**7**	4	0	12	**44**	39	7	4	94	5	18	8	1	32	194
07:45	5	37	4	**4**	50	2	6	3	0	11	13	31	2	1	47	0	3	11	1	15	123
Total Volume	25	145	24	6	200	8	24	20	3	55	103	164	28	20	315	15	52	37	4	108	678
% App. Total	12.5	72.5	12	3		14.5	43.6	36.4	5.5		32.7	52.1	8.9	6.3		13.9	48.1	34.3	3.7		
PHF	.781	.824	.750	.375	.877	.667	.857	.625	.375	.809	.585	.683	.700	.455	.703	.625	.684	.771	.500	.730	.767

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Vargas-FelixAM
Site Code : 00000025
Start Date : 9/9/2015
Page No : 2

	Vargas Rd Southbound					Felix Ave Westbound					Vargas Rd Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:00					07:00					07:00					07:00					
+0 mins.	5	24	7	1	37	2	5	**8**	**2**	**17**	14	34	**10**	4	62	**6**	12	6	0	24	
+15 mins.	7	**44**	5	1	**57**	**3**	6	5	1	15	32	**60**	9	**11**	**112**	4	**19**	**12**	**2**	**37**	
+30 mins.	**8**	40	**8**	0	56	1	**7**	4	0	12	**44**	39	7	4	94	5	18	8	1	32	
+45 mins.	5	37	4	**4**	50	2	6	3	0	11	13	31	2	1	47	0	3	11	1	15	
Total Volume	25	145	24	6	200	8	24	20	3	55	103	164	28	20	315	15	52	37	4	108	
% App. Total	12.5	72.5	12	3		14.5	43.6	36.4	5.5		32.7	52.1	8.9	6.3		13.9	48.1	34.3	3.7		
PHF	.781	.824	.750	.375	.877	.667	.857	.625	.375	.809	.585	.683	.700	.455	.703	.625	.684	.771	.500	.730	

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Vargas-FelixPM
Site Code : 00000025
Start Date : 9/9/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Vargas Rd Southbound					Felix Ave Westbound					Vargas Rd Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
16:00	4	28	0	4	36	3	2	2	3	10	7	23	6	4	40	10	6	12	8	36	122
16:15	7	23	0	5	35	0	4	4	0	8	8	34	3	3	48	3	10	7	3	23	114
16:30	8	21	1	1	31	6	6	5	0	17	8	29	2	2	41	1	6	9	0	16	105
16:45	9	13	5	2	29	2	1	3	0	6	4	32	3	2	41	3	13	8	1	25	101
Total	28	85	6	12	131	11	13	14	3	41	27	118	14	11	170	17	35	36	12	100	442
17:00	7	21	2	7	37	5	4	0	0	9	10	35	2	0	47	0	11	18	2	31	124
17:15	5	32	2	0	39	2	4	4	1	11	11	50	3	1	65	0	13	8	1	22	137
17:30	5	31	5	3	44	5	1	0	0	6	7	28	4	2	41	4	7	11	0	22	113
17:45	3	19	1	0	23	0	4	2	1	7	11	26	4	0	41	2	6	14	0	22	93
Total	20	103	10	10	143	12	13	6	2	33	39	139	13	3	194	6	37	51	3	97	467
Grand Total	48	188	16	22	274	23	26	20	5	74	66	257	27	14	364	23	72	87	15	197	909
Apprch %	17.5	68.6	5.8	8		31.1	35.1	27	6.8		18.1	70.6	7.4	3.8		11.7	36.5	44.2	7.6		
Total %	5.3	20.7	1.8	2.4	30.1	2.5	2.9	2.2	0.6	8.1	7.3	28.3	3	1.5	40	2.5	7.9	9.6	1.7	21.7	
Autos	47	187	16	22	272	23	26	20	5	74	66	256	27	14	363	23	72	87	15	197	906
% Autos	97.9	99.5	100	100	99.3	100	100	100	100	100	100	99.6	100	100	99.7	100	100	100	100	100	99.7
Heavy Vehicles	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
% Heavy Vehicles	2.1	0.5	0	0	0.7	0	0	0	0	0	0	0.4	0	0	0.3	0	0	0	0	0	0.3

	Vargas Rd Southbound					Felix Ave Westbound					Vargas Rd Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	**9**	13	**5**	2	29	2	1	3	0	6	4	32	3	**2**	41	3	**13**	8	1	25	101
17:00	7	21	2	**7**	37	**5**	**4**	0	0	9	10	35	2	0	47	0	11	**18**	**2**	**31**	124
17:15	5	**32**	2	0	39	2	4	**4**	**1**	**11**	**11**	**50**	3	1	**65**	0	13	8	1	22	**137**
17:30	5	31	5	3	**44**	5	1	0	0	6	7	28	**4**	2	41	**4**	7	11	0	22	113
Total Volume	26	97	14	12	149	14	10	7	1	32	32	145	12	5	194	7	44	45	4	100	475
% App. Total	17.4	65.1	9.4	8.1		43.8	31.2	21.9	3.1		16.5	74.7	6.2	2.6		7	44	45	4		
PHF	.722	.758	.700	.429	.847	.700	.625	.438	.250	.727	.727	.725	.750	.625	.746	.438	.846	.625	.500	.806	.867

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Vargas-FelixPM
Site Code : 00000025
Start Date : 9/9/2015
Page No : 2

	Vargas Rd Southbound					Felix Ave Westbound					Vargas Rd Northbound					Felix Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	16:45					16:30					16:30					16:00					
+0 mins.	**9**	13	**5**	2	29	**6**	**6**	**5**	0	**17**	8	29	2	**2**	41	**10**	6	**12**	**8**	**36**	
+15 mins.	7	21	2	**7**	37	2	1	3	0	6	4	32	**3**	2	41	3	10	7	3	23	
+30 mins.	5	**32**	2	0	39	5	4	0	0	9	10	35	2	0	47	1	6	9	0	16	
+45 mins.	5	31	5	3	**44**	2	4	4	**1**	11	**11**	**50**	3	1	**65**	3	**13**	8	1	25	
Total Volume	26	97	14	12	149	15	15	12	1	43	33	146	10	5	194	17	35	36	12	100	
% App. Total	17.4	65.1	9.4	8.1		34.9	34.9	27.9	2.3		17	75.3	5.2	2.6		17	35	36	12		
PHF	.722	.758	.700	.429	.847	.625	.625	.600	.250	.632	.750	.730	.833	.625	.746	.425	.673	.750	.375	.694	

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Vargas-PoncaAM
Site Code : 00000031
Start Date : 9/9/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Vargas Rd Southbound					Ponca St Westbound					Vargas Rd Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00	0	24	7	0	31	8	5	2	0	15	3	40	0	0	43	8	0	8	0	16	105
07:15	0	30	10	0	40	18	4	1	0	23	10	47	0	0	57	20	1	5	0	26	146
07:30	0	14	8	0	22	26	12	7	0	45	10	47	0	0	57	24	2	8	0	34	158
07:45	0	23	8	0	31	16	9	3	0	28	8	41	0	0	49	6	2	10	0	18	126
Total	0	91	33	0	124	68	30	13	0	111	31	175	0	0	206	58	5	31	0	94	535
08:00	0	18	1	0	19	4	2	1	0	7	4	24	0	0	28	3	3	3	0	9	63
08:15	0	14	0	0	14	0	0	1	0	1	7	21	0	0	28	4	2	3	0	9	52
08:30	0	9	5	0	14	3	0	0	0	3	3	23	0	0	26	3	2	0	0	5	48
08:45	0	13	3	0	16	2	1	1	0	4	5	25	0	0	30	7	2	3	0	12	62
Total	0	54	9	0	63	9	3	3	0	15	19	93	0	0	112	17	9	9	0	35	225
Grand Total	0	145	42	0	187	77	33	16	0	126	50	268	0	0	318	75	14	40	0	129	760
Apprch %	0	77.5	22.5	0		61.1	26.2	12.7	0		15.7	84.3	0	0		58.1	10.9	31	0		
Total %	0	19.1	5.5	0	24.6	10.1	4.3	2.1	0	16.6	6.6	35.3	0	0	41.8	9.9	1.8	5.3	0	17	
Autos	0	135	42	0	177	60	33	16	0	109	49	250	0	0	299	75	1	40	0	116	701
% Autos	0	93.1	100	0	94.7	77.9	100	100	0	86.5	98	93.3	0	0	94	100	7.1	100	0	89.9	92.2
Heavy Vehicles	0	10	0	0	10	17	0	0	0	17	1	18	0	0	19	0	13	0	0	13	59
% Heavy Vehicles	0	6.9	0	0	5.3	22.1	0	0	0	13.5	2	6.7	0	0	6	0	92.9	0	0	10.1	7.8

	Vargas Rd Southbound					Ponca St Westbound					Vargas Rd Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	24	7	0	31	8	5	2	0	15	3	40	0	0	43	8	0	8	0	16	105
07:15	0	**30**	**10**	0	**40**	18	4	1	0	23	**10**	**47**	0	0	**57**	20	1	5	0	26	146
07:30	0	14	8	0	22	**26**	**12**	**7**	0	**45**	10	47	0	0	57	**24**	**2**	8	0	**34**	**158**
07:45	0	23	8	0	31	16	9	3	0	28	8	41	0	0	49	6	2	**10**	0	18	126
Total Volume	0	91	33	0	124	68	30	13	0	111	31	175	0	0	206	58	5	31	0	94	535
% App. Total	0	73.4	26.6	0		61.3	27	11.7	0		15	85	0	0		61.7	5.3	33	0		
PHF	.000	.758	.825	.000	.775	.654	.625	.464	.000	.617	.775	.931	.000	.000	.904	.604	.625	.775	.000	.691	.847

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Vargas-PoncaAM
Site Code : 00000031
Start Date : 9/9/2015
Page No : 2

	Vargas Rd Southbound					Ponca St Westbound					Vargas Rd Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:00					07:00					07:00					07:00					
+0 mins.	0	24	7	0	31	8	5	2	0	15	3	40	0	0	43	8	0	8	0	16	
+15 mins.	0	**30**	**10**	0	**40**	18	4	1	0	23	**10**	**47**	0	0	**57**	20	1	5	0	26	
+30 mins.	0	14	8	0	22	**26**	**12**	**7**	0	**45**	10	47	0	0	57	**24**	**2**	8	0	**34**	
+45 mins.	0	23	8	0	31	16	9	3	0	28	8	41	0	0	49	6	2	**10**	0	18	
Total Volume	0	91	33	0	124	68	30	13	0	111	31	175	0	0	206	58	5	31	0	94	
% App. Total	0	73.4	26.6	0		61.3	27	11.7	0		15	85	0	0		61.7	5.3	33	0		
PHF	.000	.758	.825	.000	.775	.654	.625	.464	.000	.617	.775	.931	.000	.000	.904	.604	.625	.775	.000	.691	

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Vargas-PoncaPM
Site Code : 00000031
Start Date : 9/9/2015
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	Vargas Rd Southbound					Ponca St Westbound					Vargas Rd Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
16:00	0	21	4	0	25	5	3	1	0	9	6	23	0	0	29	10	3	6	0	19	82
16:15	0	20	2	0	22	4	3	3	0	10	7	29	0	0	36	9	0	4	0	13	81
16:30	0	18	5	0	23	2	2	0	0	4	8	27	0	0	35	10	2	8	0	20	82
16:45	0	13	4	0	17	4	3	2	0	9	6	27	0	0	33	9	0	4	0	13	72
Total	0	72	15	0	87	15	11	6	0	32	27	106	0	0	133	38	5	22	0	65	317
17:00	0	26	13	0	39	2	3	2	0	7	10	29	0	0	39	2	4	5	0	11	96
17:15	0	28	3	0	31	6	1	5	0	12	7	41	0	0	48	5	1	6	0	12	103
17:30	0	33	7	0	40	3	0	4	0	7	5	32	0	0	37	8	0	7	0	15	99
17:45	0	18	3	0	21	0	0	1	0	1	5	24	0	0	29	6	2	3	0	11	62
Total	0	105	26	0	131	11	4	12	0	27	27	126	0	0	153	21	7	21	0	49	360
Grand Total	0	177	41	0	218	26	15	18	0	59	54	232	0	0	286	59	12	43	0	114	677
Apprch %	0	81.2	18.8	0		44.1	25.4	30.5	0		18.9	81.1	0	0		51.8	10.5	37.7	0		
Total %	0	26.1	6.1	0	32.2	3.8	2.2	2.7	0	8.7	8	34.3	0	0	42.2	8.7	1.8	6.4	0	16.8	
Autos	0	170	29	0	199	26	12	18	0	56	52	227	0	0	279	57	1	43	0	101	635
% Autos	0	96	70.7	0	91.3	100	80	100	0	94.9	96.3	97.8	0	0	97.6	96.6	8.3	100	0	88.6	93.8
Heavy Vehicles	0	7	12	0	19	0	3	0	0	3	2	5	0	0	7	2	11	0	0	13	42
% Heavy Vehicles	0	4	29.3	0	8.7	0	20	0	0	5.1	3.7	2.2	0	0	2.4	3.4	91.7	0	0	11.4	6.2

	Vargas Rd Southbound					Ponca St Westbound					Vargas Rd Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	13	4	0	17	4	**3**	2	0	9	6	27	0	0	33	**9**	0	4	0	13	72
17:00	0	26	**13**	0	39	2	3	2	0	7	**10**	29	0	0	39	2	**4**	5	0	11	96
17:15	0	28	3	0	31	**6**	1	**5**	0	**12**	7	**41**	0	0	**48**	5	1	6	0	12	**103**
17:30	0	**33**	7	0	**40**	3	0	4	0	7	5	32	0	0	37	8	0	**7**	0	**15**	99
Total Volume	0	100	27	0	127	15	7	13	0	35	28	129	0	0	157	24	5	22	0	51	370
% App. Total	0	78.7	21.3	0		42.9	20	37.1	0		17.8	82.2	0	0		47.1	9.8	43.1	0		
PHF	.000	.758	.519	.000	.794	.625	.583	.650	.000	.729	.700	.787	.000	.000	.818	.667	.313	.786	.000	.850	.898

GRAM Traffic Counting, Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Vargas-PoncaPM
Site Code : 00000031
Start Date : 9/9/2015
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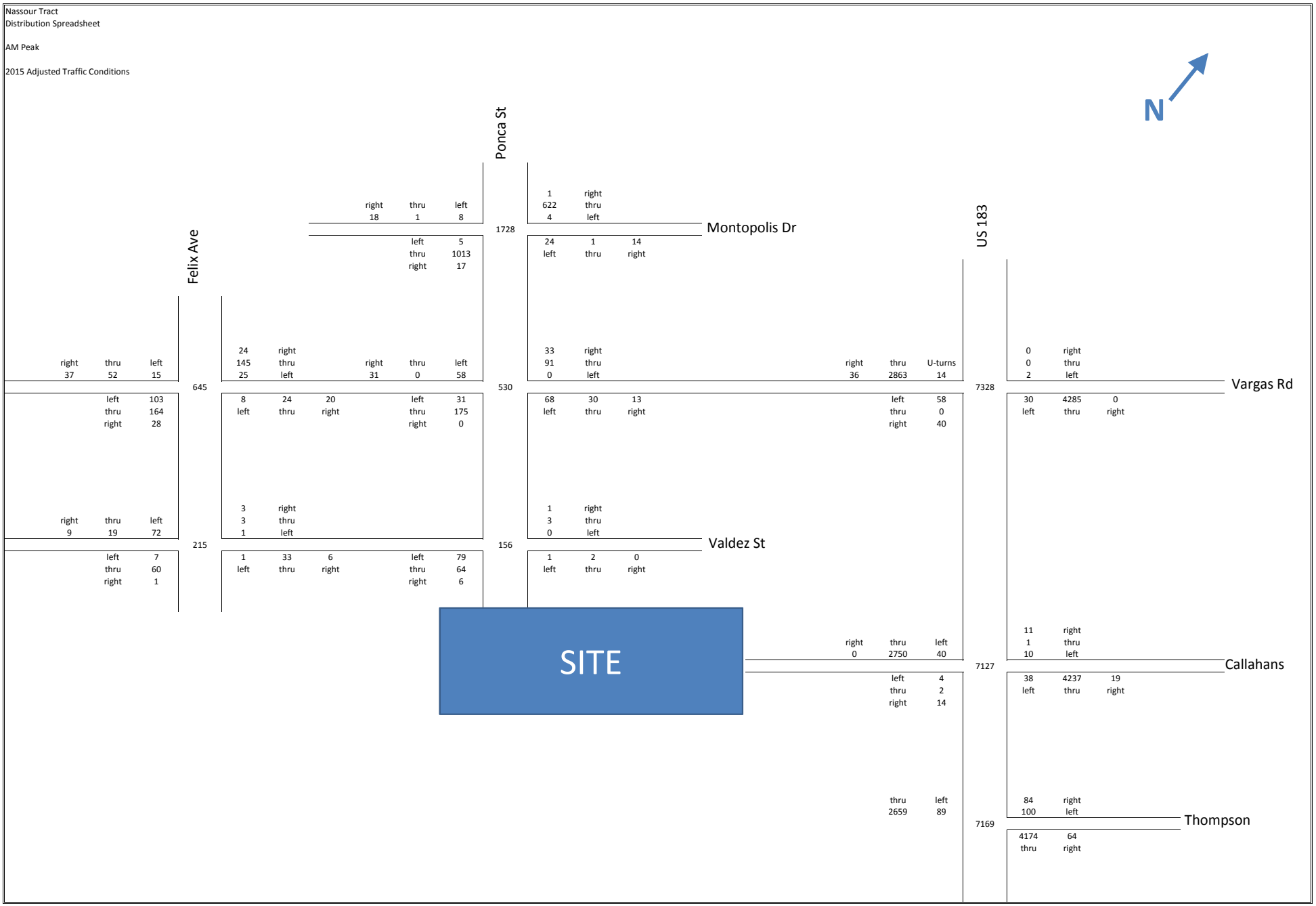
	Vargas Rd Southbound					Ponca St Westbound					Vargas Rd Northbound					Ponca St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	17:00					16:45					16:45					16:00					
+0 mins.	0	26	**13**	0	39	4	**3**	2	0	9	6	27	0	0	33	**10**	**3**	6	0	19	
+15 mins.	0	28	3	0	31	2	3	2	0	7	**10**	29	0	0	39	9	0	4	0	13	
+30 mins.	0	**33**	7	0	**40**	**6**	1	**5**	0	**12**	7	**41**	0	0	**48**	10	2	**8**	0	**20**	
+45 mins.	0	18	3	0	21	3	0	4	0	7	5	32	0	0	37	9	0	4	0	13	
Total Volume	0	105	26	0	131	15	7	13	0	35	28	129	0	0	157	38	5	22	0	65	
% App. Total	0	80.2	19.8	0		42.9	20	37.1	0		17.8	82.2	0	0		58.5	7.7	33.8	0		
PHF	.000	.795	.500	.000	.819	.625	.583	.650	.000	.729	.700	.787	.000	.000	.818	.950	.417	.688	.000	.813	

