

ZONING CHANGE REVIEW SHEET

CASE: C814-92-0006.02 – Seton Medical Center
Planned Unit Development Amendment No. 2

DISTRICT: 10

ZONING FROM / TO: PUD-NP to PUD-NP, to change conditions of zoning

ADDRESS: 1201 West 38th Street

SITE AREA: 12.21 acres

PROPERTY OWNER: Seton Medical Center, % Altus Group US Inc. (Scott Herndon)

AGENT: Metcalfe Wolff Stuart & Williams, LLP (Michele Rogerson Lynch)

CASE MANAGER: Wendy Rhoades (512-974-7719, wendy.rhoades@austintexas.gov)

STAFF RECOMMENDATION:

The Staff recommendation is to grant an amendment to planned unit development – neighborhood plan (PUD-NP) combining district zoning as shown in the Proposed Zoning Submittal (Attachment A). *For a summary of the basis of Staff's recommendation, see pages 2 and 3.*

ENVIRONMENTAL COMMISSION ACTION:

August 17, 2022: APPROVED AN AMENDMENT TO PUD-NP DISTRICT ZONING AS THE STAFF RECOMMENDED

**[J. BRISTOL; M. SCHIERA – 2ND] (7-4) A. BARRETT BIXLER, R. BRIMER,
R. SCOTT, P. THOMPSON – NAY**

PLANNING COMMISSION ACTION:

September 27, 2022: APPROVED AN AMENDMENT TO PUD-NP DISTRICT ZONING AS THE STAFF RECOMMENDED, WITH THE CONDITION THAT PEDESTRIAN, BICYCLE, AND SCHOOL TRAFFIC SAFETY IMPROVEMENTS BE EVALUATED BY THE APPLICANT AND, IF DEEMED APPROPRIATE AND APPROVED BY ATD, INSTALLED BY THE APPLICANT ON 34TH STREET AND IMMEDIATELY ADJACENT AREAS WITHIN THE TIA STUDY AREA, BY CONSENT

**[C. HEMPEL; G. COX – 2ND] (9-0) J. MUSHTALER, R. SCHNEIDER;
J. THOMPSON – ABSENT; ONE VACANCY ON THE DAIS**

August 23, 2022: APPROVED A POSTPONEMENT REQUEST BY THE NEIGHBORHOOD TO SEPTEMBER 27, 2022

[J. THOMPSON; R. SCHNEIDER – 2ND] (9-0) S. PRAXIS – ABSENT

CITY COUNCIL ACTION:

October 27, 2022:

September 15, 2022: *APPROVED A POSTPONEMENT REQUEST BY STAFF TO OCTOBER 27, 2022. VOTE: 10-0, MAYOR PRO TEM ALTER WAS OFF THE DAIS.*

ORDINANCE NUMBER:

ISSUES:

The Applicant is in agreement with the recommendation of the Planning Commission.

The West 31st Street Creekside Neighborhood Association and the Bryker Woods Neighborhood Association requested postponement until the September 27th Planning Commission meeting. The Applicant did not object to the postponement request by the Neighborhoods.

The Applicant has met with the Rosedale Neighborhood Association and President of Brykerwoods Neighborhood Association, and met with the Brykerwoods Neighborhood board on August 16, 2022.

EXHIBITS AND ATTACHMENTS TO THE STAFF REPORT:

Exhibits A and A-1: Zoning Map and Aerial

Attachment A: Applicant's Summary Letter

Correspondence Received

Attachment A-1: Proposed Zoning Submittal

Attachment B: Environmental Commission action and support material

Attachment C: TIA Compliance document

CASE MANAGER COMMENTS:

The Seton Medical Center PUD is bounded by West 38th Street on the north, Medical Parkway to the east, West 34th Street to the south, and medical offices that border the property to the west (GO-V-NP). There are retail and service-oriented commercial uses on the north side of West 38th (SF-3; LO; CS-1-V; LR-V; CS-V; GR-V); medical offices and supporting businesses on the east side of Medical Parkway, the south side of East 34th Street and adjacent to the west (CS-NP; CS-V-NP; GO-CO-NP; GO-NP; GO-V-NP; GR-NP. The PUD is designated as Civic land use on the Central West Austin Combined (Windsor Road) Neighborhood Plan approved by Council in September 2010. ***Please refer to Exhibits A (Zoning Map) and A-1 (Aerial View).***

The PUD was approved by Council in June 1993 and prescribed development intensity according to a Land Use Plan. The PUD also included the following components: 1) limited floor-to-area ratio to 1.48 : 1; 2) prescribed minimum front yard setbacks of 25 feet except

for a minimum street side setback of 10 feet along West 34th Street; 3) required a minimum of 11.9% open space; 4) limited height to 120 feet above ground level within 300-540 feet of SF-5 or more restrictive zoned property; 5) required six off-street loading spaces for a hospital (general) use; 6) waived additional right-of-way dedication on Medical Parkway and West 34th Street; 7) waived sidewalk installation along West 34th Street; and 8) waived the requirement for driveways to align with opposing driveways or have minimum offsets for the West 38th Street driveway, Service Yard drive, and the West 34th Street drive (C814-92-0006). The first amendment to the PUD was approved administratively in December 2002 and resulted in updating the existing PUD drawings to show the full build-out of the PUD and the landscape concept plan.

The purpose of the second amendment to the PUD is to facilitate the addition of a 358,155 square foot addition of a cardiovascular wing along the West 38th Street frontage and a Women's and Children's Tower along the West 34th Street frontage. The existing parking garage on the subject property is proposed to be demolished and then rebuilt on the adjacent property to the west which is under the same ownership. Specifically, the proposed PUD amendment consists of the following components:

- Increase the floor-to-area ratio from 1.48 : 1 to 1.9 to : 1
- Increase the building coverage from 272,388 square feet (51.2%) to 334,830 square feet (62.95%)
- Increase the building square footage from 786,600 square feet to 1,144,755 square feet (resulting from the 358,155 square foot expansion)
- Increase the impervious cover from 79.16 percent to 79.62 percent
- Add water quality controls where none currently exist

Following input from the City arborist, the tree relocation component of the PUD is being reviewed under an administrative site plan on the adjacent property to the west. The site plan proposes relocation of the existing garage on the main hospital / east campus and also an underground parking garage along West 38th Street (SP-2022-0059C – Ascension Seton Medical Center - 34th Street and 38th Street Garages). ***Please refer to Applicant's Summary Letter and Proposed Zoning Submittal (Attachment A).***

Below is a description of the **proposed superiority items** associated with the PUD amendment through PUD notes:

- New buildings will achieve a LEED silver rating
- Redevelopment will exceed minimum landscaping requirements
- All trees will be sourced from Central Texas native seed stock
- New buildings will enhance City of Austin Dark Sky regulations
- Building design will reduce bird / building collisions by utilizing glass with a reflectivity of 15 percent or less
- An Integrated Pest Management (IPM) Plan will be provided at the time of site plan application
- The Project will provide onsite water reuse system that will collect condensate and rainwater collection to offset cooling tower potable water demand and irrigation

BASIS OF STAFF RECOMMENDATION:

1. *The proposed zoning should be consistent with the purpose statement of the district sought.*

Per the Land Development Code, PUD district zoning was established to implement goals of preserving the natural environment, encouraging high quality, sustainable development and innovative design, and ensuring adequate public facilities and services. The City Council intends PUD district zoning to produce development that achieves these goals to a greater degree than and thus is superior to development which could occur under conventional zoning and subdivision regulations. The PUD provides a canvas for the design of a large scale project, with the end goal to allow flexibility, and also inform and communicate the possibilities for development. Additional effort is required by all parties to ensure that development standards are clear and municipal and citizen needs are addressed. The PUD ordinance and related exhibits are key because once approved, they provide the regulations under which the project will be built, which provides certainty for developers and their agents. The neighborhood plan (NP) district denotes a tract located within the boundaries of an adopted Neighborhood Plan.

2. *Zoning should promote the policy of locating retail and more intensive zoning near the intersections of arterial roadways or at the intersections of arterials and major collectors.*

Staff recommends the Applicant's request because the PUD is bounded by existing arterial and collector roadways on three sides and is an integral part of an area that is distinguished by a wide range of hospital services, medical offices, and supporting services. The proposed PUD amendment will increase the square footage of the facility and modernize it so that hospital and medical services continue to be provided to the Austin area at a regional scale.