Distribution Worksheets

Nassour Tract
Distribution Spreadsheet

AM Peak

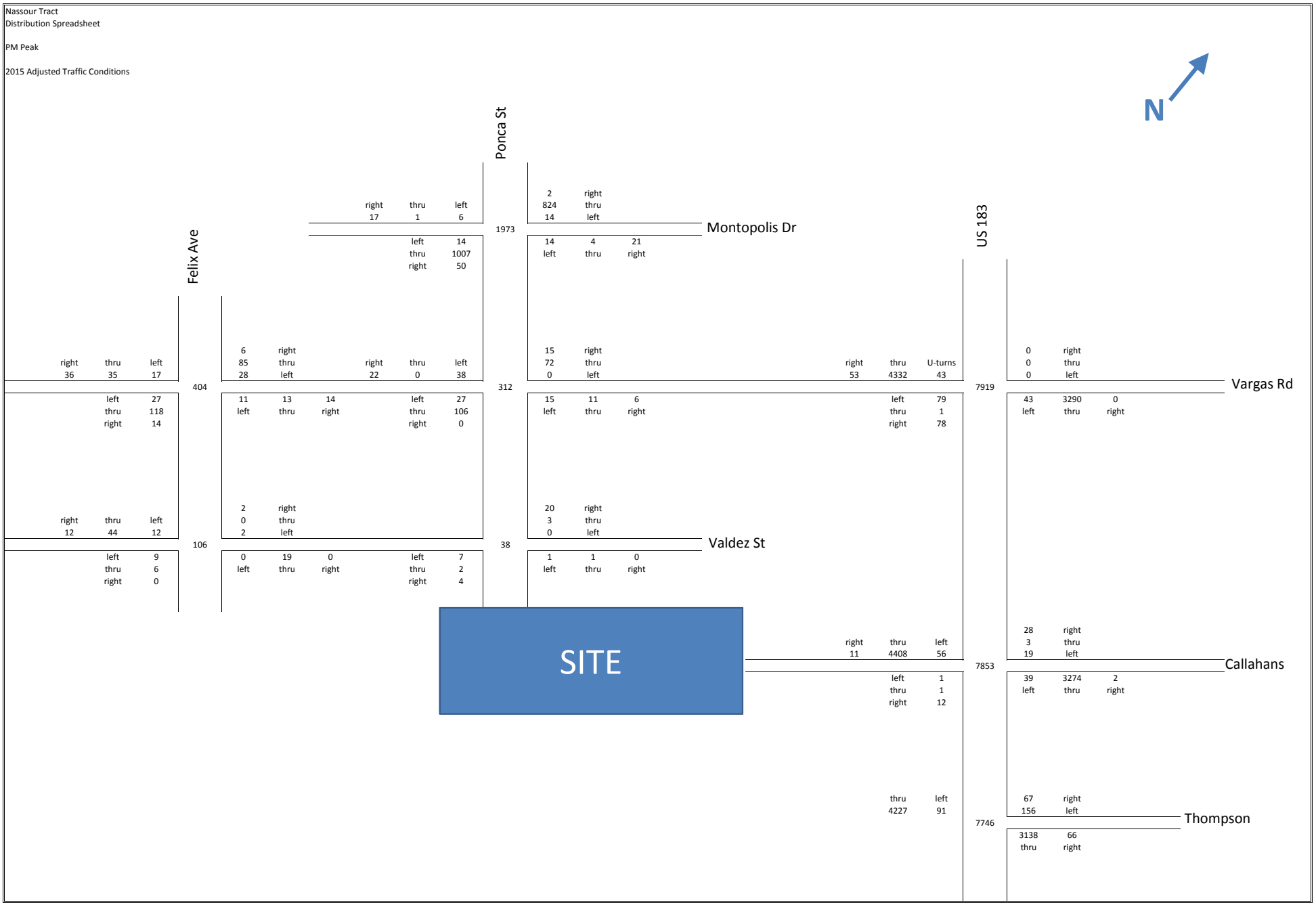
2015 Adjusted Traffic Conditions



Nassour Tract
Distribution Spreadsheet

PM Peak

2015 Adjusted Traffic Conditions

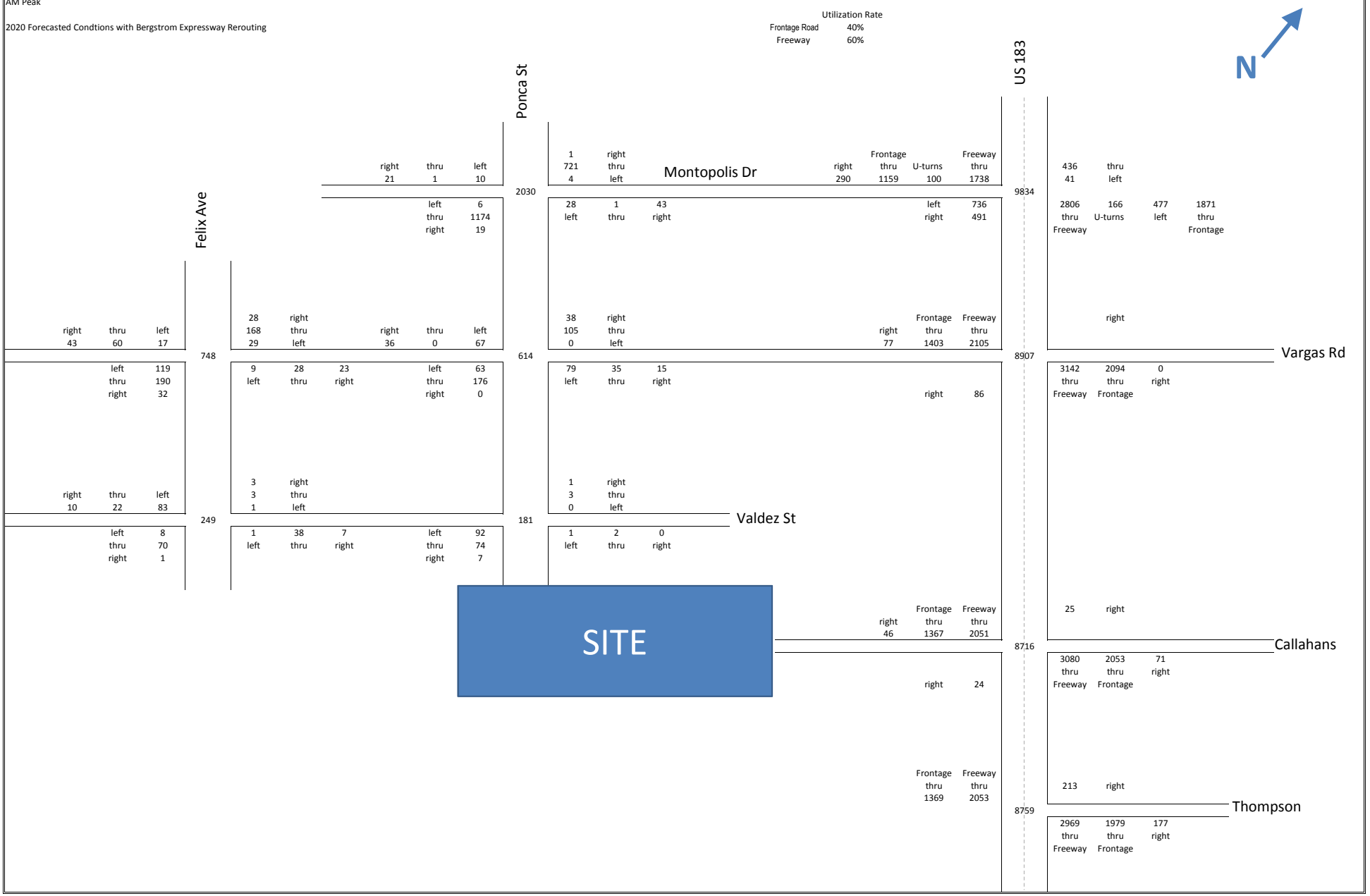


Nassour Tract
Distribution Spreadsheet

AM Peak

2020 Forecasted Condtions with Bergstrom Expressway Rerouting

Utilization Rate	
Frontage Road	40%
Freeway	60%

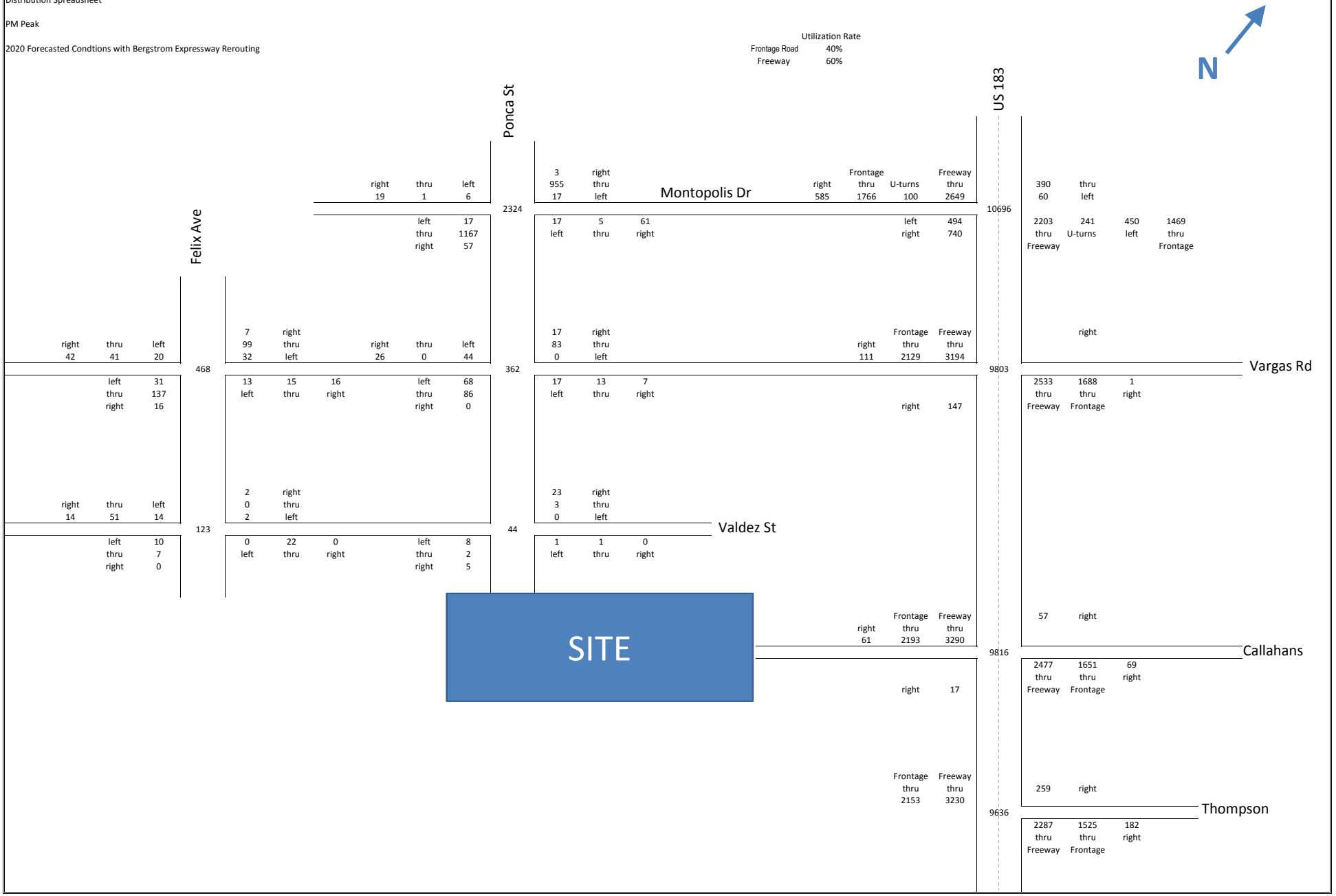


Nassour Tract
Distribution Spreadsheet

PM Peak

2020 Forecasted Condtions with Bergstrom Expressway Rerouting

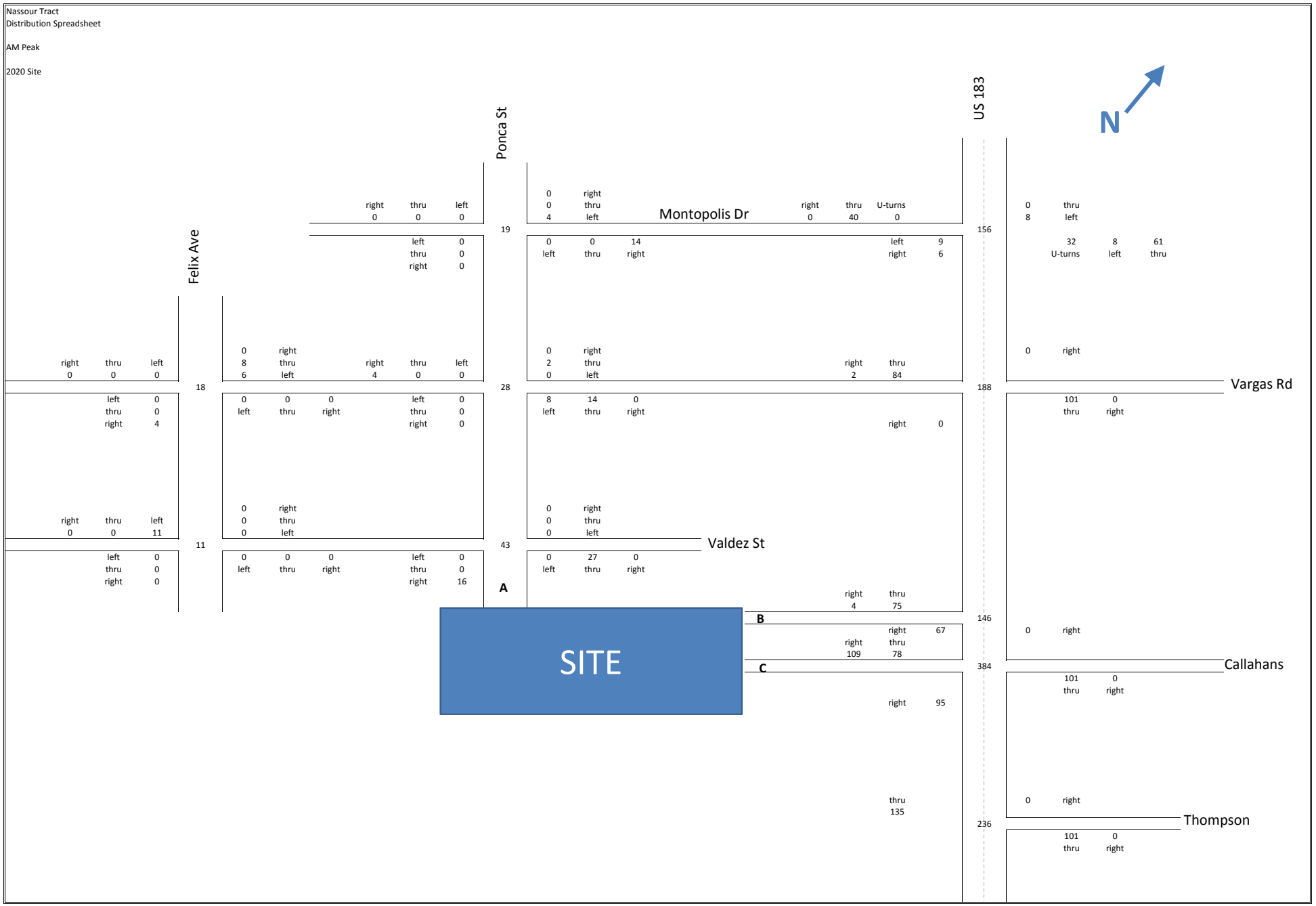
Utilization Rate	
Frontage Road	40%
Freeway	60%