EXISTING ZONING AND LAND USES:

	ZONING	LAND USES
<i>Site</i>	PUD-NP	Hospital services (general) and parking garage
<i>North</i>	SF-3; LO; CS-1-V; LR-V; CS-V; GR-V	Restaurant (limited); Retail (convenience); Medical office; Personal improvement services; Financial services; Personal services with surface parking; Single family residences – detached and attached
<i>South</i>	CS-NP; GO-CO-NP; GO-NP; GO-V-NP	Medical offices with surface parking; Retail sales (convenience)
<i>East</i>	CS-NP; CS-V-NP	Medical offices with surface and structured parking; Restaurant (limited); Medical supplies
<i>West</i>	GO-V-NP; GR-NP	Medical offices with surface parking (under the same ownership as the subject site)

NEIGHBORHOOD PLAN AREA: Central West Austin Combined (Windsor Road)

TIA: Please refer to Compliance Memo (Attachment C)

WATERSHED: Shoal Creek – Urban

CAPITOL VIEW CORRIDOR: No

SCENIC ROADWAY: No

SCHOOLS:

Bryker Woods Elementary School O Henry Middle School Austin High School

COMMUNITY REGISTRY LIST:

33 – Heritage Neighborhood Association	66 – Rosedale Neighborhood Association
88 – West Austin Neighborhood Group	283 – North Austin Neighborhood Alliance
511 – Austin Neighborhoods Council	742 – Austin Independent School District
754 – CANPAC	1144 – West 31 st Street Creekside Neighborhood Association
1194 – 45 th St. Concerned Citizens	1228 – Sierra Group, Austin Regional Group
1301 – Central West Austin Combined Neighborhood Plan Contact Team	
1391 – Central Austin Community Development Corporation	
1363 – SEL Texas	1424 – Preservation Austin
1497 – Shoal Creek Conservancy	1510 – My Guadalupe
1530 – Friends of Austin Neighborhoods	1532 – Bull Creek Road Coalition
1550 – Homeless Neighborhood Association	1609 – Friends of Heritage
1616 – Neighborhood Empowerment Foundation	1774 – Austin Lost and Found Pets

AREA CASE HISTORIES:

NUMBER	REQUEST	COMMISSION	CITY COUNCIL
C14-2008-0003 – Windsor Road Vertical Mixed Use (VMU) Rezoning – W 35th St (north); N Lamar Blvd (east); Enfield Rd (south); N Mopac Expy (west)	Apply -V to 21 tracts on 27.46 acres	To Grant excluding VMU for Tracts 1-6; To Grant VMU related standards to Tracts 7-21 and 60% MFI for 10% of rental units in a VMU building	Apvd (12-13-2007).
C14-2008-0004 – Rosedale Vertical Mixed Use (VMU) Rezoning – Burnet Rd and 45 th St (east), W 35 th and W 38 th Sts (south), N MoPac Expy	Apply -V to 28 tracts on 32.8 acres	To Grant VMU with conditions	Apvd -V to include and exclude tracts, with conditions (4-10-2008).

(west), Hancock Dr and North Loop Dr (north)			
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RELATED CASES:

The property is platted as Lot 1, Seton Medical Center Addition No. 2, a subdivision recorded in October 1980 (C8S-80-095) and Lots 8, 9, 17 and 18, Glen Ridge Addition.

The subject property is within the boundaries of the Central West Austin Combined (Windsor Road) Neighborhood Planning Area and is designated as Civic land use on the adopted Future Land Use Map (NP-2010-0027). The –NP combining district was appended to the existing base district on September 23, 2010 (C14-2010-0051 – Ordinance No. 20100923-103).

EXISTING STREET CHARACTERISTICS:

Name	ASMP Classification	ASMP Required ROW (feet)	Existing ROW (feet)	Existing Pavement	Sidewalks	Bicycle Route	Capital Metro (within ¼ mile)
W 38 th Street (northwestern segment)	Level 3	104	94	Yes	Yes	Yes	Yes
W 38 th Street (southeastern segment)	Level 3	94	78	Yes	Yes	Yes	Yes
W 34 th Street	Level 2	64	60	Yes	Yes	Yes	Yes
Medical Parkway	Level 2	80	61	Yes	Yes	Yes	Yes
Bailey Lane	Level 1	58	45	Yes	Yes	No	Yes

Note: West 38th Street is broken up into two sections. The dividing line for these segments is the intersection of Tonkawa Trail.

ADDITIONAL STAFF COMMENTS:Inclusive Planning

Proposed Area and Use: 12.21 acres. Proposing to amend a previously approved PUD to allow for building expansion. Allow for the addition of 358,155 square foot for an expansion of a Women's Tower and a cardiovascular wing. Existing FAR is 1.48:1 and the proposed FAR is 1.9:1. The currently allowed building coverage is 272,388 square feet (51.2%). The proposed building square footage is 334,830 square feet (62.95%). The currently allowed building square footage is 786,600 square feet. The total proposed building square footage

with the 358,155 square foot expansion is 1,144,755 square feet. The currently allowed impervious cover is 421,074 square feet (79.16%). The proposed impervious cover is 423,513 square feet (79.62%). Open Space: The current percentage of open space is 11.9%. The proposed percentage of open space is 4%. Remove trees, demolish parking garage.

Yes	Imagine Austin Decision Guidelines
Compact and Connected Measures	
Y	Imagine Austin Growth Concept Map: Located close to, within or adjacent to an Imagine Austin Activity Center, Imagine Austin Activity Corridor, or Imagine Austin Job Center as identified on the Growth Concept Map. Name(s) of Activity Center/Activity Corridor/Job Center: 38 th STREET ACTIVITY CORRIDOR
Y	Mobility and Public Transit: Located within 0.25 miles of public transit stop and/or light rail station.
Y	Mobility and Bike/Ped Access: Adjoins a public sidewalk, shared path, and/or bike lane.
Y	Connectivity, Good and Services, Employment: Provides or is located within 0.50 miles to goods and services, and/or employment center.
Y	Connectivity and Food Access: Provides or is located within 0.50 miles of a grocery store/farmers market.
	Connectivity and Education: Is located within 0.50 miles from a public school or university.
Y	Connectivity and Healthy Living: Provides or is located within 0.50 miles from a recreational area, park and/or walking trail.
Y	Connectivity and Health: Provides or is located within 0.50 miles of health facility (ex: hospital, urgent care, doctor's office, drugstore clinic, specialized outpatient care.)
	Housing Affordability: Provides a minimum of 10% of units for workforce housing (80% MFI or less) and/or fee in lieu for affordable house.
	Housing Choice: Expands the number of units and housing choice that suits a variety of household sizes, incomes, and lifestyle needs of a diverse population (ex: apartments, triplex, granny flat, live/work units, cottage homes, and townhomes) in support of Imagine Austin and the Strategic Housing Blueprint.
	Mixed Use: Provides mixed use development (minimum 10% residential and 10% non-residential floor area).
	Culture and Creative Economy: Provides or is located within 0.50 miles of a cultural resource (ex: library, theater, museum, cultural center).
7	Total Number of "Yes's"
Imagine Austin Priority Program Bonus Features (Extra Points)	
Y	Small Area Plan Policies: Supports applicable Small Area Plans, including the Future Land Use Map, goals, objectives, actions and text. List three small area plan policies that relate to this project. Name of Small Area Plan: Central West Austin Combined NP (Windsor Road). FLUM: CIVIC
	Culture and Historic Preservation: Preserves or enhances a historically and/or culturally significant site.
	Culture and Creative Economy: Expands Austin's creative economy (ex: live music venue, art studio, film, digital, theater.)

Y	Workforce Development, the Economy and Education: Expands the economic base by creating permanent jobs, especially an industry that is currently not represented in particular area or that promotes a new technology.
Y	Workforce Development, the Economy and Education: Promotes educational opportunities or workforce development training.
10	Total Number of “Yes’s” Above and Under Bonus Features

Applicable Central West Austin Combined Small Area Plan Policies:

(TEXT) WINDSOR ROAD NEIGHBORHOOD PLANNING AREA

Bryker Woods/W. 31st Street. Neighborhood edge: The most intensive part of the planning area is the medical district located between West 38th and 31st Street between Lamar Boulevard and Shoal Creek. Seton Medical Center, Bailey Square, Medical Park Tower, and Shoal Creek Hospital are the major medical institutions that have also attracted smaller medical offices and commercial to this district. Seton Hospital is considered by many to be one of the top medical facilities in the region. This area, in combination with St. David’s Heart Hospital and Central Market across Lamar Boulevard and the commercial district on the north side of West 38th/35th Street, functions as a major hub and employee base. (p. 37)

(TEXT) Land Use Goal Statement: Development of property as office, commercial, retail, multifamily, or civic uses should be in accordance with the Future Land Use Map, as informed by the Plan text, and should be appropriately oriented, scaled and buffered to protect the existing single-family homes from any intrusion and adverse effects from higher intensity uses. (p. 41)

Drainage

Demonstration of compliance with Land Development Code (LDC) 25-7-61 and Drainage Criteria Manual (DCM) 1.2.2 regarding no adverse flooding impact and no increase in point discharge from the subject site must be demonstrated with subsequent development applications.

Demonstration of no adverse flooding impact must utilize current drainage criteria including Atlas 14 rainfall data. This will be confirmed with subsequent development applications.

Water Quality

Demonstration of compliance with Land Development Code (LDC) 25-8-211 and Environmental Criteria Manual (ECM) 1.9.2 regarding water quality requirements for the subject site must be demonstrated with subsequent development applications.

Environmental Office – Watershed Protection Department

Please refer to Attachment B

Environmental Review – Development Services Department

Please refer to Attachment B

Fire Review

No comments; Approved.

PARD – Planning & Design Review

There are no parkland dedication requirements currently associated with hospital uses.

Site Plan

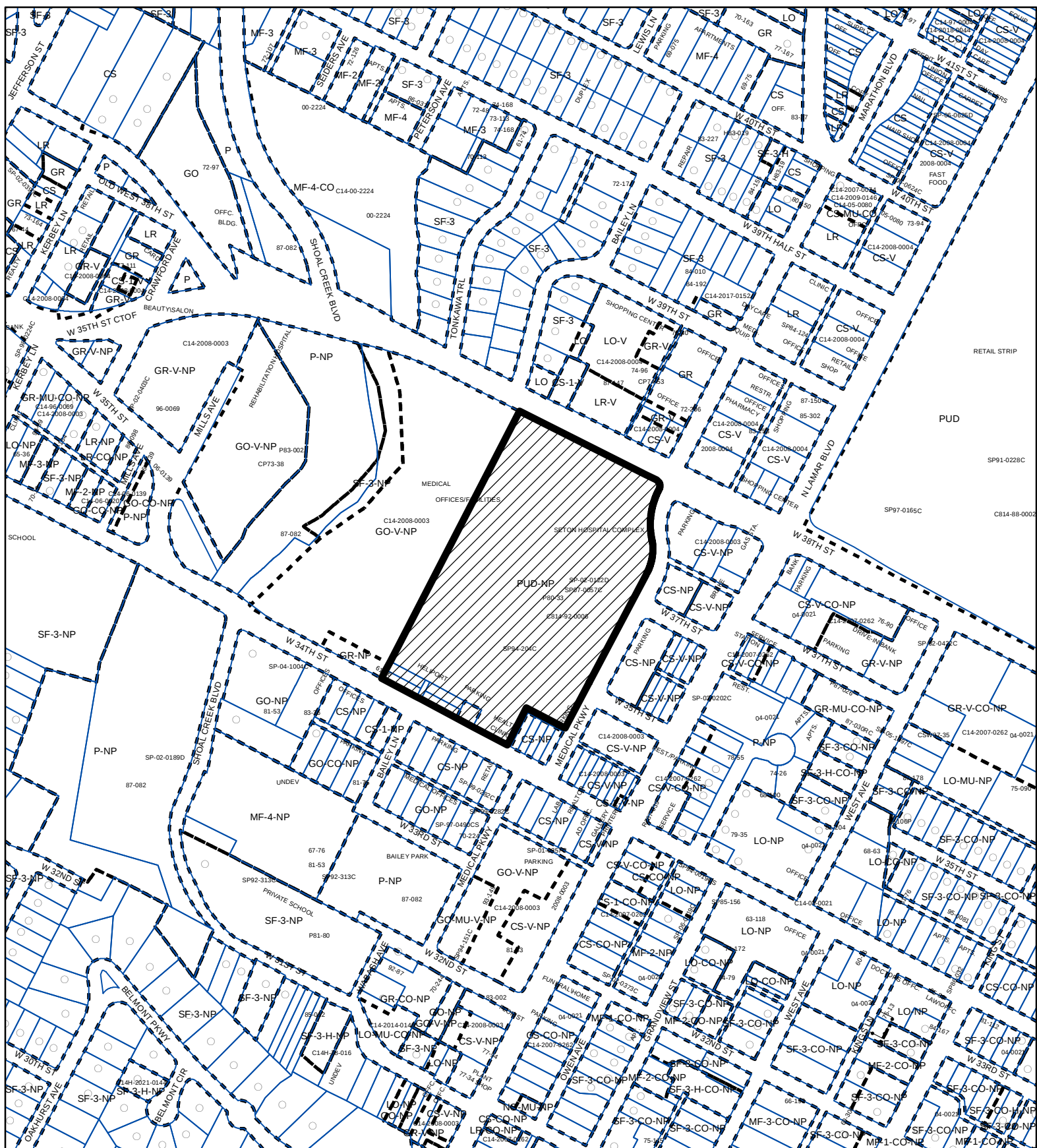
No site plan comments regarding the PUD revision. Site plan comments will be provided with site plan submittal.

Austin Transportation Department – Engineering Review

Please refer to Attachment C – TIA Compliance Memo. The memo documents that the site complies with the original Traffic Impact Analysis (TIA) and doesn't modify it in any way. The original TIA document and memo is still what controls development on the Property.

Austin Water Utility

Please refer to Attachment B



SUBJECT TRACT



PENDING CASE



ZONING BOUNDARY

PLANNED UNIT DEVELOPMENT

ZONING CASE#: C814-92-0006.02

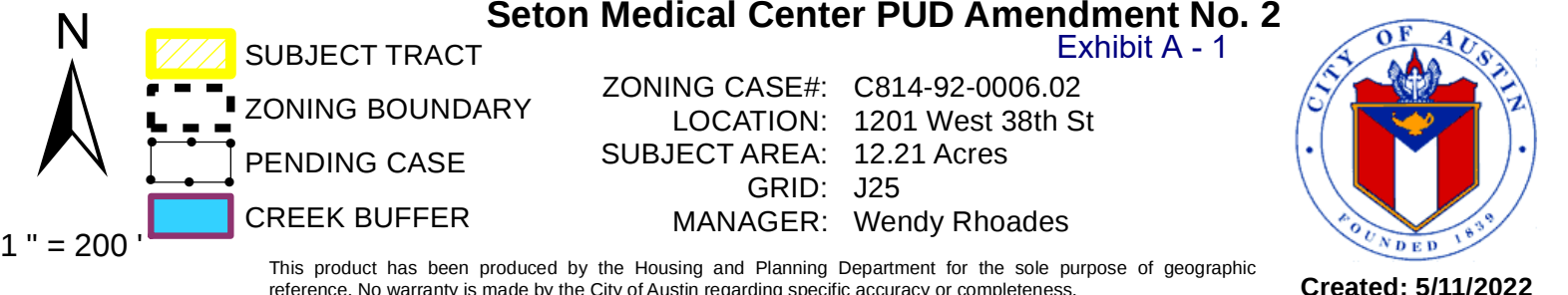
Exhibit A



1" = 400'

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 the Housing and Planning Department for the sole purpose of geographic reference. No warranty is made by the City of Austin regarding specific accuracy or





METCALFE WOLFF
STUART & WILLIAMS, LLP

MICHELE ROGERSON LYNCH
Director of Land Use &
Entitlements

512-404-2251

April 15, 2022

Jerry Rusthoven
Planning & Development Review Department
1000 East 11th Street
Austin, Texas 78702

Online Submittal

Re: **Seton Medical Center Planned Unit Development Amendment No. 2**
Application
12.21 acres located at 1201 West 38th Street (“Property”)

Dear Mr. Rusthoven,

As representatives of the owners of the above stated Property we respectfully submit this Planned Unit Development (PUD) Development Amendment application (“the 2nd Amendment”) for the Seton Medical Center PUD (C814-92-0006). The purpose of the 2nd Amendment is to allow for the addition of 358,155 square foot for an expansion of a Womens Tower and a cardiovascular wing. The proposed building addition is considered a substantial amendment described under LDC § 3.1.2 as site development regulations are being modified and is therefore subject to City Council approval. The following outlines the major components of the 2nd Amendment:

Floor to Area Ratio

The currently allowed FAR is 1.48:1 and the proposed FAR is 1.9:1.

Building Coverage

The currently allowed building coverage is 272,388 square feet (51.2%).

The proposed building square footage is 334,830 square feet (62.95%).

Building Square Footage

The currently allowed building square footage is 786,600 square feet.

The total proposed building square footage with the 358,155 square foot expansion is 1,144,755 square feet.

Impervious Cover

The currently allowed impervious cover is 421,074 square feet (79.16%).

The proposed impervious cover is 423,513 square feet (79.62%).

Open Space

The current percentage of open space is 11.9%.

The proposed percentage of open space is 4%.

Drainage/Detention/Water Quality

Two detention ponds exist on the Property today. The pond along Medical Parkway will be reconfigured in roughly the same location. There are no water quality controls on the Property today, however water quality in the form of an underground vault and rain gardens is proposed.

Trees

The Property has many Protected and Heritage Trees that will be preserved.

A 25" Pecan located along 38th Street is proposed for removal. This tree has been assessed by a certified arborist as being in poor health and condition. Three other trees (29" Pecan, 25" Live Oak, 24" Pecan) are proposed to be relocated onsite.

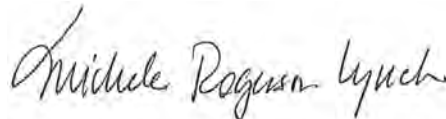
Transportation and Parking

A Traffic Impact Analysis (TIA) was approved with the PUD in 1992 and was updated with the 1st amendment in 2002. After talking with the Austin Transportation Department, updated traffic counts were conducted at certain intersections. A TIA Compliance Memorandum was prepared and is included with the submittal. The updated study indicates the expansion will not materially impact the operation of the intersections studied and therefore no improvements are proposed.

Part of the redevelopment includes the demolition of the existing parking garage. A new parking garage will be constructed off-site on the adjacent Medical Tower property to the west, which is under the same ownership. The new parking garage will serve both parking for the Property as well as the Medical Tower property. A site plan for the parking garage construction is currently in review at the City of Austin.

If you have any questions about the proposed 2nd Amendment or need additional information, please do not hesitate to contact me at your convenience.

Very truly yours,

A handwritten signature in cursive script that reads "Michele Rogerson Lynch".