Nassour Tract
Distribution Spreadsheet

AM Peak

2020 Site

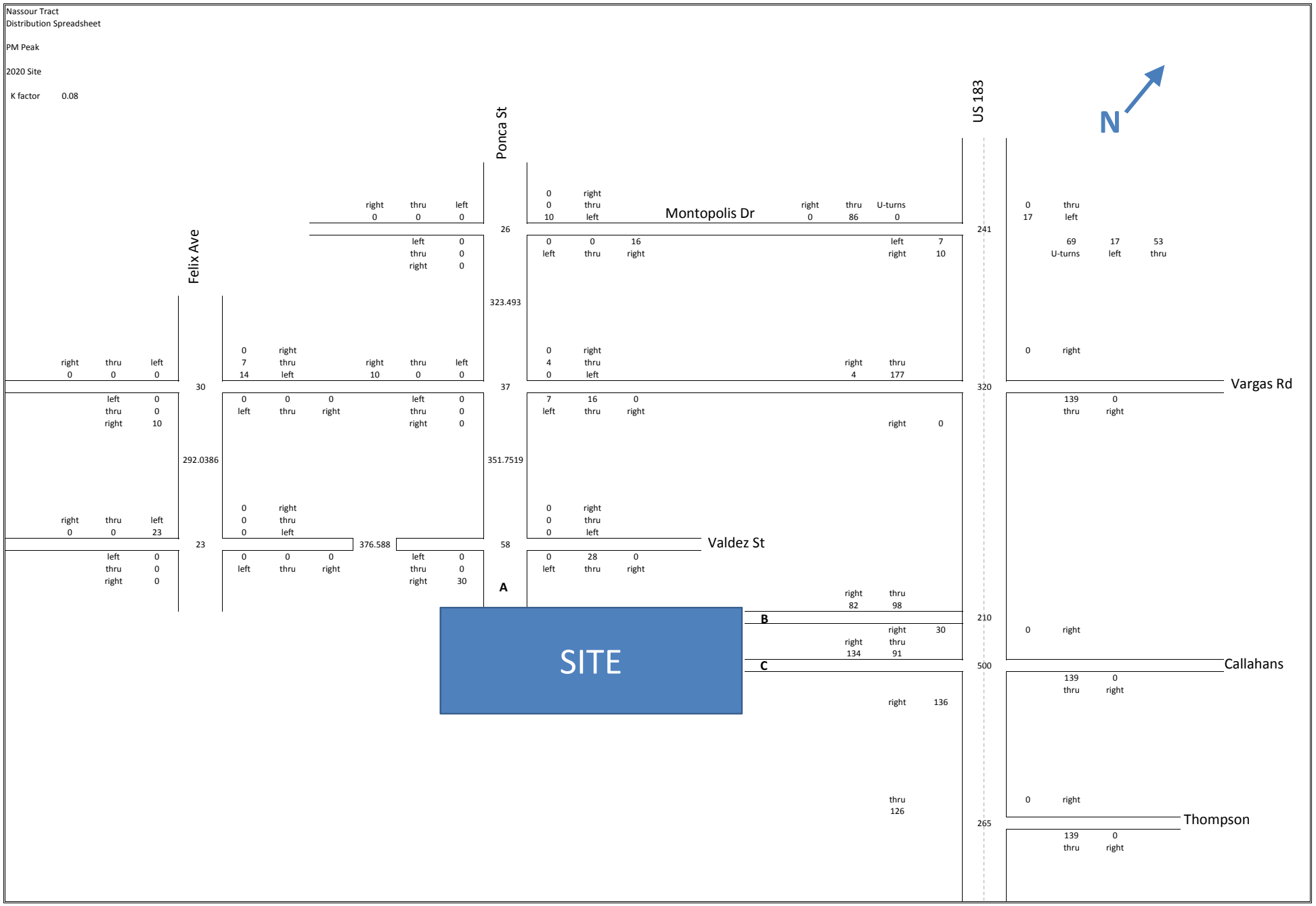


Nassour Tract
Distribution Spreadsheet

PM Peak

2020 Site

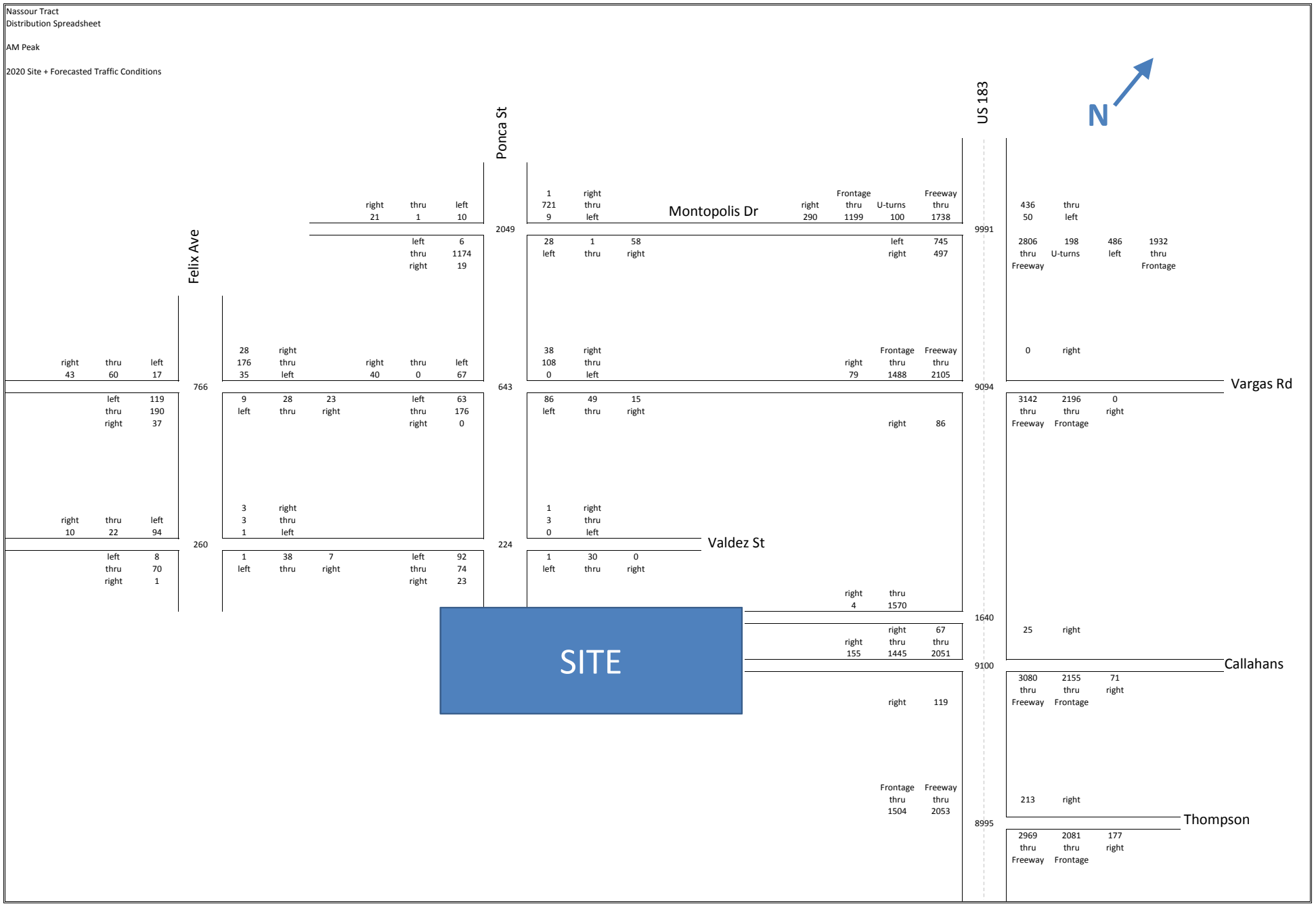
K factor 0.08



Nassour Tract
Distribution Spreadsheet

AM Peak

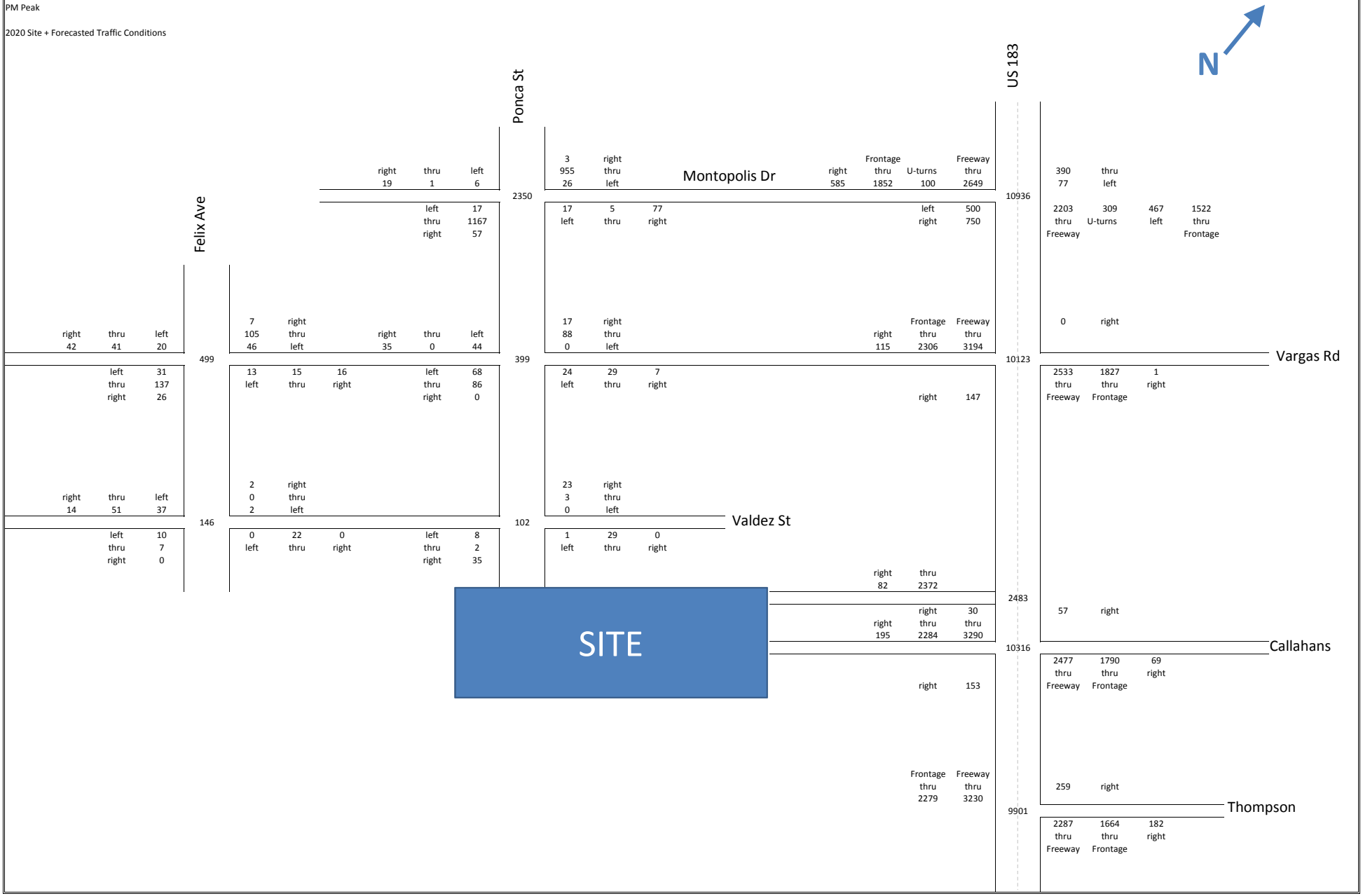
2020 Site + Forecasted Traffic Conditions



Nassour Tract
Distribution Spreadsheet

PM Peak

2020 Site + Forecasted Traffic Conditions



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Intersection Analysis

Lenox Oaks
1: US 183 & Vargas Rd
Lanes, Volumes, Timings
2015 AM Existing Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	58	1	40	2	1	1	30	4285	1	14	1	2863
Future Volume (vph)	58	1	40	2	1	1	30	4285	1	14	1	2863
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	190		0		160	
Storage Lanes	0		0	0		0	1		0		1	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.939			0.966							0.998
Flt Protected		0.972			0.976		0.950			0.950		
Satd. Flow (prot)	0	3168	0	0	1722	0	1736	4988	0	1736	0	4978
Flt Permitted		0.804			0.859		0.950			0.950		0.890
Satd. Flow (perm)	0	2621	0	0	1516	0	1736	4988	0	1736	0	4430
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)		42			1							3
Link Speed (mph)		20			30			55				55
Link Distance (ft)		273			295			920				694
Travel Time (s)		9.3			6.7			11.4				8.6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	60	1	42	2	1	1	31	4464	1	15	1	2982
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	4	0	31	4465	0	15	0	3021
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		0			0			50				50
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Number of Detectors	1	2		1	2		1	2		1	1	2
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Left	Thru
Leading Detector (ft)	20	100		20	100		20	100		20	20	100
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	Perm	NA
Protected Phases		8			4		5	2		1		6

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	36
Future Volume (vph)	36
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	0.91
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.96
Heavy Vehicles (%)	4%
Adj. Flow (vph)	38
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	

Lenox Oaks
1: US 183 & Vargas Rd
Lanes, Volumes, Timings
2015 AM Existing Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Permitted Phases	8			4							6	
Detector Phase	8	8		4	4		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		8.0	15.0		8.0	15.0	15.0
Minimum Split (s)	22.0	22.0		23.0	23.0		17.0	23.0		15.0	25.0	25.0
Total Split (s)	23.0	23.0		23.0	23.0		17.0	151.0		16.0	150.0	150.0
Total Split (%)	12.1%	12.1%		12.1%	12.1%		8.9%	79.5%		8.4%	78.9%	78.9%
Maximum Green (s)	17.0	17.0		17.0	17.0		10.0	144.0		9.0	143.0	143.0
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)		6.0			6.0		7.0	7.0		7.0		7.0
Lead/Lag							Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0		1.5	2.0		1.5	2.0	2.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Act Effct Green (s)		12.7			12.7		9.6	155.3		8.0		150.7
Actuated g/C Ratio		0.07			0.07		0.05	0.82		0.04		0.79
v/c Ratio		0.48			0.04		0.36	1.10		0.21		0.86
Control Delay		57.6			73.5		62.2	61.3		94.8		17.5
Queue Delay		0.0			0.0		0.0	0.2		0.0		0.0
Total Delay		57.6			73.5		62.2	61.5		94.8		17.5
LOS		E			E		E	E		F		B
Approach Delay		57.6			73.5			61.5				17.9
Approach LOS		E			E			E				B

Intersection Summary

Area Type: Other
Cycle Length: 190
Actuated Cycle Length: 190
Offset: 133 (70%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 44.1 Intersection LOS: D
Intersection Capacity Utilization 102.8% ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 1: US 183 & Vargas Rd

Lane Group	SBR
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lenox Oaks
Lanes, Volumes, Timings

2: US 183 & Thompson Ln
2015 AM Existing Conditions

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	4174	64	89	2659	100	84
Future Volume (vph)	4174	64	89	2659	100	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	15	15
Storage Length (ft)		0	0		0	200
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	0.91	1.00	0.91	1.00	1.00
Frt	0.998					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4930	0	1719	4940	1891	1692
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4930	0	1719	4940	1891	1692
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3					87
Link Speed (mph)	55			55	30	
Link Distance (ft)	293			393	479	
Travel Time (s)	3.6			4.9	10.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	4303	66	92	2741	103	87
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4369	0	92	2741	103	87
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	50			50	15	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.88	0.88
Turning Speed (mph)		9	15		15	9
Turn Type	NA		Prot	NA	Prot	Prot
Protected Phases	2		1	6	4	4
Permitted Phases						
Minimum Split (s)	22.0		20.0	22.0	20.0	20.0
Total Split (s)	137.0		27.0	164.0	26.0	26.0
Total Split (%)	72.1%		14.2%	86.3%	13.7%	13.7%
Maximum Green (s)	130.0		20.0	157.0	20.0	20.0
Yellow Time (s)	5.0		5.0	5.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0		7.0	7.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Act Effct Green (s)	130.0		20.0	157.0	20.0	20.0
Actuated g/C Ratio	0.68		0.11	0.83	0.11	0.11
v/c Ratio	1.29		0.51	0.67	0.52	0.34
Control Delay	163.4		83.3	1.4	90.4	16.7

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Queue Delay	0.0		0.0	0.2	0.0	0.0
Total Delay	163.4		83.3	1.6	90.4	16.7
LOS	F		F	A	F	B
Approach Delay	163.4			4.3	56.7	
Approach LOS	F			A	E	

Intersection Summary	
Area Type:	Other
Cycle Length: 190	
Actuated Cycle Length: 190	
Offset: 133 (70%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Pretimed	
Maximum v/c Ratio: 1.29	
Intersection Signal Delay: 99.7	Intersection LOS: F
Intersection Capacity Utilization 100.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: US 183 & Thompson Ln

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2015 AM Existing Conditions

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	5	1013	17	4	622	1	8	1	18	24	1	14
Future Volume (vph)	5	1013	17	4	622	1	8	1	18	24	1	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	13	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997						0.910			0.952	
Flt Protected								0.985			0.970	
Satd. Flow (prot)	0	3564	0	0	3574	0	0	1742	0	0	1737	0
Flt Permitted		0.953			0.950			0.884				
Satd. Flow (perm)	0	3396	0	0	3396	0	0	1564	0	0	1791	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			1			20			15	
Link Speed (mph)		35			35			30			20	
Link Distance (ft)		333			388			373			1129	
Travel Time (s)		6.5			7.6			8.5			38.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	5	1113	19	4	684	1	9	1	20	26	1	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1137	0	0	689	0	0	30	0	0	42	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2015 AM Existing Conditions

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	21.5	21.5		21.0	21.0		13.0	13.0		13.0	13.0	
Total Split (s)	37.0	37.0		37.0	37.0		13.0	13.0		13.0	13.0	
Total Split (%)	74.0%	74.0%		74.0%	74.0%		26.0%	26.0%		26.0%	26.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		8.0	8.0		8.0	8.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		3.0	3.0		3.0	3.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		42.9			42.9			6.4			6.5	
Actuated g/C Ratio		0.86			0.86			0.13			0.13	
v/c Ratio		0.39			0.24			0.14			0.17	
Control Delay		3.0			2.4			13.1			15.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.0			2.4			13.1			15.7	
LOS		A			A			B			B	
Approach Delay		3.0			2.4			13.1			15.7	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 15 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.39
Intersection Signal Delay: 3.2 Intersection LOS: A
Intersection Capacity Utilization 44.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Montopolis Dr & Ponca St