Michele Rogerson Lynch

cc: Scott Herndon, Ascension Seton
Dan Vickers, Medxcel



METCALFE WOLFF
STUART & WILLIAMS, LLP

MICHELE ROGERSON LYNCH
Director of Land Use &
Entitlements

512-404-2251

August 18, 2022

Jerry Rusthoven
Planning & Development Review Department
1000 East 11th Street
Austin, Texas 78702

Online Submittal

Re: **Seton Medical Center Planned Unit Development Amendment No. 2**
Application - Updated
12.21 acres located at 1201 West 38th Street ("Property")

Dear Mr. Rusthoven,

Upon further review of the proposed amendment and project, a modification to open space is no longer needed. Therefore, we are officially requesting to remove any modification to open space with this application.

If you have any questions about the proposed 2nd Amendment or need additional information, please do not hesitate to contact me at your convenience.

Very truly yours,

A handwritten signature in black ink that reads "Michele Rogerson Lynch".

Michele Rogerson Lynch



ENVIRONMENTAL COMMISSION MOTION 20220817-004

Date: August 17, 2022

Subject: Seton Medical Center Planned Unit Development Amendment No. 2, C814-92-0006.02

Motion by: Jennifer Bristol

Seconded by: Melinda Schiera

RATIONALE:

WHEREAS, the Environmental Commission recognizes the applicant is requesting an amendment to planned unit development – neighborhood plan (PUD-NP) combining district zoning as shown in the Proposed Zoning Submittal. The requested modifications will increase impervious cover from 421,074 square feet (79.16%) to 423,513 square feet (79.62%) and add water quality controls where none currently exist.

WHEREAS, the Environmental Commission recognizes that the Staff recommendation is to grant an amendment to the planned unit development – neighborhood plan (PUD-NP) combining district zoning as shown in the Proposed Zoning Submittal with conditions.

THEREFORE, the Environmental Commission recommends the PUD amendment with the following conditions:

Staff Conditions:

1. This project complies with the following Tier 1 superiority items:
 - a. Provide a LEED Silver Rating
 - b. Exceed the minimum landscaping requirements of the City Code as noted on the PUD exhibits
2. The project complies with the following Tier 2 superiority items:
 - a. Addition of water quality controls
 - b. Tree plantings use Central Texas native seed stock and are installed with adequate soil volume. As clarified in the meeting, this means container-sized trees will be planted.
 - c. Enhanced City of Austin Dark Sky regulations as noted on the PUD exhibit
 - d. Require building design that will reduce the potential for bird/building collisions as noted on the PUD exhibit
 - e. The project will provide an Integrated Pest Management System
3. The project commits to collect and beneficially use both rainwater and condensate for cooling water demand.

Attachment B

VOTE 7-4

For: Qureshi, Schiera, Nickells, Bristol, Ramberg, Aguirre, and Bedford

Against: Scott, Thompson, Barrett Bixler, and Brimer

Abstain: None

Recuse: None

Absent: None

Approved By:

A handwritten signature in black ink that reads "KEVIN RAMBERG". The letters are slightly slanted and connected in a cursive-like fashion.

Kevin Ramberg, Environmental Commission Chair



Seton Medical Center PUD

1201 West 38th Street

C814-92-0006.02 (PUD Amendment)

Leslie Lilly

Environmental Program Coordinator

Watershed Protection



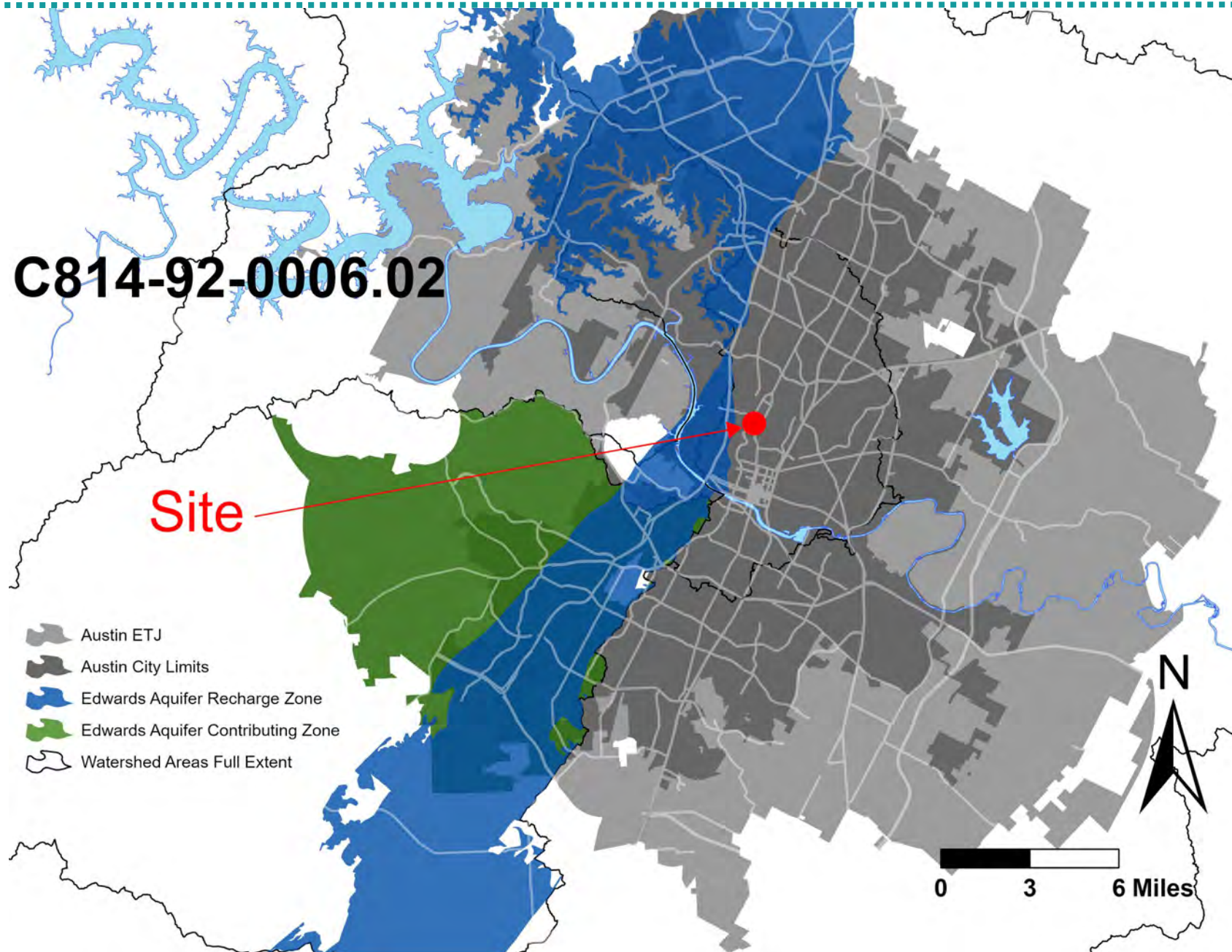
Seton Planned Unit Development

- **Approved by council in 1993 for the development of the Seton Medical Center and associated improvements.**
- **The applicant is requesting a PUD Amendment for the purpose of modifying the site development regulations to construct a Women's Health Tower and cardiovascular wing.**



C814-92-0006.02

Site



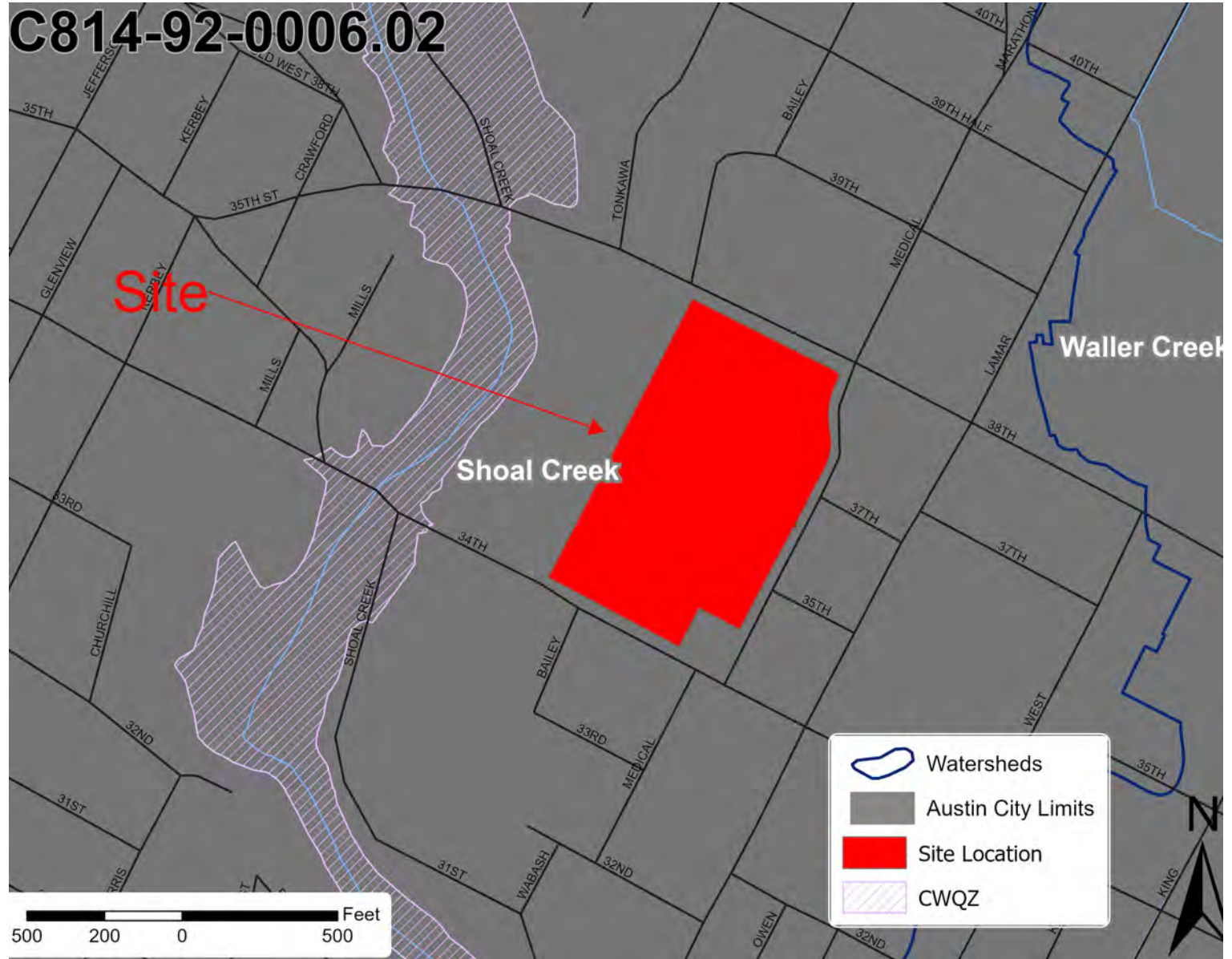


Site Conditions

- 12.21 acres
- Located in Full Purpose Jurisdiction
- In the Shoal Creek Watershed
- Classified as Urban Watershed



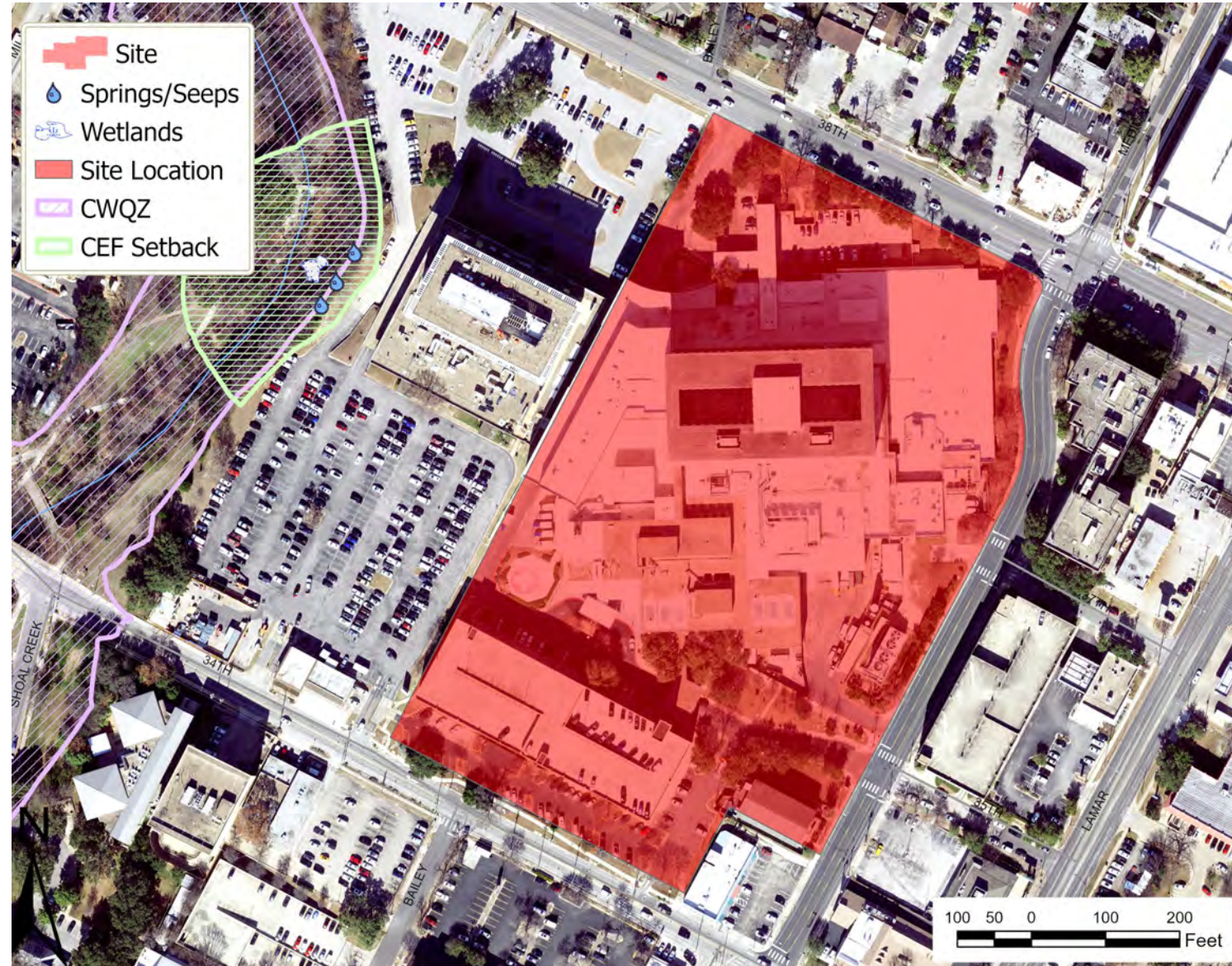
C814-92-0006.02



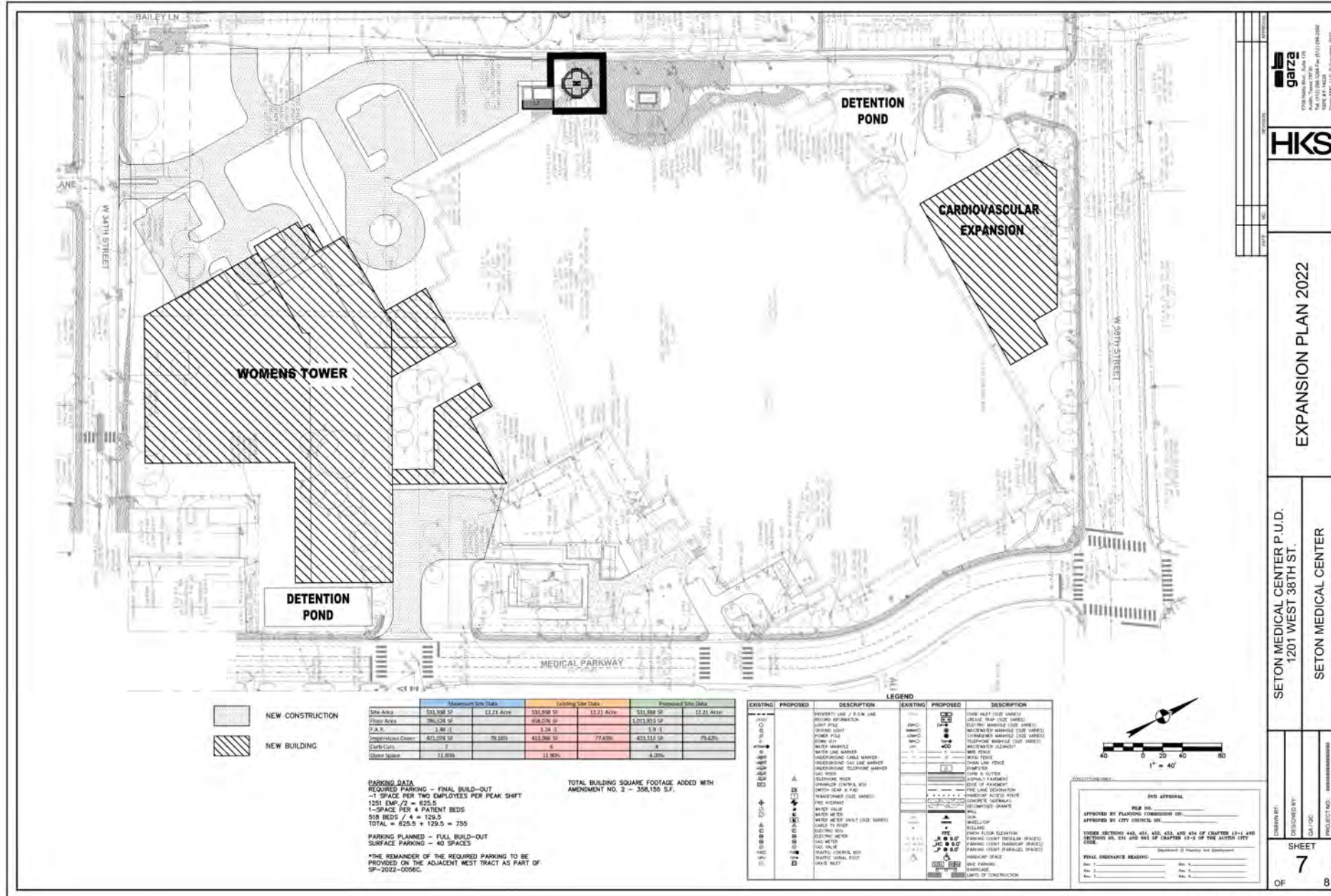


Environmental Features

- No CEFs within 150' of site
- No CWQZ on site
- Current IC 79.16%
- No water quality controls currently on site