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	58	0	31	0	68	30	13	0	31	175	0
Future Vol, veh/h	0	58	0	31	0	68	30	13	0	31	175	0
Peak Hour Factor	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	5	5	5	2	5	5	5	2	5	5	5
Mvmt Flow	0	68	0	36	0	80	35	15	0	36	206	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.9	9.3	10.1
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	65%	61%	0%
Vol Thru, %	85%	0%	27%	73%
Vol Right, %	0%	35%	12%	27%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	206	89	111	124
LT Vol	31	58	68	0
Through Vol	175	0	30	91
RT Vol	0	31	13	33
Lane Flow Rate	242	105	131	146
Geometry Grp	1	1	1	1
Degree of Util (X)	0.322	0.146	0.185	0.191
Departure Headway (Hd)	4.784	5.01	5.101	4.719
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	749	711	699	756
Service Time	2.838	3.076	3.165	2.778
HCM Lane V/C Ratio	0.323	0.148	0.187	0.193
HCM Control Delay	10.1	8.9	9.3	8.9
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.4	0.5	0.7	0.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	91	33
Future Vol, veh/h	0	0	91	33
Peak Hour Factor	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	5	5	5
Mvmt Flow	0	0	107	39
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.9
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	15	52	37	0	8	24	20	0	103	164	28
Future Vol, veh/h	0	15	52	37	0	8	24	20	0	103	164	28
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	19	67	47	0	10	31	26	0	132	210	36
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9.7	9.1	12.6
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	35%	14%	15%	13%
Vol Thru, %	56%	50%	46%	75%
Vol Right, %	9%	36%	38%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	295	104	52	194
LT Vol	103	15	8	25
Through Vol	164	52	24	145
RT Vol	28	37	20	24
Lane Flow Rate	378	133	67	249
Geometry Grp	1	1	1	1
Degree of Util (X)	0.499	0.199	0.102	0.334
Departure Headway (Hd)	4.749	5.383	5.497	4.84
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	749	671	655	734
Service Time	2.835	3.386	3.501	2.935
HCM Lane V/C Ratio	0.505	0.198	0.102	0.339
HCM Control Delay	12.6	9.7	9.1	10.4
HCM Lane LOS	B	A	A	B
HCM 95th-tile Q	2.8	0.7	0.3	1.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	25	145	24
Future Vol, veh/h	0	25	145	24
Peak Hour Factor	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	32	186	31
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.4
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	24.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	4	2	14	10	1	11	38	4237	19	40	2750	1
Future Vol, veh/h	4	2	14	10	1	11	38	4237	19	40	2750	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	130	-	-	210	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	4	2	15	11	1	12	40	4460	20	42	2895	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	4844	7539	1448	5793	7530	2240	2896	0	0	4480	0	0
Stage 1	2979	2979	-	4550	4550	-	-	-	-	-	-	-
Stage 2	1865	4560	-	1243	2980	-	-	-	-	-	-	-
Critical Hdwy	6.46	6.56	7.16	6.46	6.56	7.16	5.36	-	-	5.36	-	-
Critical Hdwy Stg 1	7.36	5.56	-	7.36	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.56	-	6.76	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.83	4.03	3.93	3.83	4.03	3.93	3.13	-	-	3.13	-	-
Pot Cap-1 Maneuver	~ 1	0	102	0	0	28	42	-	-	~ 6	-	-
Stage 1	7	31	-	0	4	-	-	-	-	-	-	-
Stage 2	65	4	-	164	31	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	0	0	102	0	0	28	42	-	-	~ 6	-	-
Mov Cap-2 Maneuver	0	0	-	0	0	-	-	-	-	-	-	-
Stage 1	0	31	-	0	0	-	-	-	-	-	-	-
Stage 2	~ 2	0	-	131	31	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	49.2	$ 316.8	2.4	55.7
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	42	-	-	102	28	~ 6	-	-
HCM Lane V/C Ratio	0.952	-	-	0.206	0.827	7.018	-	-
HCM Control Delay (s)	272	-	-	49.2	$ 316.8	$ 3889.7	-	-
HCM Lane LOS	F	-	-	E	F	F	-	-
HCM 95th %tile Q(veh)	3.8	-	-	0.7	2.7	6.8	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	0	1	2	1	79	64	6	1	3	1
Future Vol, veh/h	0	0	0	1	2	1	79	64	6	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	1	3	1	116	94	9	1	4	1

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	10	7	0	58	7	4
Stage 1	-	-	-	0	0	-	7	7	-
Stage 2	-	-	-	10	7	-	51	0	-
Critical Hdwy	-	-	-	6.4	6.5	-	6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	5.4	5.5	-	-	-	-
Follow-up Hdwy	-	-	-	3.5	4	-	3.5	4	3.3
Pot Cap-1 Maneuver	-	-	-	1015	892	-	954	892	1085
Stage 1	-	-	-	-	-	-	1021	894	-
Stage 2	-	-	-	1018	894	-	-	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	1015	0	-	954	0	1085
Mov Cap-2 Maneuver	-	-	-	1015	0	-	954	0	-
Stage 1	-	-	-	-	0	-	1021	0	-
Stage 2	-	-	-	1018	0	-	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s			8.6
HCM LOS		-	A

Minor Lane/Major Mvmt	NBLn1	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1015
HCM Lane V/C Ratio	-	-	-	-	0.007
HCM Control Delay (s)	-	-	-	-	8.6
HCM Lane LOS	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	0

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	72	19	9	1	33	6	7	60	1	1	3	3
Future Vol, veh/h	72	19	9	1	33	6	7	60	1	1	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	103	27	13	1	47	9	10	86	1	1	4	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	143	116	6	135	117	86	9	0	0	87	0	0
Stage 1	9	9	-	106	106	-	-	-	-	-	-	-
Stage 2	134	107	-	29	11	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	831	778	1083	841	777	978	1624	-	-	1522	-	-
Stage 1	1017	892	-	905	811	-	-	-	-	-	-	-
Stage 2	874	811	-	993	890	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	781	773	1083	804	772	978	1624	-	-	1522	-	-
Mov Cap-2 Maneuver	781	773	-	804	772	-	-	-	-	-	-	-
Stage 1	1011	891	-	900	806	-	-	-	-	-	-	-
Stage 2	811	806	-	950	889	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	9.9	0.7	1.1
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1624	-	-	799	798	1522	-	-
HCM Lane V/C Ratio	0.006	-	-	0.179	0.072	0.001	-	-
HCM Control Delay (s)	7.2	0	-	10.5	9.9	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.2	0	-	-

Lenox Oaks
1: US 183 & Vargas Rd
Lanes, Volumes, Timings
2015 PM Existing Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	79	1	78	1	1	1	43	3290	1	43	1	4332
Future Volume (vph)	79	1	78	1	1	1	43	3290	1	43	1	4332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	190		0		160	
Storage Lanes	0		0	0		0	1		0		1	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Frt		0.926			0.955							0.998
Flt Protected		0.976			0.984		0.950			0.950		
Satd. Flow (prot)	0	3168	0	0	1733	0	1752	5036	0	1752	0	5026
Flt Permitted		0.819			0.897		0.950			0.950		0.938
Satd. Flow (perm)	0	2658	0	0	1580	0	1752	5036	0	1752	0	4714
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)		87			1							2
Link Speed (mph)		30			30			55				55
Link Distance (ft)		266			295			920				694
Travel Time (s)		6.0			6.7			11.4				8.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	88	1	87	1	1	1	48	3656	1	48	1	4813
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	176	0	0	3	0	48	3657	0	48	0	4873
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		0			0			50				50
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Number of Detectors	1	2		1	2		1	2		1	1	2
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Left	Thru
Leading Detector (ft)	20	100		20	100		20	100		20	20	100
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	Perm	NA
Protected Phases		8			4		5	2		1		6

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	53
Future Volume (vph)	53
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	0.91
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.90
Heavy Vehicles (%)	3%
Adj. Flow (vph)	59
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	

Lenox Oaks
1: US 183 & Vargas Rd
Lanes, Volumes, Timings
2015 PM Existing Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Permitted Phases	8			4							6	
Detector Phase	8	8		4	4		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		8.0	15.0		8.0	15.0	15.0
Minimum Split (s)	22.0	22.0		22.0	22.0		17.0	23.0		15.0	25.0	25.0
Total Split (s)	22.0	22.0		22.0	22.0		22.0	171.0		22.0	171.0	171.0
Total Split (%)	10.2%	10.2%		10.2%	10.2%		10.2%	79.5%		10.2%	79.5%	79.5%
Maximum Green (s)	16.0	16.0		16.0	16.0		15.0	164.0		15.0	164.0	164.0
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)		6.0			6.0		7.0	7.0		7.0		7.0
Lead/Lag							Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0		1.5	2.0		1.5	2.0	2.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Act Effct Green (s)		14.0			14.0		15.0	170.7		10.3		166.0
Actuated g/C Ratio		0.07			0.07		0.07	0.79		0.05		0.77
v/c Ratio		0.69			0.03		0.39	0.91		0.57		1.34
Control Delay		63.6			80.7		75.0	9.2		125.4		179.5
Queue Delay		0.2			0.0		0.0	7.2		0.0		0.2
Total Delay		63.9			80.7		75.0	16.4		125.4		179.7
LOS		E			F		E	B		F		F
Approach Delay		63.9			80.7			17.2				179.2
Approach LOS		E			F			B				F

Intersection Summary

Area Type: Other
Cycle Length: 215
Actuated Cycle Length: 215
Offset: 123 (57%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.34
Intersection Signal Delay: 108.7 Intersection LOS: F
Intersection Capacity Utilization 107.4% ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 1: US 183 & Vargas Rd

Lane Group	SBR
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lenox Oaks
2: US 183 & Thompson Ln
Lanes, Volumes, Timings
2015 PM Existing Conditions

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	3138	66	91	4227	156	67
Future Volume (vph)	3138	66	91	4227	156	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	15	15
Storage Length (ft)		0	0		0	200
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	0.91	1.00	0.91	1.00	1.00
Frt	0.997					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4973	0	1736	4988	1909	1708
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4973	0	1736	4988	1909	1708
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3					74
Link Speed (mph)	55			55	30	
Link Distance (ft)	293			393	479	
Travel Time (s)	3.6			4.9	10.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	3566	75	103	4803	177	76
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3641	0	103	4803	177	76
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	50			50	15	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	0.88	0.88
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	6		20	6	20	20
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Prot	NA	Prot	Prot

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Protected Phases	2		1	6	4	4
Permitted Phases						
Detector Phase	2		1	6	4	4
Switch Phase						
Minimum Initial (s)	15.0		8.0	15.0	9.0	9.0
Minimum Split (s)	22.0		20.0	22.0	20.0	20.0
Total Split (s)	141.0		40.0	181.0	34.0	34.0
Total Split (%)	65.6%		18.6%	84.2%	15.8%	15.8%
Maximum Green (s)	134.0		33.0	174.0	28.0	28.0
Yellow Time (s)	5.0		5.0	5.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0		7.0	7.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		2.0	3.0	4.5	4.5
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	137.1		33.0	177.1	24.9	24.9
Actuated g/C Ratio	0.64		0.15	0.82	0.12	0.12
v/c Ratio	1.15		0.39	1.17	0.80	0.29
Control Delay	107.0		75.1	92.4	118.1	18.3
Queue Delay	0.0		0.0	0.2	0.0	0.0
Total Delay	107.0		75.1	92.5	118.1	18.3
LOS	F		E	F	F	B
Approach Delay	107.0			92.2	88.2	
Approach LOS	F			F	F	

Intersection Summary	
Area Type: Other	
Cycle Length: 215	
Actuated Cycle Length: 215	
Offset: 123 (57%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 98.2	Intersection LOS: F
Intersection Capacity Utilization 101.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: US 183 & Thompson Ln

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2015 PM Existing Conditions

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	14	1007	50	14	824	2	6	1	17	14	4	21
Future Volume (vph)	14	1007	50	14	824	2	6	1	17	14	4	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	13	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993						0.904			0.927	
Flt Protected		0.999			0.999			0.987			0.982	
Satd. Flow (prot)	0	3546	0	0	3571	0	0	1734	0	0	1712	0
Flt Permitted		0.937			0.923			0.896			0.907	
Satd. Flow (perm)	0	3326	0	0	3299	0	0	1575	0	0	1582	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			1			22			27	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		334			377			329			1129	
Travel Time (s)		6.5			7.3			7.5			25.7	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	18	1291	64	18	1056	3	8	1	22	18	5	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1373	0	0	1077	0	0	31	0	0	50	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2015 PM Existing Conditions

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	21.5	21.5		21.0	21.0		13.0	13.0		13.0	13.0	
Total Split (s)	37.0	37.0		37.0	37.0		13.0	13.0		13.0	13.0	
Total Split (%)	74.0%	74.0%		74.0%	74.0%		26.0%	26.0%		26.0%	26.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		8.0	8.0		8.0	8.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		3.0	3.0		3.0	3.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		43.0			43.0			6.4			6.5	
Actuated g/C Ratio		0.86			0.86			0.13			0.13	
v/c Ratio		0.48			0.38			0.14			0.22	
Control Delay		3.5			3.0			12.8			14.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.5			3.0			12.8			14.3	
LOS		A			A			B			B	
Approach Delay		3.5			3.0			12.8			14.3	
Approach LOS		A			A			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 33 (66%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 3.6	Intersection LOS: A
Intersection Capacity Utilization 51.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Montopolis Dr & Ponca St

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	38	0	22	0	15	11	6	0	27	106	0
Future Vol, veh/h	0	38	0	22	0	15	11	6	0	27	106	0
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	6	6	6	2	6	6	6	2	6	6	6
Mvmt Flow	0	39	0	23	0	15	11	6	0	28	109	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.8	7.8	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	63%	47%	0%
Vol Thru, %	80%	0%	34%	83%
Vol Right, %	0%	37%	19%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	133	60	32	87
LT Vol	27	38	15	0
Through Vol	106	0	11	72
RT Vol	0	22	6	15
Lane Flow Rate	137	62	33	90
Geometry Grp	1	1	1	1
Degree of Util (X)	0.163	0.077	0.042	0.104
Departure Headway (Hd)	4.276	4.46	4.567	4.274
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	827	808	788	844
Service Time	2.366	2.461	2.57	2.274
HCM Lane V/C Ratio	0.166	0.077	0.042	0.107
HCM Control Delay	8.2	7.8	7.8	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.2	0.1	0.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	72	15
Future Vol, veh/h	0	0	72	15
Peak Hour Factor	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	6	6	6
Mvmt Flow	0	0	74	15
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.8
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	17	35	36	0	11	13	14	0	27	118	14
Future Vol, veh/h	0	17	35	36	0	11	13	14	0	27	118	14
Peak Hour Factor	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	17	36	37	0	11	13	14	0	28	120	14
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8	7.7	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	19%	29%	24%
Vol Thru, %	74%	40%	34%	71%
Vol Right, %	9%	41%	37%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	159	88	38	119
LT Vol	27	17	11	28
Through Vol	118	35	13	85
RT Vol	14	36	14	6
Lane Flow Rate	162	90	39	121
Geometry Grp	1	1	1	1
Degree of Util (X)	0.195	0.11	0.048	0.148
Departure Headway (Hd)	4.321	4.391	4.494	4.398
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	832	818	798	817
Service Time	2.338	2.41	2.516	2.417
HCM Lane V/C Ratio	0.195	0.11	0.049	0.148
HCM Control Delay	8.4	8	7.7	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.4	0.2	0.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	28	85	6
Future Vol, veh/h	0	28	85	6
Peak Hour Factor	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	29	87	6
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.2
HCM LOS	A

Lane

Intersection	
Int Delay, s/veh	31.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	1	12	19	3	28	39	3274	2	56	4408	11
Future Vol, veh/h	1	1	12	19	3	28	39	3274	2	56	4408	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	130	-	-	210	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	1	12	20	3	29	40	3375	2	58	4544	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	6097	8123	2278	5391	8128	1689	4556	0	0	3377	0	0
Stage 1	4665	4665	-	3457	3457	-	-	-	-	-	-	-
Stage 2	1432	3458	-	1934	4671	-	-	-	-	-	-	-
Critical Hdwy	6.46	6.56	7.16	6.46	6.56	7.16	5.36	-	-	5.36	-	-
Critical Hdwy Stg 1	7.36	5.56	-	7.36	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.56	-	6.76	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.83	4.03	3.93	3.83	4.03	3.93	3.13	-	-	3.13	-	-
Pot Cap-1 Maneuver	0	0	27	0	0	70	~ 5	-	-	~ 23	-	-
Stage 1	0	3	-	~ 3	17	-	-	-	-	-	-	-
Stage 2	124	17	-	59	~ 3	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	0	0	27	0	0	70	~ 5	-	-	~ 23	-	-
Mov Cap-2 Maneuver	0	0	-	0	0	-	-	-	-	-	-	-
Stage 1	0	3	-	~ 3	17	-	-	-	-	-	-	-
Stage 2	60	17	-	21	~ 3	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	241.1	140.5	53.8	13
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 5	-	-	27	70	~ 23	-	-
HCM Lane V/C Ratio	8.041	-	-	0.535	0.736	2.51	-	-
HCM Control Delay (s)	$ 4571	-	-	241.1	140.$	$ 1041.9	-	-
HCM Lane LOS	F	-	-	F	F	F	-	-
HCM 95th %tile Q(veh)	6.7	-	-	1.7	3.4	7.3	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	0	1	1	1	7	2	4	1	3	20
Future Vol, veh/h	0	0	0	1	1	1	7	2	4	1	3	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	0	0	0	1	1	1	9	3	5	1	4	26

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	19	5	0	9	5	2
Stage 1	-	-	-	0	0	-	5	5	-
Stage 2	-	-	-	19	5	-	4	0	-
Critical Hdwy	-	-	-	6.5	6.6	-	6.5	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	5.6	-
Critical Hdwy Stg 2	-	-	-	5.5	5.6	-	-	-	-
Follow-up Hdwy	-	-	-	3.59	4.09	-	3.59	4.09	3.39
Pot Cap-1 Maneuver	-	-	-	978	875	-	991	875	1059
Stage 1	-	-	-	-	-	-	998	876	-
Stage 2	-	-	-	983	876	-	-	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	978	0	-	991	0	1059
Mov Cap-2 Maneuver	-	-	-	978	0	-	991	0	-
Stage 1	-	-	-	-	0	-	998	0	-
Stage 2	-	-	-	983	0	-	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s			8.5
HCM LOS		-	A

Minor Lane/Major Mvmt	NBLn1	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1056
HCM Lane V/C Ratio	-	-	-	-	0.03
HCM Control Delay (s)	-	-	-	-	8.5
HCM Lane LOS	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	0.1

Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	12	44	12	1	19	1	9	6	0	2	1	2
Future Vol, veh/h	12	44	12	1	19	1	9	6	0	2	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	14	52	14	1	22	1	11	7	0	2	1	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	47	35	2	68	36	7	4	0	0	7	0	0
Stage 1	7	7	-	28	28	-	-	-	-	-	-	-
Stage 2	40	28	-	40	8	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.51	6.21	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	957	859	1085	927	858	1078	1624	-	-	1620	-	-
Stage 1	1017	892	-	992	874	-	-	-	-	-	-	-
Stage 2	977	874	-	977	891	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	931	852	1085	867	851	1078	1624	-	-	1620	-	-
Mov Cap-2 Maneuver	931	852	-	867	851	-	-	-	-	-	-	-
Stage 1	1010	891	-	985	868	-	-	-	-	-	-	-
Stage 2	944	868	-	907	890	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	9.3	4.3	2.9
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1624	-	-	900	860	1620	-	-
HCM Lane V/C Ratio	0.007	-	-	0.089	0.029	0.001	-	-
HCM Control Delay (s)	7.2	0	-	9.4	9.3	7.2	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2020 AM Forecasted Conditions