Requested Development Modifications

1. Increase Impervious Cover from 421,074 sf (79.16%) to 423,513 sf (79.62%)
- ~~2. Reduce Open Space from 11.9% to 4%~~
3. Add water quality controls where none currently exist



Proposed Environmental Superiority

1. New buildings will achieve a LEED silver rating
2. The redevelopment will exceed minimum landscaping requirements
3. All trees will be sourced from Central Texas native seed stock
4. New buildings will enhance COA dark sky regulations
5. Building design will reduce bird/building collisions by utilizing glass with a reflectivity of 15% or less
6. An Integrated Pest Management plan will be provided



Additional Environmental Items

1. The project will provide onsite water reuse system that will collect condensate and rainwater collection to offset cooling tower potable water demand and irrigation
2. Electric vehicle charging ports will be available for Women's Tower occupants
3. Heat island effect will be mitigated by having over 75% parking under cover and using light-colored hardscape (concrete vs asphalt) and shading
4. Over 50% potable outdoor water will be saved by using a native, drought tolerant plant palette and efficient irrigation equipment
5. Efficient plumbing fixtures will be used to reduce 35% reduction in indoor potable water use
6. Equipment and appliances will comply with LEED water use requirements



Recommendation

Staff recommends approval of the PUD Amendment with the following conditions

- 1. This project complies with Tier 1 superiority items as noted on the PUD exhibits**
- 2. The project complies with Tier 2 superiority items as noted on the PUD exhibits**
- 3. The project commits to collect and beneficially reuse both rainwater and condensate for cooling water demand and irrigation**



Questions?

Contact Information:

Leslie Lilly

leslie.lilly@austintexas.gov

From: [Beaty, Curtis](#)
To: [Rhoades, Wendy](#)
Subject: C814-92-0006.02 - Seton Medical Center Planned Unit Development Amendment No. 2 -- ATD Notes
Date: Wednesday, September 21, 2022 9:01:00 AM
Attachments: [image001.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image002.png](#)

Wendy –

ATD wishes to add some clarification notes relating to the transportation analysis compliance process required of the Seton PUD Amendment. These notes do not alter the TIA compliance memo dated 8/10/2022 and approved on 8/11/2022, but serve as a preface to the considerations taken during the review of the compliance memo.

1. The existing PUD has an approved TIA as part of that zoning ordinance. A compliance review and memo is necessary to show that the proposed amendment is consistent with the assumptions and analysis within that TIA. Elements of transportation superiority do not need to be shown in the PUD amendment itself, but the compliance memo is to show that the requirements of the base PUD – which had superiority requirements at that time -- are being met.
2. When determining the number of new trips that the hospital expansion could generate, ATD took a conservative approach by using the gross square footage of the new area. This method looks at a higher number of possible new trips for analysis purposes. In reality, a sizeable portion of the new square footage will be added to existing hospital patient rooms in order to right-size them to acceptable standards. New floor area used for such right-sizing do not add new trips to the transportation network. In other words, the number of new trips identified within the compliance memo is an overestimate of the most likely actual traffic generated by the planned expansion.
3. The planned improvements included in the PUD amendment reduce the number of driveways along Medical Parkway and 34th Street from current conditions. The elimination of these driveways will improve vehicular operations along these streets.
4. Looking at the neighborhood characteristics, there are three activities that have noticeable influences on the transportation network: (1) the drop-off/pick-up times of schools, (2) shift changes at the hospital campus, and (3) the traditional AM/PM peak periods of the roadway network. The timing of these events occur differently during the day and are not compounding simultaneously. Like many other areas of the city, there may be short periods of the day when congestion occurs at intersections and driveways due to such similar events. These known, short-lived events are expected and are not an indication of continuous, over-saturated streets across a broad area.
5. Traffic along W 34 Street between Mills Avenue and Jefferson Street will see little change in traffic patterns due to the expansion of the hospital campus. Existing traffic patterns show that traffic from W 34th Street use W 35th Street to access Mopac and destinations west of the hospital campus. Speed mitigation measures, however, could be applied to this section (between Mills Avenue and Jefferson Street) of W 34th Street to address concerns.

6. The ATD-sponsored bike network/Shoal Creek Trail improvement project along W 31st Street is still in the due diligence phase. ATD is selecting preferred design options for these improvements and then will move into the public outreach phase of the project within the next few months. The TIA compliance review was not required to include the impacts of any bike/trail improvements since it is not known what that project will specifically entail.

If you have questions regarding the above comments, please contact myself or Nate Aubert. Thank you.

[Curtis P. Beaty, P.E.](#)

Managing Engineer | Division Manager

[Transportation Development Services Division](#)

Austin Transportation Department

(Direct) 512-974-6471 | (Main) 512-974-1150





08/11/2022
APPROVED
Nate Aubert

August 10, 2022

Curtis Beaty, P.E. and Nathan Aubert, P.E.
Transportation Development Services Division
Permitting and Development Center
6310 Wilhelmina Delco Drive
Austin, Texas 78752

RE: Ascension Seton 38th TIA Compliance

Dear Curtis and Nate,

The purpose of this letter is to show compliance with the Seton TIA, which was approved in September 1992 as part of the PUD, for the currently proposed expansion of the site. The land uses modeled in the approved TIA consisted of the following:

- 877,998 square feet of Hospital
- 77,002 square feet of Clinic

On February 15, 2002, the TIA was updated to reflect a reduction in the square footage for the land use mix. The land uses assumed in this approved TIA update letter consisted of the following:

- 709,598 square feet of Hospital
- 77,002 square feet of Clinic

Based on the TIA update, the project was approved for a total of 10,019 unadjusted trips per day, as shown as shown in Table 1.

The following land uses are currently built to date for the Ascension Seton 38th site:

- 581,074 square feet of Hospital
- 77,002 square feet of Clinic

The currently proposed land use for the Ascension Seton 38th development expansion consists of the following:

- 358,155 square feet of Hospital

This will result in a total square footage of 1,144,755 (709,598 SF of Hospital, 358,155 SF of Hospital, and 77,002 SF of Clinic).

Table 1 below provides a trip generation comparison of the uses in the 2018 TIA update with what was approved as well as what is currently proposed for the Ascension Seton 38th development. The ITE Trip Generation Manual (11th Edition) was used for the approved, existing, and currently proposed land use mixes. The total approved project trips based on the 2002 TIA Update letter is

10,019 unadjusted trips per day, while the approved plus proposed land uses would generate a total of 15,383 unadjusted trips per day. This results in an estimated 5,364 trips over the approved for the site.

Table 1. Summary of Unadjusted Daily & Peak Hour Trip Generation

Land Use Code	Land Use	Size	24-Hour Two Way Volume	Total AM Peak Hour Volumes	Total PM Peak Hour Volumes
	Previously Approved TIA Update (02.15.02)				
610	Hospital	709,598 SF	7,223	638	646
630	Clinic	77,002 SF	2,796	177	275
	Total Approved	786,600 SF	10,019	815	921
	Existing Land Uses				
610	Hospital	581,074 SF	6,543	379	187
630	Clinic	77,002 SF	2,796	177	275
	Total Existing	658,076 SF	9,339	556	462
	Proposed Land Uses				
610	Hospital	358,155 SF	5,364	424	417
	Total	1,144,755	15,383	1,239	1,338
	Remaining		-5,364	-424	-417

As noted in the PUD, the monitoring of certain intersections (as defined by City staff) was conducted to ensure the impact of the Ascension Seton site expansion does not cause these intersections to operate unacceptably. The following intersections were identified by City staff to be included in this report, as shown in the enclosed figure:

1. Lamar Boulevard and 38th Street
2. Guadalupe Street and 38th Street
3. Shoal Creek Boulevard and 38th Street
4. Lamar Boulevard and 40th Street/Central Market Driveway

Table 2. Intersection Level of Service and Delay (sec/veh)

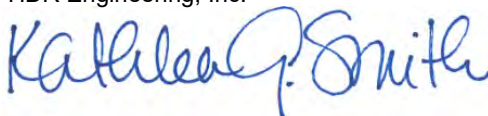
Intersection		Control	2022 Existing		2028 Forecasted (Without Site)		2028 Site + Forecasted (No Improvements)		2028 Site + Forecasted (With Improvements)	
			AM	PM	AM	PM	AM	PM	AM	PM
Overall intersection LOS and delay is reported for signalized intersections.										
1	Lamar Boulevard and 38 th Street	Signal	C (30.4)	D (40.4)	C (34.2)	E (59.5)	D (35.8)	E (62.2)	N/A	N/A
2	Guadalupe Street and 38 th Street	Signal	D (37.0)	D (42.4)	D (40.3)	D (52.4)	D (40.7)	D (52.4)	N/A	N/A
3	Lamar Boulevard and 40 th Street/Central Market Driveway	Signal	A (6.0)	B (15.8)	A (7.4)	B (19.3)	A (7.3)	B (19.4)	N/A	N/A
4	Shoal Creek Boulevard and 38 th Street	Signal	B (12.0)	A (6.8)	B (14.1)	A (8.0)	B (14.2)	A (8.7)	N/A	N/A

Based on the capacity analysis shown in Table 2 above, ***no improvements are recommended at the study intersections as a part of this study.*** It should be noted that the intersection of Lamar Boulevard and 38th Street operates at LOS E during the PM peak under future conditions with and without the hospital expansion; however, the addition of site traffic results in a delay increase of less than 10%. Due to limited ROW, geometric improvements are not feasible at this intersection. Signal timing optimization was considered, however; retiming the intersection of Lamar Boulevard and 38th Street would require the retiming of multiple intersections to ensure the North Lamar Boulevard Corridor operates efficiently and acceptably. Detailed intersection capacity analysis is provided in the enclosures.