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	6	1174	19	4	721	1	10	1	21	28	1	43
Future Volume (vph)	6	1174	19	4	721	1	10	1	21	28	1	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	13	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998						0.911			0.920	
Flt Protected								0.985			0.981	
Satd. Flow (prot)	0	3567	0	0	3574	0	0	1744	0	0	1698	0
Flt Permitted		0.952			0.950			0.865			0.856	
Satd. Flow (perm)	0	3396	0	0	3396	0	0	1532	0	0	1481	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6						23			47	
Link Speed (mph)		35			35			30			20	
Link Distance (ft)		333			2438			350			1129	
Travel Time (s)		6.5			47.5			8.0			38.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	7	1290	21	4	792	1	11	1	23	31	1	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1318	0	0	797	0	0	35	0	0	79	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2020 AM Forecasted Conditions

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	21.5	21.5		21.0	21.0		13.0	13.0		13.0	13.0	
Total Split (s)	37.0	37.0		37.0	37.0		13.0	13.0		13.0	13.0	
Total Split (%)	74.0%	74.0%		74.0%	74.0%		26.0%	26.0%		26.0%	26.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		8.0	8.0		8.0	8.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		3.0	3.0		3.0	3.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		39.5			39.5			6.7			6.7	
Actuated g/C Ratio		0.79			0.79			0.13			0.13	
v/c Ratio		0.49			0.30			0.16			0.33	
Control Delay		4.5			3.3			12.9			14.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		4.5			3.3			12.9			14.5	
LOS		A			A			B			B	
Approach Delay		4.5			3.3			12.9			14.5	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 50
Actuated Cycle Length: 50
Offset: 15 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 4.5 Intersection LOS: A
Intersection Capacity Utilization 51.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Montopolis Dr & Ponca St

Lenox Oaks
10: US 183 & Montopolis Drive
Lanes, Volumes, Timings
2020 AM Forecasted Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	736	491	41	436	0	0	0	0	100	1159	290
Future Volume (vph)	0	736	491	41	436	0	0	0	0	100	1159	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.88
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3539	1583	1770	3539	0	0	0	0	1770	5085	2787
Flt Permitted				0.275						0.950		
Satd. Flow (perm)	0	3539	1583	512	3539	0	0	0	0	1770	5085	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143									297
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		375			194			107			329	
Travel Time (s)		7.3			3.8			1.3			4.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	800	534	45	474	0	0	0	0	109	1260	315
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	800	534	45	474	0	0	0	0	109	1260	315
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	pm+pt	NA					Split	NA	Prot
Protected Phases		6		5	5 6					8	8	8
Permitted Phases			6	5 6								
Detector Phase		6	6	5	5 6					8	8	8
Switch Phase												
Minimum Initial (s)		4.0	4.0	4.0						4.0	4.0	4.0

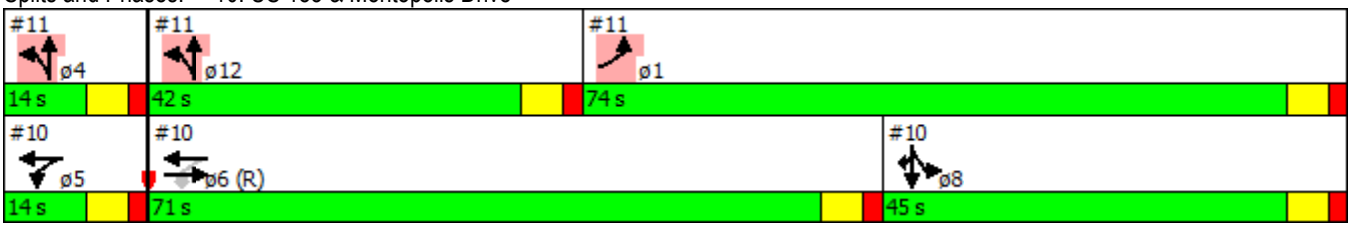
Lane Group	ø1	ø4	ø12
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	1	4	12
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0

Lenox Oaks
10: US 183 & Montopolis Drive
Lanes, Volumes, Timings
2020 AM Forecasted Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		22.0	22.0	14.0						22.0	22.0	22.0
Total Split (s)		71.0	71.0	14.0						45.0	45.0	45.0
Total Split (%)		54.6%	54.6%	10.8%						34.6%	34.6%	34.6%
Maximum Green (s)		65.0	65.0	8.0						39.0	39.0	39.0
Yellow Time (s)		4.0	4.0	4.0						4.0	4.0	4.0
All-Red Time (s)		2.0	2.0	2.0						2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0						0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0						6.0	6.0	6.0
Lead/Lag		Lead	Lead							Lag	Lag	Lag
Lead-Lag Optimize?		Yes	Yes							Yes	Yes	Yes
Vehicle Extension (s)		3.0	3.0	3.0						3.0	3.0	3.0
Recall Mode		C-Max	C-Max	Max						None	None	None
Act Effct Green (s)		65.0	65.0	73.9	79.9					38.1	38.1	38.1
Actuated g/C Ratio		0.50	0.50	0.57	0.61					0.29	0.29	0.29
v/c Ratio		0.45	0.62	0.12	0.22					0.21	0.85	0.31
Control Delay		22.0	20.3	1.1	0.2					35.5	49.4	5.5
Queue Delay		39.2	0.0	0.3	0.8					0.0	0.0	0.0
Total Delay		61.2	20.3	1.4	1.0					35.5	49.4	5.5
LOS		E	C	A	A					D	D	A
Approach Delay		44.8			1.0						40.3	
Approach LOS		D			A						D	

Intersection Summary	
Area Type: Other	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2: and 6:EBWB, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 36.2	Intersection LOS: D
Intersection Capacity Utilization 97.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 10: US 183 & Montopolis Drive



Lane Group	ø1	ø4	ø12
Minimum Split (s)	22.0	14.0	10.0
Total Split (s)	74.0	14.0	42.0
Total Split (%)	57%	11%	32%
Maximum Green (s)	68.0	8.0	36.0
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	None
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary

Lenox Oaks
Lanes, Volumes, Timings

11: US 183 & Montopolis Drive
2020 AM Forecasted Conditions

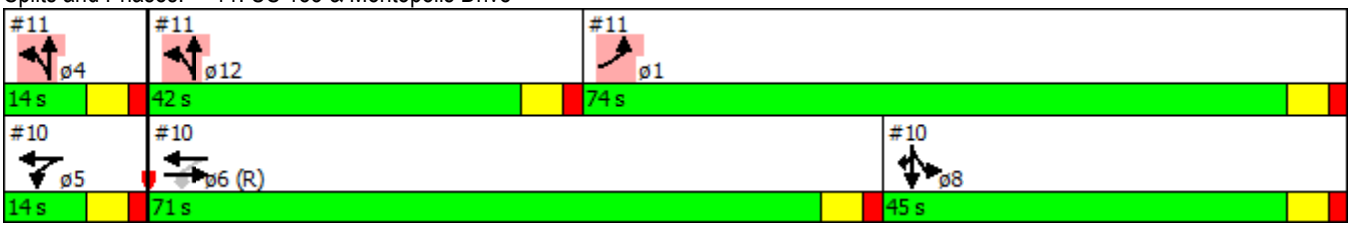
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4	ø5	ø6	ø8	ø12
Lane Configurations											
Traffic Volume (vph)	736	0	477	1871	0	0					
Future Volume (vph)	736	0	477	1871	0	0					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00	1.00					
Frt											
Flt Protected	0.950		0.950								
Satd. Flow (prot)	3433	0	1770	5085	0	0					
Flt Permitted	0.950		0.950								
Satd. Flow (perm)	3433	0	1770	5085	0	0					
Right Turn on Red		Yes				Yes					
Satd. Flow (RTOR)											
Link Speed (mph)	35			55	30						
Link Distance (ft)	194			93	307						
Travel Time (s)	3.8			1.2	7.0						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92					
Adj. Flow (vph)	800	0	518	2034	0	0					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	800	0	518	2034	0	0					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Left	Left	Right					
Median Width(ft)	24			12	12						
Link Offset(ft)	0			0	0						
Crosswalk Width(ft)	16			16	16						
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00					
Turning Speed (mph)	15	9	15			9					
Number of Detectors	1		1	2							
Detector Template	Left		Left	Thru							
Leading Detector (ft)	20		20	100							
Trailing Detector (ft)	0		0	0							
Detector 1 Position(ft)	0		0	0							
Detector 1 Size(ft)	20		20	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex							
Detector 1 Channel											
Detector 1 Extend (s)	0.0		0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0							
Detector 2 Position(ft)				94							
Detector 2 Size(ft)				6							
Detector 2 Type				Cl+Ex							
Detector 2 Channel											
Detector 2 Extend (s)				0.0							
Turn Type	Prot		Split	NA							
Protected Phases	1		4 12	4 12			4	5	6	8	12
Permitted Phases											
Detector Phase	1		4 12	4 12							
Switch Phase											
Minimum Initial (s)	4.0						4.0	4.0	4.0	4.0	4.0

Lenox Oaks
11: US 183 & Montopolis Drive
Lanes, Volumes, Timings
2020 AM Forecasted Conditions

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4	ø5	ø6	ø8	ø12
Minimum Split (s)	22.0						14.0	14.0	22.0	22.0	10.0
Total Split (s)	74.0						14.0	14.0	71.0	45.0	42.0
Total Split (%)	56.9%						11%	11%	55%	35%	32%
Maximum Green (s)	68.0						8.0	8.0	65.0	39.0	36.0
Yellow Time (s)	4.0						4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0						2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0										
Total Lost Time (s)	6.0										
Lead/Lag	Lag								Lead	Lag	Lead
Lead-Lag Optimize?	Yes								Yes	Yes	Yes
Vehicle Extension (s)	3.0						3.0	3.0	3.0	3.0	3.0
Recall Mode	None						None	Max	C-Max	None	None
Act Effct Green (s)	67.1		50.9	50.9							
Actuated g/C Ratio	0.52		0.39	0.39							
v/c Ratio	0.45		0.75	1.02							
Control Delay	28.1		42.4	65.1							
Queue Delay	24.3		0.0	0.0							
Total Delay	52.4		42.4	65.1							
LOS	D		D	E							
Approach Delay	52.4			60.5							
Approach LOS	D			E							

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2: and 6:EBWB, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 58.6	Intersection LOS: E
Intersection Capacity Utilization 103.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 11: US 183 & Montopolis Drive



Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	67	0	36	0	79	35	15	0	63	176	0
Future Vol, veh/h	0	67	0	36	0	79	35	15	0	63	176	0
Peak Hour Factor	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	5	5	5	2	5	5	5	2	5	5	5
Mvmt Flow	0	79	0	42	0	93	41	18	0	74	207	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9.4	9.9	11.2
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	65%	61%	0%
Vol Thru, %	74%	0%	27%	73%
Vol Right, %	0%	35%	12%	27%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	239	103	129	143
LT Vol	63	67	79	0
Through Vol	176	0	35	105
RT Vol	0	36	15	38
Lane Flow Rate	281	121	152	168
Geometry Grp	1	1	1	1
Degree of Util (X)	0.387	0.176	0.223	0.229
Departure Headway (Hd)	4.956	5.219	5.301	4.897
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	720	679	669	725
Service Time	3.033	3.316	3.394	2.984
HCM Lane V/C Ratio	0.39	0.178	0.227	0.232
HCM Control Delay	11.2	9.4	9.9	9.5
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.8	0.6	0.8	0.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	105	38
Future Vol, veh/h	0	0	105	38
Peak Hour Factor	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	5	5	5
Mvmt Flow	0	0	124	45
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.5
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	17	60	43	0	9	28	23	0	119	190	32
Future Vol, veh/h	0	17	60	43	0	9	28	23	0	119	190	32
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	22	77	55	0	12	36	29	0	153	244	41
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	10.6	9.8	15.6
HCM LOS	B	A	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	35%	14%	15%	13%
Vol Thru, %	56%	50%	47%	75%
Vol Right, %	9%	36%	38%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	341	120	60	225
LT Vol	119	17	9	29
Through Vol	190	60	28	168
RT Vol	32	43	23	28
Lane Flow Rate	437	154	77	288
Geometry Grp	1	1	1	1
Degree of Util (X)	0.61	0.244	0.125	0.413
Departure Headway (Hd)	5.024	5.704	5.863	5.159
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	629	610	698
Service Time	3.055	3.748	3.915	3.194
HCM Lane V/C Ratio	0.609	0.245	0.126	0.413
HCM Control Delay	15.6	10.6	9.8	11.8
HCM Lane LOS	C	B	A	B
HCM 95th-tile Q	4.2	1	0.4	2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	29	168	28
Future Vol, veh/h	0	29	168	28
Peak Hour Factor	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	37	215	36
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	11.8
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	86	0	0	1403	77
Future Vol, veh/h	0	86	0	0	1403	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	0	90	0	0	1461	80

Major/Minor	Minor2		Major2	
Conflicting Flow All	1502	770	-	0
Stage 1	1502	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.48	7.18	-	-
Critical Hdwy Stg 1	7.38	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.84	3.94	-	-
Pot Cap-1 Maneuver	126	291	-	-
Stage 1	87	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	126	291	-	-
Mov Cap-2 Maneuver	126	-	-	-
Stage 1	87	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	22.8	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	291	-	-
HCM Lane V/C Ratio	0.308	-	-
HCM Control Delay (s)	22.8	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.3	-	-

Intersection	
Int Delay, s/veh	19.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	213	1979	177	0	0
Future Vol, veh/h	0	213	1979	177	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	92	92
Heavy Vehicles, %	5	5	5	5	2	2
Mvmt Flow	0	220	2040	182	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	2131	1110	0	0
Stage 1	2131	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.5	7.2	-	-
Critical Hdwy Stg 1	7.4	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.85	3.95	-	-
Pot Cap-1 Maneuver	51	~ 171	-	-
Stage 1	30	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	51	~ 171	-	-
Mov Cap-2 Maneuver	51	-	-	-
Stage 1	30	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	217.5	0
HCM LOS	F	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	171
HCM Lane V/C Ratio	-	-	1.284
HCM Control Delay (s)	-	-	217.5
HCM Lane LOS	-	-	F
HCM 95th %tile Q(veh)	-	-	12.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	25	2053	71	0	0
Future Vol, veh/h	0	25	2053	71	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	92	92
Heavy Vehicles, %	3	3	3	3	0	0
Mvmt Flow	0	26	2161	75	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	2198	1117	0	0
Stage 1	2198	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.46	7.16	-	-
Critical Hdwy Stg 1	7.36	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-
Pot Cap-1 Maneuver	47	172	-	-
Stage 1	27	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	47	172	-	-
Mov Cap-2 Maneuver	47	-	-	-
Stage 1	27	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	29.7	0
HCM LOS	D	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	172
HCM Lane V/C Ratio	-	-	0.153
HCM Control Delay (s)	-	-	29.7
HCM Lane LOS	-	-	D
HCM 95th %tile Q(veh)	-	-	0.5

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	24	0	0	1367	46
Future Vol, veh/h	0	24	0	0	1367	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	25	0	0	1439	48

Major/Minor	Minor2		Major2	
Conflicting Flow All	1463	743	-	0
Stage 1	1463	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.46	7.16	-	-
Critical Hdwy Stg 1	7.36	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-
Pot Cap-1 Maneuver	134	305	-	-
Stage 1	93	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	134	305	-	-
Mov Cap-2 Maneuver	134	-	-	-
Stage 1	93	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	17.9	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	305	-	-
HCM Lane V/C Ratio	0.083	-	-
HCM Control Delay (s)	17.9	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	0	1	2	1	92	74	7	1	3	1
Future Vol, veh/h	0	0	0	1	2	1	92	74	7	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	1	3	1	135	109	10	1	4	1

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	10	7	0	67	7	4
Stage 1	-	-	-	0	0	-	7	7	-
Stage 2	-	-	-	10	7	-	60	0	-
Critical Hdwy	-	-	-	6.4	6.5	-	6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	5.4	5.5	-	-	-	-
Follow-up Hdwy	-	-	-	3.5	4	-	3.5	4	3.3
Pot Cap-1 Maneuver	-	-	-	1015	892	-	943	892	1085
Stage 1	-	-	-	-	-	-	1021	894	-
Stage 2	-	-	-	1018	894	-	-	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	1015	0	-	943	0	1085
Mov Cap-2 Maneuver	-	-	-	1015	0	-	943	0	-
Stage 1	-	-	-	-	0	-	1021	0	-
Stage 2	-	-	-	1018	0	-	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s			8.6
HCM LOS		-	A

Minor Lane/Major Mvmt	NBLn1	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1009
HCM Lane V/C Ratio	-	-	-	-	0.007
HCM Control Delay (s)	-	-	-	-	8.6
HCM Lane LOS	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	0

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	83	22	10	1	38	7	8	70	1	1	3	3
Future Vol, veh/h	83	22	10	1	38	7	8	70	1	1	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	119	31	14	1	54	10	11	100	1	1	4	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	165	133	6	156	135	101	9	0	0	101	0	0
Stage 1	9	9	-	124	124	-	-	-	-	-	-	-
Stage 2	156	124	-	32	11	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	804	761	1083	815	760	960	1624	-	-	1504	-	-
Stage 1	1017	892	-	885	797	-	-	-	-	-	-	-
Stage 2	851	797	-	990	890	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	747	755	1083	774	754	960	1624	-	-	1504	-	-
Mov Cap-2 Maneuver	747	755	-	774	754	-	-	-	-	-	-	-
Stage 1	1010	891	-	879	791	-	-	-	-	-	-	-
Stage 2	779	791	-	942	889	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	10	0.7	1.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1624	-	-	769	780	1504	-	-
HCM Lane V/C Ratio	0.007	-	-	0.214	0.084	0.001	-	-
HCM Control Delay (s)	7.2	0	-	10.9	10	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.3	0	-	-

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2020 PM Forecasted Conditions

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	17	1167	57	17	955	3	6	1	19	17	5	61
Future Volume (vph)	17	1167	57	17	955	3	6	1	19	17	5	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	13	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993						0.902			0.901	
Flt Protected		0.999			0.999			0.988			0.990	
Satd. Flow (prot)	0	3546	0	0	3571	0	0	1732	0	0	1678	0
Flt Permitted		0.929			0.908			0.923			0.919	
Satd. Flow (perm)	0	3297	0	0	3245	0	0	1618	0	0	1558	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			1			24			47	
Link Speed (mph)		35			35			30			20	
Link Distance (ft)		334			2454			329			1129	
Travel Time (s)		6.5			47.8			7.5			38.5	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	22	1496	73	22	1224	4	8	1	24	22	6	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1591	0	0	1250	0	0	33	0	0	106	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2020 PM Forecasted Conditions

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	21.5	21.5		21.0	21.0		13.0	13.0		13.0	13.0	
Total Split (s)	37.0	37.0		37.0	37.0		13.0	13.0		13.0	13.0	
Total Split (%)	74.0%	74.0%		74.0%	74.0%		26.0%	26.0%		26.0%	26.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		8.0	8.0		8.0	8.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		3.0	3.0		3.0	3.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		36.2			36.2			6.9			6.9	
Actuated g/C Ratio		0.72			0.72			0.14			0.14	
v/c Ratio		0.67			0.53			0.13			0.41	
Control Delay		7.0			5.5			12.0			17.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		7.0			5.5			12.0			17.5	
LOS		A			A			B			B	
Approach Delay		7.0			5.5			12.0			17.5	
Approach LOS		A			A			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 33 (66%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Montopolis Dr & Ponca St

Lenox Oaks
Lanes, Volumes, Timings

10: US 183 & Montopolis Drive
2020 PM Forecasted Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	494	740	60	390	0	0	0	0	100	1766	585
Future Volume (vph)	0	494	740	60	390	0	0	0	0	100	1766	585
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.88
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3539	1583	1770	3539	0	0	0	0	1770	5085	2787
Flt Permitted				0.394						0.950		
Satd. Flow (perm)	0	3539	1583	734	3539	0	0	0	0	1770	5085	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116									426
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		370			194			107			329	
Travel Time (s)		8.4			4.4			1.3			4.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	537	804	65	424	0	0	0	0	109	1920	636
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	537	804	65	424	0	0	0	0	109	1920	636
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	D.P+P	NA					Split	NA	Prot
Protected Phases		6		5	5 6					8	8	8
Permitted Phases			6	6								
Detector Phase		6	6	5	5 6					8	8	8
Switch Phase												
Minimum Initial (s)		4.0	4.0	4.0						4.0	4.0	4.0

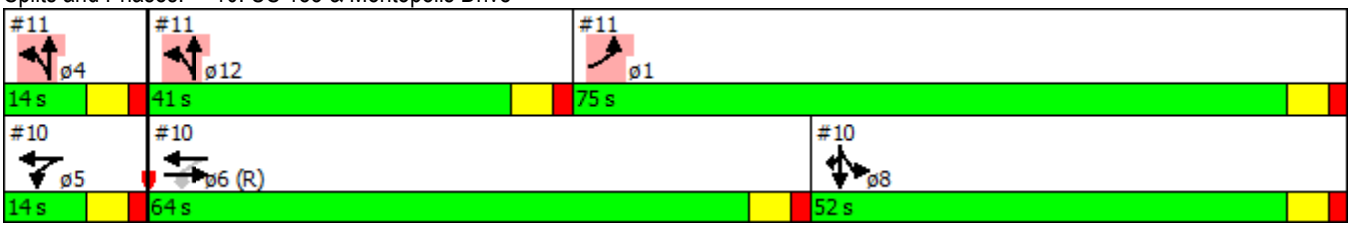
Lane Group	ø1	ø4	ø12
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	1	4	12
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0

Lenox Oaks
10: US 183 & Montopolis Drive
Lanes, Volumes, Timings
2020 PM Forecasted Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		22.0	22.0	14.0						22.0	22.0	22.0
Total Split (s)		64.0	64.0	14.0						52.0	52.0	52.0
Total Split (%)		49.2%	49.2%	10.8%						40.0%	40.0%	40.0%
Maximum Green (s)		58.0	58.0	8.0						46.0	46.0	46.0
Yellow Time (s)		4.0	4.0	4.0						4.0	4.0	4.0
All-Red Time (s)		2.0	2.0	2.0						2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0						0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0						6.0	6.0	6.0
Lead/Lag		Lead	Lead							Lag	Lag	Lag
Lead-Lag Optimize?		Yes	Yes							Yes	Yes	Yes
Vehicle Extension (s)		3.0	3.0	3.0						3.0	3.0	3.0
Recall Mode		C-Max	C-Max	None						None	None	None
Act Effct Green (s)		58.0	58.0	66.0	72.0					46.0	46.0	46.0
Actuated g/C Ratio		0.45	0.45	0.51	0.55					0.35	0.35	0.35
v/c Ratio		0.34	1.04	0.15	0.22					0.17	1.07	0.50
Control Delay		24.3	75.2	1.2	0.2					29.9	82.1	11.6
Queue Delay		5.3	0.0	0.5	0.8					0.0	0.0	0.0
Total Delay		29.6	75.2	1.7	1.0					29.9	82.1	11.6
LOS		C	E	A	A					C	F	B
Approach Delay		56.9			1.1						63.2	
Approach LOS		E			A						E	

Intersection Summary	
Area Type: Other	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 6:EBWB, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 54.6	Intersection LOS: D
Intersection Capacity Utilization 116.0%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 10: US 183 & Montopolis Drive



Lane Group	ø1	ø4	ø12
Minimum Split (s)	22.0	14.0	10.0
Total Split (s)	75.0	14.0	41.0
Total Split (%)	58%	11%	32%
Maximum Green (s)	69.0	8.0	35.0
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	None
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary

Lenox Oaks
Lanes, Volumes, Timings

11: US 183 & Montopolis Drive
2020 PM Forecasted Conditions

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4	ø5	ø6	ø8	ø12
Lane Configurations											
Traffic Volume (vph)	494	0	450	1469	0	0					
Future Volume (vph)	494	0	450	1469	0	0					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00	1.00					
Frt											
Flt Protected	0.950		0.950								
Satd. Flow (prot)	3433	0	1770	5085	0	0					
Flt Permitted	0.950		0.950								
Satd. Flow (perm)	3433	0	1770	5085	0	0					
Right Turn on Red		Yes				Yes					
Satd. Flow (RTOR)											
Link Speed (mph)	30			55	30						
Link Distance (ft)	194			93	307						
Travel Time (s)	4.4			1.2	7.0						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92					
Adj. Flow (vph)	537	0	489	1597	0	0					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	537	0	489	1597	0	0					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Left	Left	Right					
Median Width(ft)	24			12	12						
Link Offset(ft)	0			0	0						
Crosswalk Width(ft)	16			16	16						
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00					
Turning Speed (mph)	15	9	15			9					
Number of Detectors	1		1	2							
Detector Template	Left		Left	Thru							
Leading Detector (ft)	20		20	100							
Trailing Detector (ft)	0		0	0							
Detector 1 Position(ft)	0		0	0							
Detector 1 Size(ft)	20		20	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex							
Detector 1 Channel											
Detector 1 Extend (s)	0.0		0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0							
Detector 2 Position(ft)				94							
Detector 2 Size(ft)				6							
Detector 2 Type				Cl+Ex							
Detector 2 Channel											
Detector 2 Extend (s)				0.0							
Turn Type	Prot		Split	NA							
Protected Phases	1		4 12	4 12			4	5	6	8	12
Permitted Phases											
Detector Phase	1		4 12	4 12							
Switch Phase											
Minimum Initial (s)	4.0						4.0	4.0	4.0	4.0	4.0

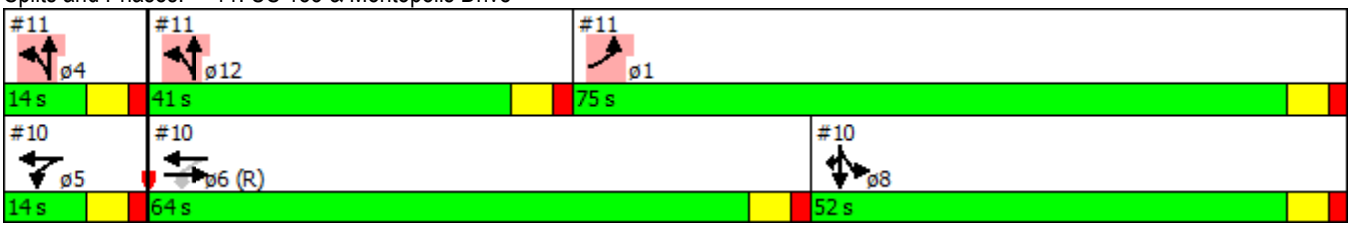
Lenox Oaks
11: US 183 & Montopolis Drive
Lanes, Volumes, Timings
2020 PM Forecasted Conditions

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4	ø5	ø6	ø8	ø12
Minimum Split (s)	22.0						14.0	14.0	22.0	22.0	10.0
Total Split (s)	75.0						14.0	14.0	64.0	52.0	41.0
Total Split (%)	57.7%						11%	11%	49%	40%	32%
Maximum Green (s)	69.0						8.0	8.0	58.0	46.0	35.0
Yellow Time (s)	4.0						4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0						2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0										
Total Lost Time (s)	6.0										
Lead/Lag	Lag								Lead	Lag	Lead
Lead-Lag Optimize?	Yes								Yes	Yes	Yes
Vehicle Extension (s)	3.0						3.0	3.0	3.0	3.0	3.0
Recall Mode	None						None	None	C-Max	None	None
Act Effct Green (s)	69.0		49.0	49.0							
Actuated g/C Ratio	0.53		0.38	0.38							
v/c Ratio	0.29		0.73	0.83							
Control Delay	24.8		42.7	41.5							
Queue Delay	10.0		0.0	0.0							
Total Delay	34.8		42.7	41.5							
LOS	C		D	D							
Approach Delay	34.8			41.8							
Approach LOS	C			D							

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 6:EBWB, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 40.4 Intersection LOS: D
Intersection Capacity Utilization 123.3% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 11: US 183 & Montopolis Drive



Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	44	0	26	0	17	13	7	0	68	86	0
Future Vol, veh/h	0	44	0	26	0	17	13	7	0	68	86	0
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	6	6	6	2	6	6	6	2	6	6	6
Mvmt Flow	0	45	0	27	0	18	13	7	0	70	89	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8	7.9	8.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	63%	46%	0%
Vol Thru, %	56%	0%	35%	83%
Vol Right, %	0%	37%	19%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	154	70	37	100
LT Vol	68	44	17	0
Through Vol	86	0	13	83
RT Vol	0	26	7	17
Lane Flow Rate	159	72	38	103
Geometry Grp	1	1	1	1
Degree of Util (X)	0.197	0.091	0.049	0.124
Departure Headway (Hd)	4.463	4.55	4.666	4.336
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	807	789	769	830
Service Time	2.474	2.566	2.684	2.348
HCM Lane V/C Ratio	0.197	0.091	0.049	0.124
HCM Control Delay	8.6	8	7.9	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.3	0.2	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	83	17
Future Vol, veh/h	0	0	83	17
Peak Hour Factor	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	6	6	6
Mvmt Flow	0	0	86	18
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	20	41	42	0	13	15	16	0	31	137	16
Future Vol, veh/h	0	20	41	42	0	13	15	16	0	31	137	16
Peak Hour Factor	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	20	42	43	0	13	15	16	0	32	140	16
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.2	7.9	8.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	19%	30%	23%
Vol Thru, %	74%	40%	34%	72%
Vol Right, %	9%	41%	36%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	184	103	44	138
LT Vol	31	20	13	32
Through Vol	137	41	15	99
RT Vol	16	42	16	7
Lane Flow Rate	188	105	45	141
Geometry Grp	1	1	1	1
Degree of Util (X)	0.23	0.132	0.058	0.176
Departure Headway (Hd)	4.405	4.511	4.632	4.488
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	817	795	773	800
Service Time	2.428	2.538	2.663	2.512
HCM Lane V/C Ratio	0.23	0.132	0.058	0.176
HCM Control Delay	8.7	8.2	7.9	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	0.5	0.2	0.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	32	99	7
Future Vol, veh/h	0	32	99	7
Peak Hour Factor	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	33	101	7
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.5
HCM LOS	A

Lane

Intersection	
Int Delay, s/veh	11.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	147	0	0	2129	111
Future Vol, veh/h	0	147	0	0	2129	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	163	0	0	2366	123

Major/Minor	Minor2		Major2	
Conflicting Flow All	2427	1243	-	0
Stage 1	2427	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.46	7.16	-	-
Critical Hdwy Stg 1	7.36	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-
Pot Cap-1 Maneuver	34	~ 141	-	-
Stage 1	18	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	34	~ 141	-	-
Mov Cap-2 Maneuver	34	-	-	-
Stage 1	18	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	186.9	0
HCM LOS	F	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	141	-	-
HCM Lane V/C Ratio	1.158	-	-
HCM Control Delay (s)	186.9	-	-
HCM Lane LOS	F	-	-
HCM 95th %tile Q(veh)	9.3	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	31.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	259	1525	182	0	0
Future Vol, veh/h	0	259	1525	182	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	0	294	1733	207	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	1836	969	0	0
Stage 1	1836	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.48	7.18	-	-
Critical Hdwy Stg 1	7.38	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.84	3.94	-	-
Pot Cap-1 Maneuver	78	~ 215	-	-
Stage 1	50	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	78	~ 215	-	-
Mov Cap-2 Maneuver	78	-	-	-
Stage 1	50	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	235.9	0
HCM LOS	F	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	215
HCM Lane V/C Ratio	-	-	1.369
HCM Control Delay (s)	-	-	235.9
HCM Lane LOS	-	-	F
HCM 95th %tile Q(veh)	-	-	16.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	57	1651	69	0	0
Future Vol, veh/h	0	57	1651	69	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	59	1702	71	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	1738	886	0	0
Stage 1	1738	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.46	7.16	-	-
Critical Hdwy Stg 1	7.36	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-
Pot Cap-1 Maneuver	91	245	-	-
Stage 1	59	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	91	245	-	-
Mov Cap-2 Maneuver	91	-	-	-
Stage 1	59	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	24.3	0
HCM LOS	C	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	245
HCM Lane V/C Ratio	-	-	0.24
HCM Control Delay (s)	-	-	24.3
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.9

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	17	0	0	2193	61
Future Vol, veh/h	0	17	0	0	2193	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	18	0	0	2261	63

Major/Minor	Minor2		Major2	
Conflicting Flow All	2292	1161	-	0
Stage 1	2292	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.46	7.16	-	-
Critical Hdwy Stg 1	7.36	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-
Pot Cap-1 Maneuver	41	161	-	-
Stage 1	23	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	41	161	-	-
Mov Cap-2 Maneuver	41	-	-	-
Stage 1	23	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	30.1	0
HCM LOS	D	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	161	-	-
HCM Lane V/C Ratio	0.109	-	-
HCM Control Delay (s)	30.1	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	0.4	-	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	0	1	1	1	8	2	5	1	3	23
Future Vol, veh/h	0	0	0	1	1	1	8	2	5	1	3	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	0	0	0	1	1	1	10	3	6	1	4	30

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	21	5	0	10	5	2
Stage 1	-	-	-	0	0	-	5	5	-
Stage 2	-	-	-	21	5	-	5	0	-
Critical Hdwy	-	-	-	6.5	6.6	-	6.5	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	5.6	-
Critical Hdwy Stg 2	-	-	-	5.5	5.6	-	-	-	-
Follow-up Hdwy	-	-	-	3.59	4.09	-	3.59	4.09	3.39
Pot Cap-1 Maneuver	-	-	-	976	875	-	990	875	1059
Stage 1	-	-	-	-	-	-	998	876	-
Stage 2	-	-	-	981	876	-	-	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	976	0	-	990	0	1059
Mov Cap-2 Maneuver	-	-	-	976	0	-	990	0	-
Stage 1	-	-	-	-	0	-	998	0	-
Stage 2	-	-	-	981	0	-	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s			8.5
HCM LOS		-	A

Minor Lane/Major Mvmt	NBLn1	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1056
HCM Lane V/C Ratio	-	-	-	-	0.033
HCM Control Delay (s)	-	-	-	-	8.5
HCM Lane LOS	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	0.1

Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	14	51	14	1	22	1	10	7	1	2	1	2
Future Vol, veh/h	14	51	14	1	22	1	10	7	1	2	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	16	60	16	1	26	1	12	8	1	2	1	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	53	40	2	77	40	9	4	0	0	9	0	0
Stage 1	7	7	-	32	32	-	-	-	-	-	-	-
Stage 2	46	33	-	45	8	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.51	6.21	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	948	854	1085	915	854	1076	1624	-	-	1617	-	-
Stage 1	1017	892	-	987	870	-	-	-	-	-	-	-
Stage 2	970	870	-	971	891	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	919	847	1085	847	847	1076	1624	-	-	1617	-	-
Mov Cap-2 Maneuver	919	847	-	847	847	-	-	-	-	-	-	-
Stage 1	1010	891	-	980	864	-	-	-	-	-	-	-
Stage 2	933	864	-	891	890	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	9.4	4	2.9
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1624	-	-	894	855	1617	-	-
HCM Lane V/C Ratio	0.007	-	-	0.104	0.033	0.001	-	-
HCM Control Delay (s)	7.2	0	-	9.5	9.4	7.2	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2020 AM S+F Conditions with Improvements

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	6	1174	19	9	721	1	10	1	21	28	1	58
Future Volume (vph)	6	1174	19	9	721	1	10	1	21	28	1	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	13	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998						0.911			0.910	
Flt Protected					0.999			0.985			0.984	
Satd. Flow (prot)	0	3567	0	0	3571	0	0	1744	0	0	1684	0
Flt Permitted		0.951			0.937			0.893			0.879	
Satd. Flow (perm)	0	3392	0	0	3349	0	0	1581	0	0	1505	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6						23			64	
Link Speed (mph)		35			35			30			20	
Link Distance (ft)		333			2438			350			1129	
Travel Time (s)		6.5			47.5			8.0			38.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	7	1290	21	10	792	1	11	1	23	31	1	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1318	0	0	803	0	0	35	0	0	96	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2020 AM S+F Conditions with Improvements