I am hereby requesting approval of this TIA compliance letter, since the proposed expansion does not cause any of the identified intersections to operate unacceptably. It should be noted that this development will be subject to Street Impact Fees (SIF) based on the amount of expansion that is beyond the previously approved square footage amount.

Please feel free to contact me if you have any questions or need additional information to approve this request.

Sincerely,
HDR Engineering, Inc.



Kathleen G. Smith, P.E., PTOE
Senior Project Manager

Cc: Dan Vickers, Scott Herndon; Ascension Seton
Michele Rogerson, Katherine Nicely; Metcalfe Wolff Stuart & Williams, LLP
Enclosures - MM

Table 1. Intersection Analysis Results for AM Peak

Intersection	AM Peak																							
	2021 Existing						2028 Forecasted (without site)						2028 Site + Forecasted (No Improvements)						2028 Site + Forecasted (With Improvements)					
	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **
Lamar Boulevard & 38th Street	Signal	30.4	C				Signal	34.2	C				Signal	35.8	D				Signal	35.8	D			
EB left		49.1	D	138	150	0.61		48.5	D	164	150	0.67		52.3	D	176	150	0.72		52.3	D	176	150	0.72
EB through		68.5	E	310	N/A	0.90		74.6	E	388	N/A	0.94		76.4	E	400	N/A	0.95		76.4	E	400	N/A	0.95
EB right		37.6	D	134	260	0.52		33.6	C	154	260	0.54		33.6	C	158	260	0.55		33.6	C	158	260	0.55
WB left		87.7	F	202	150	0.86		104.7	F	260	150	0.92		112.6	F	274	150	0.95		112.6	F	274	150	0.95
WB through		63.3	E	252	N/A	0.83		61.2	E	298	N/A	0.81		63.5	E	318	N/A	0.84		63.5	E	318	N/A	0.84
WB right		0.0		0	160	N/A		0.0		0	160	N/A		0.0		0	160	N/A		0.0		0	160	N/A
NB left		13.1	B	64	150	0.24		21.4	C	118	150	0.41		22.9	C	132	150	0.44		22.9	C	132	150	0.44
NB through		15.5	B	148	N/A	0.25		21.6	C	208	N/A	0.35		21.8	C	210	N/A	0.35		21.8	C	210	N/A	0.35
NB right		0.0		0	120	N/A		0.0		0	120	N/A		0.0		0	120	N/A		0.0		0	120	N/A
SB left		10.7	B	76	150	0.30		14.1	B	108	150	0.44		14.3	B	108	150	0.45		14.3	B	108	150	0.45
SB through		3.6	A	32	N/A	0.69		6.4	A	60	N/A	0.84		7.0	A	64	N/A	0.85		7.0	A	64	N/A	0.85
SB right		3.7	A	34	N/A	0.69		7.6	A	68	N/A	0.86		8.6	A	76	N/A	0.88		8.6	A	76	N/A	0.88
Guadalupe Street & 38th Street	Signal	37.0	D				Signal	40.3	D				Signal	40.7	D				Signal	40.7	D			
EB left		64.3	E	156	150	0.83		69.5	E	192	150	0.86		70.8	E	198	150	0.86		70.8	E	198	150	0.86
EB through		46.4	D	186	N/A	0.53		41.4	D	210	N/A	0.51		40.7	D	212	N/A	0.51		40.7	D	212	N/A	0.51
EB right		17.4	B	90	100	0.51		18.2	B	114	100	0.49		18.2	B	116	100	0.49		18.2	B	116	100	0.49
WB left		38.7	D	88	165	0.38		33.5	C	98	165	0.42		32.9	C	96	165	0.41		32.9	C	96	165	0.41
WB through		58.1	E	342	N/A	0.88		62.1	E	424	N/A	0.90		62.6	E	432	N/A	0.91		62.6	E	432	N/A	0.91
WB right		58.1	E	348	N/A	0.88		61.9	E	432	N/A	0.90		62.3	E	440	N/A	0.91		62.3	E	440	N/A	0.91
NB left		14.0	B	54	150	0.27		20.0	B	80	150	0.44		20.7	C	86	150	0.47		20.7	C	86	150	0.47
NB through		32.5	C	150	N/A	0.29		33.8	C	182	N/A	0.36		33.8	C	182	N/A	0.36		33.8	C	182	N/A	0.36
NB right		32.6	C	154	N/A	0.30		33.9	C	184	N/A	0.37		33.9	C	184	N/A	0.37		33.9	C	184	N/A	0.37

Table 1. Intersection Analysis Results for AM Peak

Intersection	AM Peak																							
	2021 Existing						2028 Forecasted (without site)						2028 Site + Forecasted (No Improvements)						2028 Site + Forecasted (With Improvements)					
	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **
SB left		18.6	B	70	150	0.15		26.0	C	106	150	0.23		26.6	C	108	150	0.24		26.6	C	108	150	0.24
SB through		18.8	B	204	N/A	0.37		27.2	C	294	N/A	0.53		28.3	C	302	N/A	0.55		28.3	C	302	N/A	0.55
SB right		0.0		0	N/A	N/A		0.0		0	N/A	N/A		0.0		0	N/A	N/A		0.0		0	N/A	N/A
Lamar Boulevard & 40th Street/Central Market Drive	Signal	6.0	A				Signal	7.4	A				Signal	7.3	A				Signal	7.3	A			
EB left		64.7	E	38	N/A	0.23		65.4	E	46	N/A	0.28		65.4	E	46	N/A	0.28		65.4	E	46	N/A	0.28
EB through		0.0	A	0	N/A	0.00		0.0	A	0	N/A	0.00		0.0	A	0	N/A	0.00		0.0	A	0	N/A	0.00
EB right		69.0	E	76	N/A	0.57		78.5	E	102	N/A	0.70		78.5	E	102	N/A	0.70		78.5	E	102	N/A	0.70
WB left		81.5	F	82	N/A	0.62		130.1	F	134	N/A	0.87		130.1	F	134	N/A	0.87		130.1	F	134	N/A	0.87
WB through		62.4	E	12	N/A	0.09		62.5	E	16	N/A	0.10		62.5	E	16	N/A	0.10		62.5	E	16	N/A	0.10
WB right		69.2	E	70	N/A	0.53		79.2	E	94	N/A	0.65		79.2	E	94	N/A	0.65		79.2	E	94	N/A	0.65
NB left		53.7	D	18	150	0.23		53.9	D	22	150	0.28		53.9	D	22	150	0.28		53.9	D	22	150	0.28
NB through		0.0	A	0	N/A	0.03		0.0	A	0	N/A	0.04		0.0	A	0	N/A	0.04		0.0	A	0	N/A	0.04
NB right		0.0	A	0	115	0.01		0.0	A	0	115	0.01		0.0	A	0	115	0.01		0.0	A	0	115	0.01
SB left		0.0	A	0	150	0.00		0.0	A	0	150	0.00		0.0	A	0	150	0.00		0.0	A	0	150	0.00
SB through		0.0	A	2	N/A	0.07		0.0	A	2	N/A	0.08		0.0	A	2	N/A	0.08		0.0	A	2	N/A	0.08
SB right		0.0	A	2	N/A	0.07		0.0	A	2	N/A	0.08		0.0	A	2	N/A	0.08		0.0	A	2	N/A	0.08
38th Street & Shoal Creek Boulevard	Signal	12.0	B				Signal	14.1	B				Signal	14.2	B				Signal	14.2	B			
EB left		6.2	A	46	150	0.37		10.5	B	70	150	0.57		10.7	B	70	150	0.57		10.7	B	70	150	0.57
EB through		4.5	A	142	N/A	0.39		6.4	A	214	N/A	0.50		6.4	A	218	N/A	0.50		6.4	A	218	N/A	0.50
WB through		8.9	A	184	N/A	0.37		11.9	B	258	N/A	0.47		12.0	B	262	N/A	0.48		12.0	B	262	N/A	0.48
WB right		6.6	A	22	75	0.05		8.2	A	30	75	0.07		8.2	A	32	75	0.07		8.2	A	32	75	0.07
SB left		57.5	E	118	230	0.44		55.2	E	142	230	0.46		55.5	E	152	230	0.49		55.5	E	152	230	0.49

Table 1. Intersection Analysis Results for AM Peak

Intersection	AM Peak																							
	2021 Existing						2028 Forecasted (without site)						2028 Site + Forecasted (No Improvements)						2028 Site + Forecasted (With Improvements)					
	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **
SB right		57.0	E	204	N/A	0.69		56.6	E	242	N/A	0.71		56.6	E	242	N/A	0.71		56.6	E	242	N/A	0.71

Table 2. Intersection Analysis Results for PM Peak

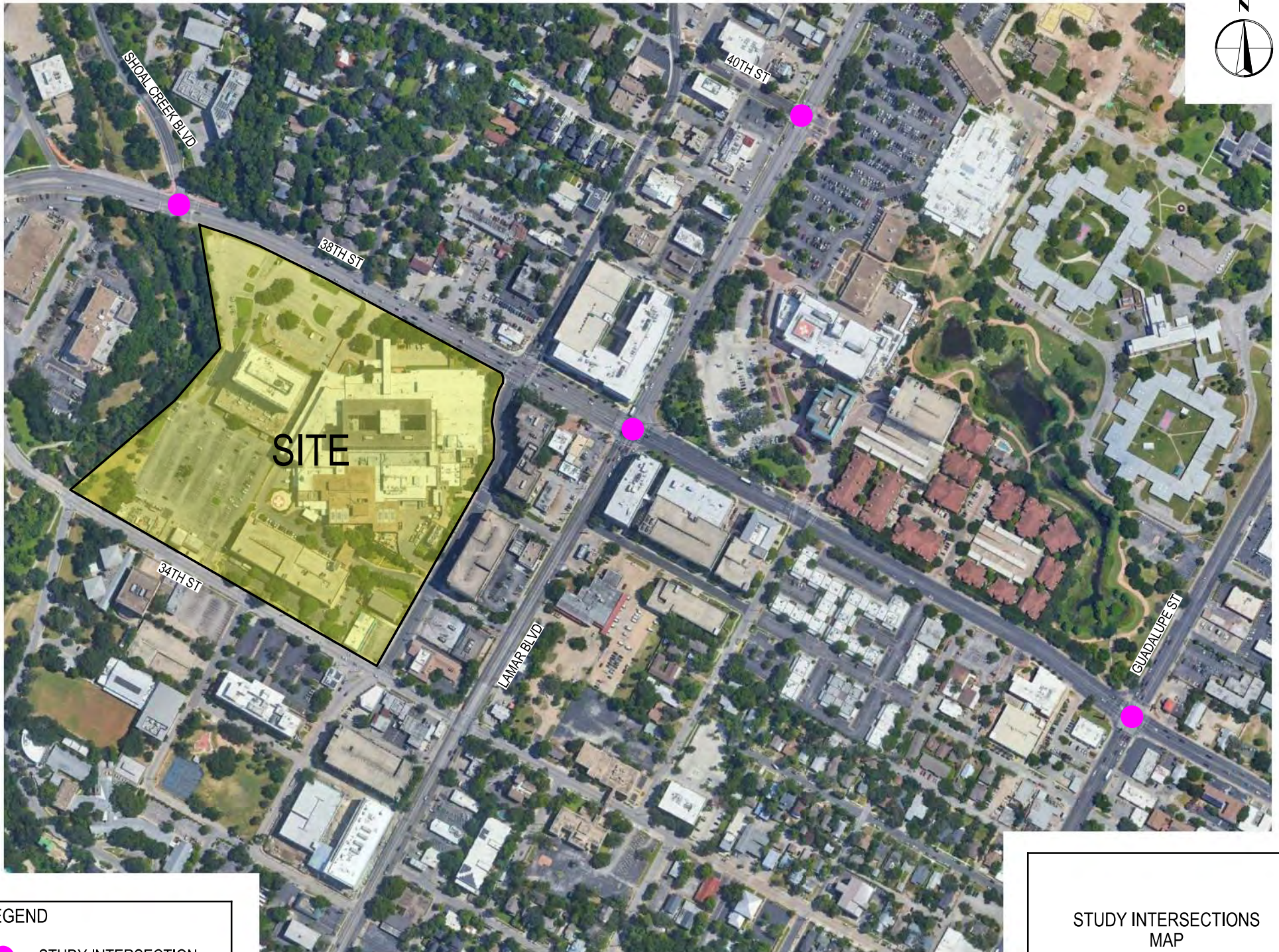
Intersection	PM Peak																							
	2021 Existing						2028 Forecasted (without site)						2028 Site + Forecasted (No Improvements)						2028 Site + Forecasted (With Improvements)					
	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **
Lamar Boulevard & 38th Street	Signal	40.4	D				Signal	59.5	E				Signal	62.2	E				Signal	62.2	E			
EB left		46.5	D	180	150	0.71		52.7	D	222	150	0.81		60.6	E	250	150	0.87		60.6	E	250	150	0.87
EB through		55.9	E	256	N/A	0.87		57.8	E	312	N/A	0.89		58.3	E	326	N/A	0.90		58.3	E	326	N/A	0.90
EB right		35.5	D	98	260	0.43		30.4	C	112	260	0.44		29.7	C	116	260	0.44		29.7	C	116	260	0.44
WB left		53.1	D	140	150	0.50		53.8	D	172	150	0.57		55.4	E	176	150	0.60		55.4	E	176	150	0.60
WB through		54.9	D	250	N/A	0.84		56.2	E	304	N/A	0.87		56.4	E	312	N/A	0.87		56.4	E	312	N/A	0.87
WB right		0.0		0	160	N/A		0.0		0	160	N/A		0.0		0	160	N/A		0.0		0	160	N/A
NB left		38.3	D	174	150	0.39		50.4	D	236	150	0.64		52.3	D	244	150	0.67		52.3	D	244	150	0.67
NB through		25.6	C	446	N/A	0.72		60.3	F	806	N/A	1.01		65.1	F	834	N/A	1.03		65.1	F	834	N/A	1.03
NB right		0.0		0	120	N/A		0.0		0	120	N/A		0.0		0	120	N/A		0.0		0	120	N/A
SB left		21.2	C	62	150	0.55		58.6	E	202	150	0.87		58.2	E	200	150	0.87		58.2	E	200	150	0.87
SB through		45.9	D	444	N/A	0.79		67.3	E	630	N/A	0.97		69.9	E	648	N/A	0.98		69.9	E	648	N/A	0.98
SB right		45.9	D	444	N/A	0.79		68.2	E	638	N/A	0.98		71.0	E	656	N/A	0.99		71.0	E	656	N/A	0.99
Guadalupe Street & 38th Street	Signal	42.4	D				Signal	52.4	D				Signal	54.2	D				Signal	54.2	D			
EB left		135.1	F	250	150	1.08		223.3	F	412	150	1.33		242.3	F	450	150	1.38		242.3	F	450	150	1.38

Table 2. Intersection Analysis Results for PM Peak

Intersection	PM Peak																								
	2021 Existing						2028 Forecasted (without site)						2028 Site + Forecasted (No Improvements)						2028 Site + Forecasted (With Improvements)						
	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	
EB through		53.0	D	276	N/A	0.84		53.5	D	334	N/A	0.87		53.5	D	340	N/A	0.87		53.5	D	340	N/A	0.87	
EB right		47.9	D	146	100	0.49		44.6	D	168	100	0.50		44.5	D	174	100	0.52		44.5	D	174	100	0.52	
WB left		46.6	D	130	165	0.65		59.3	E	174	165	0.80		59.2	E	172	165	0.80		59.2	E	172	165	0.80	
WB through		52.5	D	264	N/A	0.80		54.1	D	322	N/A	0.82		53.7	D	324	N/A	0.82		53.7	D	324	N/A	0.82	
WB right		53.1	D	264	N/A	0.81		54.6	D	320	N/A	0.83		54.2	D	322	N/A	0.83		54.2	D	322	N/A	0.83	
NB left		26.2	C	162	150	0.34		37.1	D	222	150	0.51		37.9	D	226	150	0.52		37.9	D	226	150	0.52	
NB through		20.6	C	292	N/A	0.50		28.8	C	420	N/A	0.68		29.3	C	422	N/A	0.68		29.3	C	422	N/A	0.68	
NB right		20.6	C	294	N/A	0.50		28.9	C	422	N/A	0.68		29.4	C	426	N/A	0.68		29.4	C	426	N/A	0.68	
SB left		14.6	B	42	150	0.27		20.6	C	58	150	0.45		20.9	C	60	150	0.45		20.9	C	60	150	0.45	
SB through		31.8	C	232	N/A	0.45		33.8	C	286	N/A	0.55		33.9	C	288	N/A	0.55		33.9	C	288	N/A	0.55	
SB right		0.0		0	N/A	N/A		0.0		0	N/A	N/A		0.0		0	N/A	N/A		0.0		0	N/A	N/A	
Lamar Boulevard & 40th Street/Central Market Drive	Signal	15.8	B				Signal	19.3	B				Signal	19.4	B				Signal	19.4	B				
EB left		60.8	E	100	N/A	0.36		61.2	E	124	N/A	0.43		61.2	E	124	N/A	0.43		61.2	E	124	N/A	0.43	
EB through		0.0	A	0	N/A	0.00		0.0	A	0	N/A	0.00		0.0	A	0	N/A	0.00		0.0	A	0	N/A	0.00	
EB right		58.3	E	76	N/A	0.27		57.8	E	90	N/A	0.30		57.8	E	90	N/A	0.30		57.8	E	90	N/A