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	21.5	21.5		21.0	21.0		13.0	13.0		13.0	13.0	
Total Split (s)	37.0	37.0		37.0	37.0		13.0	13.0		13.0	13.0	
Total Split (%)	74.0%	74.0%		74.0%	74.0%		26.0%	26.0%		26.0%	26.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		8.0	8.0		8.0	8.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		3.0	3.0		3.0	3.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		36.4			36.4			6.7			6.7	
Actuated g/C Ratio		0.73			0.73			0.13			0.13	
v/c Ratio		0.53			0.33			0.15			0.38	
Control Delay		5.3			3.9			12.8			13.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		5.3			3.9			12.8			13.8	
LOS		A			A			B			B	
Approach Delay		5.3			3.9			12.8			13.8	
Approach LOS		A			A			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 15 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 5.3	Intersection LOS: A
Intersection Capacity Utilization 52.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Montopolis Dr & Ponca St

Lenox Oaks
Lanes, Volumes, Timings

10: US 183/SB US 183 & Montopolis Dr
2020 AM S+F Conditions with Improvements

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	745	497	50	436	0	0	0	0	100	1199	290
Future Volume (vph)	0	745	497	50	436	0	0	0	0	100	1199	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.88
Frt		0.979	0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3319	1441	1770	3539	0	0	0	0	1770	5085	2787
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3319	1441	1770	3539	0	0	0	0	1770	5085	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20	153									294
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		375			194			107			329	
Travel Time (s)		7.3			3.8			1.3			4.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	810	540	54	474	0	0	0	0	109	1303	315
Shared Lane Traffic (%)			24%									
Lane Group Flow (vph)	0	940	410	54	474	0	0	0	0	109	1303	315
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Prot	Prot	NA					Split	NA	Prot
Protected Phases		6	6	5	5 6					8	8	8
Permitted Phases												
Detector Phase		6	6	5	5 6					8	8	8
Switch Phase												
Minimum Initial (s)		4.0	4.0	4.0						4.0	4.0	4.0

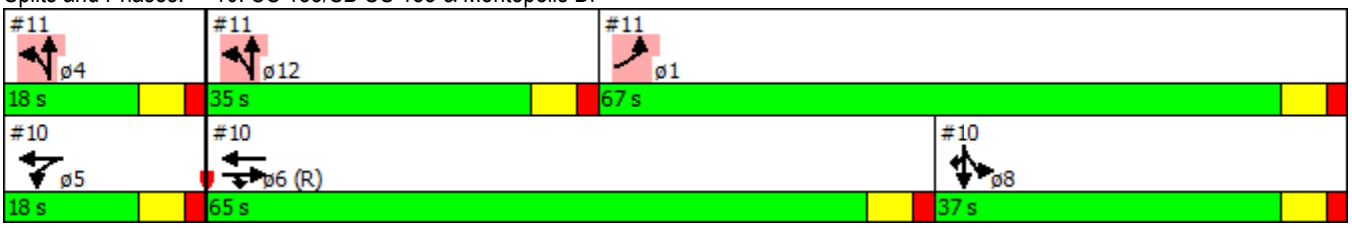
Lane Group	ø1	ø4	ø12
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	1	4	12
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0

Lenox Oaks
10: US 183/SB US 183 & Montopolis Dr
Lanes, Volumes, Timings
2020 AM S+F Conditions with Improvements

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		22.0	22.0	10.0						22.0	22.0	22.0
Total Split (s)		65.0	65.0	18.0						37.0	37.0	37.0
Total Split (%)		54.2%	54.2%	15.0%						30.8%	30.8%	30.8%
Maximum Green (s)		59.0	59.0	12.0						31.0	31.0	31.0
Yellow Time (s)		4.0	4.0	4.0						4.0	4.0	4.0
All-Red Time (s)		2.0	2.0	2.0						2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0						0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0						6.0	6.0	6.0
Lead/Lag		Lead	Lead							Lag	Lag	Lag
Lead-Lag Optimize?		Yes	Yes							Yes	Yes	Yes
Vehicle Extension (s)		3.0	3.0	3.0						3.0	3.0	3.0
Recall Mode		C-Max	C-Max	None						Max	Max	Max
Act Effct Green (s)		59.0	59.0	12.0	77.0					31.0	31.0	31.0
Actuated g/C Ratio		0.49	0.49	0.10	0.64					0.26	0.26	0.26
v/c Ratio		0.57	0.52	0.31	0.21					0.24	0.99	0.34
Control Delay		22.8	15.1	77.2	0.1					36.9	67.6	6.2
Queue Delay		50.7	0.0	1.8	0.9					0.0	0.0	0.0
Total Delay		73.5	15.1	79.1	1.0					36.9	67.6	6.2
LOS		E	B	E	A					D	E	A
Approach Delay		55.8			9.0						54.5	
Approach LOS		E			A						D	

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2: and 6:EBWB, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 48.3	Intersection LOS: D
Intersection Capacity Utilization 95.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 10: US 183/SB US 183 & Montopolis Dr



Lane Group	ø1	ø4	ø12
Minimum Split (s)	22.0	14.0	10.0
Total Split (s)	67.0	18.0	35.0
Total Split (%)	56%	15%	29%
Maximum Green (s)	61.0	12.0	29.0
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	None
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary

Lenox Oaks
Lanes, Volumes, Timings

11: US 183/NB US 183
2020 AM S+F Conditions with Improvements

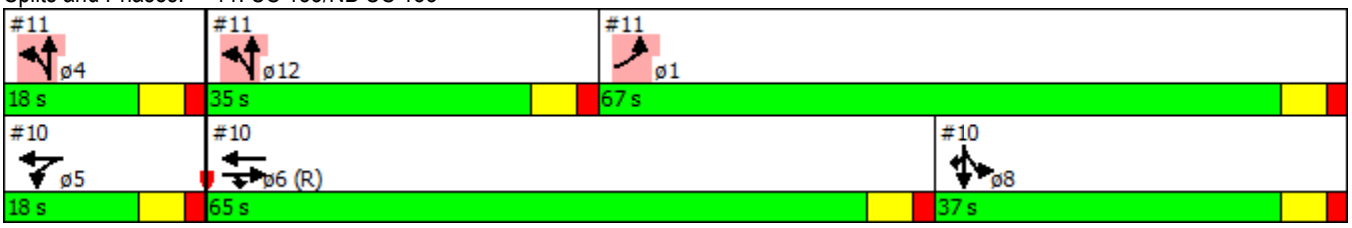
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4	ø5	ø6	ø8	ø12
Lane Configurations											
Traffic Volume (vph)	745	0	486	1932	0	0					
Future Volume (vph)	745	0	486	1932	0	0					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00	1.00					
Frt											
Flt Protected	0.950		0.950								
Satd. Flow (prot)	3433	0	1770	5085	0	0					
Flt Permitted	0.950		0.950								
Satd. Flow (perm)	3433	0	1770	5085	0	0					
Right Turn on Red		Yes				Yes					
Satd. Flow (RTOR)											
Link Speed (mph)	35			55	30						
Link Distance (ft)	194			93	307						
Travel Time (s)	3.8			1.2	7.0						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92					
Adj. Flow (vph)	810	0	528	2100	0	0					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	810	0	528	2100	0	0					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Left	Left	Right					
Median Width(ft)	24			12	12						
Link Offset(ft)	0			0	0						
Crosswalk Width(ft)	16			16	16						
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00					
Turning Speed (mph)	15	9	15			9					
Number of Detectors	1		1	2							
Detector Template	Left		Left	Thru							
Leading Detector (ft)	20		20	100							
Trailing Detector (ft)	0		0	0							
Detector 1 Position(ft)	0		0	0							
Detector 1 Size(ft)	20		20	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex							
Detector 1 Channel											
Detector 1 Extend (s)	0.0		0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0							
Detector 2 Position(ft)				94							
Detector 2 Size(ft)				6							
Detector 2 Type				Cl+Ex							
Detector 2 Channel											
Detector 2 Extend (s)				0.0							
Turn Type	Prot		Split	NA							
Protected Phases	1		4 12	4 12			4	5	6	8	12
Permitted Phases											
Detector Phase	1		4 12	4 12							
Switch Phase											
Minimum Initial (s)	4.0						4.0	4.0	4.0	4.0	4.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4	ø5	ø6	ø8	ø12
Minimum Split (s)	22.0						14.0	10.0	22.0	22.0	10.0
Total Split (s)	67.0						18.0	18.0	65.0	37.0	35.0
Total Split (%)	55.8%						15%	15%	54%	31%	29%
Maximum Green (s)	61.0						12.0	12.0	59.0	31.0	29.0
Yellow Time (s)	4.0						4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0						2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0										
Total Lost Time (s)	6.0										
Lead/Lag	Lag								Lead	Lag	Lead
Lead-Lag Optimize?	Yes								Yes	Yes	Yes
Vehicle Extension (s)	3.0						3.0	3.0	3.0	3.0	3.0
Recall Mode	None						None	None	C-Max	Max	None
Act Effct Green (s)	61.0		47.0	47.0							
Actuated g/C Ratio	0.51		0.39	0.39							
v/c Ratio	0.46		0.76	1.05							
Control Delay	21.5		40.2	72.2							
Queue Delay	17.4		0.0	0.0							
Total Delay	38.9		40.2	72.2							
LOS	D		D	E							
Approach Delay	38.9			65.8							
Approach LOS	D			E							

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2: and 6:EBWB, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 59.5 Intersection LOS: E
Intersection Capacity Utilization 101.4% ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 11: US 183/NB US 183



Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	67	0	40	0	86	49	15	0	63	176	0
Future Vol, veh/h	0	67	0	40	0	86	49	15	0	63	176	0
Peak Hour Factor	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	5	5	5	2	5	5	5	2	5	5	5
Mvmt Flow	0	79	0	47	0	101	58	18	0	74	207	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9.6	10.4	11.5
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	63%	57%	0%
Vol Thru, %	74%	0%	33%	74%
Vol Right, %	0%	37%	10%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	239	107	150	146
LT Vol	63	67	86	0
Through Vol	176	0	49	108
RT Vol	0	40	15	38
Lane Flow Rate	281	126	176	172
Geometry Grp	1	1	1	1
Degree of Util (X)	0.394	0.188	0.266	0.243
Departure Headway (Hd)	5.157	5.373	5.436	5.09
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	703	670	664	708
Service Time	3.157	3.388	3.45	3.108
HCM Lane V/C Ratio	0.4	0.188	0.265	0.243
HCM Control Delay	11.5	9.6	10.4	9.7
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	1.9	0.7	1.1	0.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	108	38
Future Vol, veh/h	0	0	108	38
Peak Hour Factor	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	5	5	5
Mvmt Flow	0	0	127	45
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.7
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	17	60	43	0	9	28	23	0	119	190	37
Future Vol, veh/h	0	17	60	43	0	9	28	23	0	119	190	37
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	22	77	55	0	12	36	29	0	153	244	47
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	10.7	9.9	16.1
HCM LOS	B	A	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	34%	14%	15%	15%
Vol Thru, %	55%	50%	47%	74%
Vol Right, %	11%	36%	38%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	346	120	60	239
LT Vol	119	17	9	35
Through Vol	190	60	28	176
RT Vol	37	43	23	28
Lane Flow Rate	444	154	77	306
Geometry Grp	1	1	1	1
Degree of Util (X)	0.623	0.247	0.127	0.441
Departure Headway (Hd)	5.052	5.772	5.938	5.187
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	714	620	602	692
Service Time	3.086	3.821	3.994	3.226
HCM Lane V/C Ratio	0.622	0.248	0.128	0.442
HCM Control Delay	16.1	10.7	9.9	12.3
HCM Lane LOS	C	B	A	B
HCM 95th-tile Q	4.4	1	0.4	2.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	35	176	28
Future Vol, veh/h	0	35	176	28
Peak Hour Factor	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	45	226	36
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	12.3
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	86	0	0	1488	79
Future Vol, veh/h	0	86	0	0	1488	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	0	90	0	0	1550	82

Major/Minor	Minor2		Major2	
Conflicting Flow All	1591	815	-	0
Stage 1	1591	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.48	7.18	-	-
Critical Hdwy Stg 1	7.38	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.84	3.94	-	-
Pot Cap-1 Maneuver	111	272	-	-
Stage 1	75	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	111	272	-	-
Mov Cap-2 Maneuver	75	-	-	-
Stage 1	75	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	24.6	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	272	-	-
HCM Lane V/C Ratio	0.329	-	-
HCM Control Delay (s)	24.6	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.4	-	-

Intersection	
Int Delay, s/veh	22.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	213	2081	177	0	0
Future Vol, veh/h	0	213	2081	177	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	92	92
Heavy Vehicles, %	5	5	5	5	2	2
Mvmt Flow	0	220	2145	182	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	2237	1163	0	0
Stage 1	2237	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.5	7.2	-	-
Critical Hdwy Stg 1	7.4	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.85	3.95	-	-
Pot Cap-1 Maneuver	43	~ 158	-	-
Stage 1	25	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	43	~ 158	-	-
Mov Cap-2 Maneuver	43	-	-	-
Stage 1	25	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	263.6	0
HCM LOS	F	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	158
HCM Lane V/C Ratio	-	-	1.39
HCM Control Delay (s)	-	-	263.6
HCM Lane LOS	-	-	F
HCM 95th %tile Q(veh)	-	-	13.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	25	2155	71	0	0
Future Vol, veh/h	0	25	2155	71	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	92	92
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	0	26	2268	75	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	2306	1171	0	0
Stage 1	2306	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.46	7.16	-	-
Critical Hdwy Stg 1	7.36	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-
Pot Cap-1 Maneuver	40	158	-	-
Stage 1	23	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	40	158	-	-
Mov Cap-2 Maneuver	40	-	-	-
Stage 1	23	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	32.3	0
HCM LOS	D	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	158
HCM Lane V/C Ratio	-	-	0.167
HCM Control Delay (s)	-	-	32.3
HCM Lane LOS	-	-	D
HCM 95th %tile Q(veh)	-	-	0.6

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	0	1	30	0	92	74	23	0	3	1
Future Vol, veh/h	0	0	0	1	30	0	92	74	23	0	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	1	44	0	135	109	34	0	4	1

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	50	47	0	118	47	44
Stage 1	-	-	-	0	0	-	47	47	-
Stage 2	-	-	-	50	47	-	71	0	-
Critical Hdwy	-	-	-	6.4	6.5	-	6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	5.4	5.5	-	-	-	-
Follow-up Hdwy	-	-	-	3.5	4	-	3.5	4	3.3
Pot Cap-1 Maneuver	-	-	-	964	849	-	883	849	1032
Stage 1	-	-	-	-	-	-	981	860	-
Stage 2	-	-	-	978	860	-	-	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	964	0	-	883	0	1032
Mov Cap-2 Maneuver	-	-	-	964	0	-	883	0	-
Stage 1	-	-	-	-	0	-	981	0	-
Stage 2	-	-	-	978	0	-	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s			8.5
HCM LOS		-	A

Minor Lane/Major Mvmt	NBLn1	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1032
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	-	-	-	-	8.5
HCM Lane LOS	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	0

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	94	22	10	1	38	7	8	70	1	1	3	3
Future Vol, veh/h	94	22	10	1	38	7	8	70	1	1	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	134	31	14	1	54	10	11	100	1	1	4	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	165	133	6	156	135	101	9	0	0	101	0	0
Stage 1	9	9	-	124	124	-	-	-	-	-	-	-
Stage 2	156	124	-	32	11	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	804	761	1083	815	760	960	1624	-	-	1504	-	-
Stage 1	1017	892	-	885	797	-	-	-	-	-	-	-
Stage 2	851	797	-	990	890	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	747	755	1083	774	754	960	1624	-	-	1504	-	-
Mov Cap-2 Maneuver	747	755	-	774	754	-	-	-	-	-	-	-
Stage 1	1010	891	-	879	791	-	-	-	-	-	-	-
Stage 2	779	791	-	942	889	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	10	0.7	1.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1624	-	-	767	780	1504	-	-
HCM Lane V/C Ratio	0.007	-	-	0.235	0.084	0.001	-	-
HCM Control Delay (s)	7.2	0	-	11.1	10	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0.3	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	67	0	0	1570	4
Future Vol, veh/h	0	67	0	0	1570	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	73	0	0	1707	4

Major/Minor	Minor2		Major2	
Conflicting Flow All	1709	854	-	0
Stage 1	1709	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.44	7.14	-	-
Critical Hdwy Stg 1	7.34	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-
Pot Cap-1 Maneuver	96	259	-	-
Stage 1	63	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	96	259	-	-
Mov Cap-2 Maneuver	96	-	-	-
Stage 1	63	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	24.2	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	259	-	-
HCM Lane V/C Ratio	0.281	-	-
HCM Control Delay (s)	24.2	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.1	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	119	0	0	1445	155
Future Vol, veh/h	0	119	0	0	1445	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	125	0	0	1521	163

Major/Minor	Minor2		Major2	
Conflicting Flow All	1603	841	-	0
Stage 1	1603	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.46	7.16	-	-
Critical Hdwy Stg 1	7.36	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-
Pot Cap-1 Maneuver	110	263	-	-
Stage 1	74	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	110	263	-	-
Mov Cap-2 Maneuver	110	-	-	-
Stage 1	74	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	30.5	0
HCM LOS	D	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	263	-	-
HCM Lane V/C Ratio	0.476	-	-
HCM Control Delay (s)	30.5	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	2.4	-	-

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2020 PM S+F Conditions with Improvements

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	17	1167	57	26	955	3	6	1	19	17	5	77
Future Volume (vph)	17	1167	57	26	955	3	6	1	19	17	5	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	13	12	12	12	12
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993						0.902			0.895	
Flt Protected		0.999			0.999			0.988			0.991	
Satd. Flow (prot)	0	3546	0	0	3571	0	0	1732	0	0	1669	0
Flt Permitted		0.928			0.877			0.922			0.931	
Satd. Flow (perm)	0	3294	0	0	3135	0	0	1617	0	0	1567	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			1			24			47	
Link Speed (mph)		35			35			30			20	
Link Distance (ft)		334			2454			329			1129	
Travel Time (s)		6.5			47.8			7.5			38.5	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	22	1496	73	33	1224	4	8	1	24	22	6	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1591	0	0	1261	0	0	33	0	0	127	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	

Lenox Oaks
Lanes, Volumes, Timings

3: Montopolis Dr & Ponca St
2020 PM S+F Conditions with Improvements

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	21.5	21.5		21.0	21.0		13.0	13.0		13.0	13.0	
Total Split (s)	37.0	37.0		37.0	37.0		13.0	13.0		13.0	13.0	
Total Split (%)	74.0%	74.0%		74.0%	74.0%		26.0%	26.0%		26.0%	26.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		8.0	8.0		8.0	8.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		3.0	3.0		3.0	3.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		35.9			35.9			7.2			7.2	
Actuated g/C Ratio		0.72			0.72			0.14			0.14	
v/c Ratio		0.67			0.56			0.13			0.48	
Control Delay		7.2			5.9			11.9			19.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		7.2			5.9			11.9			19.8	
LOS		A			A			B			B	
Approach Delay		7.2			5.9			11.9			19.8	
Approach LOS		A			A			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 50	
Actuated Cycle Length: 50	
Offset: 33 (66%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 7.2	Intersection LOS: A
Intersection Capacity Utilization 61.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Montopolis Dr & Ponca St

Lenox Oaks
Lanes, Volumes, Timings

10: US 183/SB US 183 & Montopolis Drive
2020 PM S+F Conditions with Improvements

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	500	750	77	390	0	0	0	0	100	1852	585
Future Volume (vph)	0	500	750	77	390	0	0	0	0	100	1852	585
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.91	0.88
Frt		0.937	0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3177	1441	1770	3539	0	0	0	0	1770	5085	2787
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3177	1441	1770	3539	0	0	0	0	1770	5085	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115	115									456
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		370			194			107			329	
Travel Time (s)		7.2			3.8			1.3			4.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	543	815	84	424	0	0	0	0	109	2013	636
Shared Lane Traffic (%)			48%									
Lane Group Flow (vph)	0	934	424	84	424	0	0	0	0	109	2013	636
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Prot	Prot	NA					Split	NA	Prot
Protected Phases		6	6	5	5 6					8	8	8
Permitted Phases												
Detector Phase		6	6	5	5 6					8	8	8
Switch Phase												
Minimum Initial (s)		4.0	4.0	4.0						4.0	4.0	4.0

Lane Group	ø1	ø4	ø12
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	1	4	12
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0

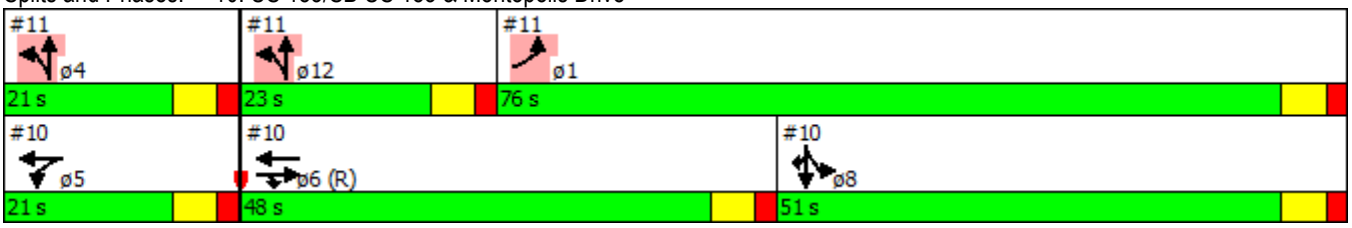
Lenox Oaks
10: US 183/SB US 183 & Montopolis Drive
Lanes, Volumes, Timings
2020 PM S+F Conditions with Improvements

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)		22.0	22.0	10.0						22.0	22.0	22.0
Total Split (s)		48.0	48.0	21.0						51.0	51.0	51.0
Total Split (%)		40.0%	40.0%	17.5%						42.5%	42.5%	42.5%
Maximum Green (s)		42.0	42.0	15.0						45.0	45.0	45.0
Yellow Time (s)		4.0	4.0	4.0						4.0	4.0	4.0
All-Red Time (s)		2.0	2.0	2.0						2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0						0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0						6.0	6.0	6.0
Lead/Lag		Lead	Lead							Lag	Lag	Lag
Lead-Lag Optimize?		Yes	Yes							Yes	Yes	Yes
Vehicle Extension (s)		3.0	3.0	3.0						3.0	3.0	3.0
Recall Mode		C-Max	C-Max	None						Max	Max	Max
Act Effct Green (s)		42.0	42.0	15.0	63.0					45.0	45.0	45.0
Actuated g/C Ratio		0.35	0.35	0.12	0.52					0.38	0.38	0.38
v/c Ratio		0.79	0.73	0.38	0.23					0.16	1.06	0.48
Control Delay		36.1	33.1	67.1	0.1					25.9	74.0	8.7
Queue Delay		22.9	0.0	4.4	1.4					0.0	0.0	0.0
Total Delay		59.1	33.1	71.5	1.5					25.9	74.0	8.7
LOS		E	C	E	A					C	E	A
Approach Delay		51.0			13.1						57.0	
Approach LOS		D			B						E	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2: and 6:EBWB, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 50.4 Intersection LOS: D
Intersection Capacity Utilization 104.8% ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 10: US 183/SB US 183 & Montopolis Drive



Lane Group	ø1	ø4	ø12
Minimum Split (s)	22.0	22.0	10.0
Total Split (s)	76.0	21.0	23.0
Total Split (%)	63%	18%	19%
Maximum Green (s)	70.0	15.0	17.0
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	None
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			

Intersection Summary

Lenox Oaks
Lanes, Volumes, Timings

11: US 183/NB US 183 & Montopolis Drive
2020 PM S+F Conditions with Improvements

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4	ø5	ø6	ø8	ø12
Lane Configurations											
Traffic Volume (vph)	500	0	467	1522	0	0					
Future Volume (vph)	500	0	467	1522	0	0					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00	1.00					
Frt											
Flt Protected	0.950		0.950								
Satd. Flow (prot)	3433	0	1770	5085	0	0					
Flt Permitted	0.950		0.950								
Satd. Flow (perm)	3433	0	1770	5085	0	0					
Right Turn on Red		Yes				Yes					
Satd. Flow (RTOR)											
Link Speed (mph)	35			55	30						
Link Distance (ft)	194			93	307						
Travel Time (s)	3.8			1.2	7.0						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92					
Adj. Flow (vph)	543	0	508	1654	0	0					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	543	0	508	1654	0	0					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Left	Left	Right					
Median Width(ft)	24			12	12						
Link Offset(ft)	0			0	0						
Crosswalk Width(ft)	16			16	16						
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00					
Turning Speed (mph)	15	9	15			9					
Number of Detectors	1		1	2							
Detector Template	Left		Left	Thru							
Leading Detector (ft)	20		20	100							
Trailing Detector (ft)	0		0	0							
Detector 1 Position(ft)	0		0	0							
Detector 1 Size(ft)	20		20	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex							
Detector 1 Channel											
Detector 1 Extend (s)	0.0		0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0							
Detector 2 Position(ft)				94							
Detector 2 Size(ft)				6							
Detector 2 Type				Cl+Ex							
Detector 2 Channel											
Detector 2 Extend (s)				0.0							
Turn Type	Prot		Split	NA							
Protected Phases	1		4 12	4 12			4	5	6	8	12
Permitted Phases											
Detector Phase	1		4 12	4 12							
Switch Phase											
Minimum Initial (s)	4.0						4.0	4.0	4.0	4.0	4.0

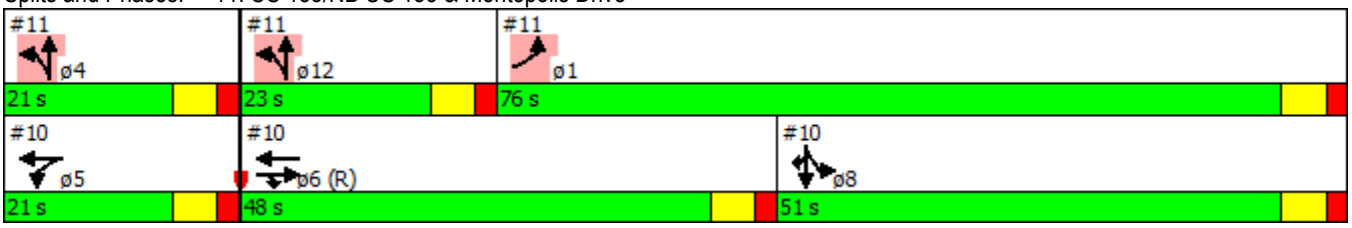
Lenox Oaks
11: US 183/NB US 183 & Montopolis Drive
Lanes, Volumes, Timings
2020 PM S+F Conditions with Improvements

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	ø4	ø5	ø6	ø8	ø12
Minimum Split (s)	22.0						22.0	10.0	22.0	22.0	10.0
Total Split (s)	76.0						21.0	21.0	48.0	51.0	23.0
Total Split (%)	63.3%						18%	18%	40%	43%	19%
Maximum Green (s)	70.0						15.0	15.0	42.0	45.0	17.0
Yellow Time (s)	4.0						4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0						2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0										
Total Lost Time (s)	6.0										
Lead/Lag	Lag								Lead	Lag	Lead
Lead-Lag Optimize?	Yes								Yes	Yes	Yes
Vehicle Extension (s)	3.0						3.0	3.0	3.0	3.0	3.0
Recall Mode	None						None	None	C-Max	Max	None
Act Effct Green (s)	70.0		38.0	38.0							
Actuated g/C Ratio	0.58		0.32	0.32							
v/c Ratio	0.27		0.91	1.03							
Control Delay	9.3		61.0	70.2							
Queue Delay	6.7		0.0	0.0							
Total Delay	16.0		61.0	70.2							
LOS	B		E	E							
Approach Delay	16.0			68.0							
Approach LOS	B			E							

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2: and 6:EBWB, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 57.6 Intersection LOS: E
Intersection Capacity Utilization 111.2% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 11: US 183/NB US 183 & Montopolis Drive



Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	44	0	35	0	24	29	7	0	68	86	0
Future Vol, veh/h	0	44	0	35	0	24	29	7	0	68	86	0
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	6	6	6	2	6	6	6	2	6	6	6
Mvmt Flow	0	45	0	36	0	25	30	7	0	70	89	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.1	8.2	8.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	56%	40%	0%
Vol Thru, %	56%	0%	48%	84%
Vol Right, %	0%	44%	12%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	154	79	60	105
LT Vol	68	44	24	0
Through Vol	86	0	29	88
RT Vol	0	35	7	17
Lane Flow Rate	159	81	62	108
Geometry Grp	1	1	1	1
Degree of Util (X)	0.201	0.103	0.081	0.133
Departure Headway (Hd)	4.551	4.543	4.729	4.425
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	791	790	758	812
Service Time	2.568	2.565	2.752	2.445
HCM Lane V/C Ratio	0.201	0.103	0.082	0.133
HCM Control Delay	8.7	8.1	8.2	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.3	0.3	0.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	88	17
Future Vol, veh/h	0	0	88	17
Peak Hour Factor	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	6	6	6
Mvmt Flow	0	0	91	18
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.1
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	20	41	42	0	13	15	16	0	31	137	26
Future Vol, veh/h	0	20	41	42	0	13	15	16	0	31	137	26
Peak Hour Factor	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	1	1	1	2	1	1	1	2	1	1	1
Mvmt Flow	0	20	42	43	0	13	15	16	0	32	140	27
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.3	8	8.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	19%	30%	29%
Vol Thru, %	71%	40%	34%	66%
Vol Right, %	13%	41%	36%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	103	44	158
LT Vol	31	20	13	46
Through Vol	137	41	15	105
RT Vol	26	42	16	7
Lane Flow Rate	198	105	45	161
Geometry Grp	1	1	1	1
Degree of Util (X)	0.242	0.134	0.059	0.202
Departure Headway (Hd)	4.401	4.579	4.701	4.518
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	816	783	761	795
Service Time	2.428	2.609	2.737	2.545
HCM Lane V/C Ratio	0.243	0.134	0.059	0.203
HCM Control Delay	8.8	8.3	8	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	0.5	0.2	0.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	46	105	7
Future Vol, veh/h	0	46	105	7
Peak Hour Factor	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	1	1	1
Mvmt Flow	0	47	107	7
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.7
HCM LOS	A

Lane

Intersection	
Int Delay, s/veh	15.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	147	0	0	2306	115
Future Vol, veh/h	0	147	0	0	2306	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	163	0	0	2562	128

Major/Minor	Minor2		Major2	
Conflicting Flow All	2626	1344	-	0
Stage 1	2626	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.46	7.16	-	-
Critical Hdwy Stg 1	7.36	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-
Pot Cap-1 Maneuver	25	~ 121	-	-
Stage 1	13	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	25	~ 121	-	-
Mov Cap-2 Maneuver	25	-	-	-
Stage 1	13	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	269.3	0
HCM LOS	F	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	121	-	-
HCM Lane V/C Ratio	1.35	-	-
HCM Control Delay (s)	269.3	-	-
HCM Lane LOS	F	-	-
HCM 95th %tile Q(veh)	10.9	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	38.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	259	1664	182	0	0
Future Vol, veh/h	0	259	1664	182	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	0	294	1891	207	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	1994	1048	0	0
Stage 1	1994	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.48	7.18	-	-
Critical Hdwy Stg 1	7.38	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.84	3.94	-	-
Pot Cap-1 Maneuver	63	~ 190	-	-
Stage 1	38	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	63	~ 190	-	-
Mov Cap-2 Maneuver	63	-	-	-
Stage 1	38	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	$ 316.2	0
HCM LOS	F	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	190
HCM Lane V/C Ratio	-	-	1.549
HCM Control Delay (s)	-	-	$ 316.2
HCM Lane LOS	-	-	F
HCM 95th %tile Q(veh)	-	-	18.9

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	57	1790	69	0	0
Future Vol, veh/h	0	57	1790	69	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	59	1845	71	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	1881	957	0	0
Stage 1	1881	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.46	7.16	-	-
Critical Hdwy Stg 1	7.36	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-
Pot Cap-1 Maneuver	74	220	-	-
Stage 1	46	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	74	220	-	-
Mov Cap-2 Maneuver	74	-	-	-
Stage 1	46	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	27.2	0
HCM LOS	D	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	220
HCM Lane V/C Ratio	-	-	0.267
HCM Control Delay (s)	-	-	27.2
HCM Lane LOS	-	-	D
HCM 95th %tile Q(veh)	-	-	1

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	0	1	29	1	8	2	35	1	3	23
Future Vol, veh/h	0	0	0	1	29	1	8	2	35	1	3	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	0	0	0	1	38	1	10	3	45	1	4	30

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	58	42	0	65	41	38
Stage 1	-	-	-	0	0	-	41	41	-
Stage 2	-	-	-	58	42	-	24	0	-
Critical Hdwy	-	-	-	6.5	6.6	-	6.5	6.6	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	5.5	5.6	-
Critical Hdwy Stg 2	-	-	-	5.5	5.6	-	-	-	-
Follow-up Hdwy	-	-	-	3.59	4.09	-	3.59	4.09	3.39
Pot Cap-1 Maneuver	-	-	-	929	835	-	921	836	1012
Stage 1	-	-	-	-	-	-	961	845	-
Stage 2	-	-	-	945	844	-	-	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	929	0	-	921	0	1012
Mov Cap-2 Maneuver	-	-	-	929	0	-	921	0	-
Stage 1	-	-	-	-	0	-	961	0	-
Stage 2	-	-	-	945	0	-	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s			8.7
HCM LOS		-	A

Minor Lane/Major Mvmt	NBLn1	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	1008
HCM Lane V/C Ratio	-	-	-	-	0.035
HCM Control Delay (s)	-	-	-	-	8.7
HCM Lane LOS	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	0.1

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	37	51	14	1	22	1	10	7	1	2	1	2
Future Vol, veh/h	37	51	14	1	22	1	10	7	1	2	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	44	60	16	1	26	1	12	8	1	2	1	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	53	40	2	77	40	9	4	0	0	9	0	0
Stage 1	7	7	-	32	32	-	-	-	-	-	-	-
Stage 2	46	33	-	45	8	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.51	6.21	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	948	854	1085	915	854	1076	1624	-	-	1617	-	-
Stage 1	1017	892	-	987	870	-	-	-	-	-	-	-
Stage 2	970	870	-	971	891	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	919	847	1085	847	847	1076	1624	-	-	1617	-	-
Mov Cap-2 Maneuver	919	847	-	847	847	-	-	-	-	-	-	-
Stage 1	1010	891	-	980	864	-	-	-	-	-	-	-
Stage 2	933	864	-	891	890	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.6	9.4	4	2.9
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1624	-	-	900	855	1617	-	-
HCM Lane V/C Ratio	0.007	-	-	0.133	0.033	0.001	-	-
HCM Control Delay (s)	7.2	0	-	9.6	9.4	7.2	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	30	0	0	2372	82
Future Vol, veh/h	0	30	0	0	2372	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	33	0	0	2578	89

Major/Minor	Minor2		Major2	
Conflicting Flow All	2623	1333	-	0
Stage 1	2623	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.44	7.14	-	-
Critical Hdwy Stg 1	7.34	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-
Pot Cap-1 Maneuver	26	124	-	-
Stage 1	13	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	26	124	-	-
Mov Cap-2 Maneuver	26	-	-	-
Stage 1	13	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	44.1	0
HCM LOS	E	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	124	-	-
HCM Lane V/C Ratio	0.263	-	-
HCM Control Delay (s)	44.1	-	-
HCM Lane LOS	E	-	-
HCM 95th %tile Q(veh)	1	-	-

Intersection	
Int Delay, s/veh	11.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	0	153	0	0	2284	195
Future Vol, veh/h	0	153	0	0	2284	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	158	0	0	2355	201

Major/Minor	Minor2		Major2	
Conflicting Flow All	2455	1277	-	0
Stage 1	2455	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.46	7.16	-	-
Critical Hdwy Stg 1	7.36	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-
Pot Cap-1 Maneuver	32	~ 134	-	-
Stage 1	18	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	32	~ 134	-	-
Mov Cap-2 Maneuver	32	-	-	-
Stage 1	18	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	197.5	0
HCM LOS	F	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	134	-	-
HCM Lane V/C Ratio	1.177	-	-
HCM Control Delay (s)	197.5	-	-
HCM Lane LOS	F	-	-
HCM 95th %tile Q(veh)	9.3	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon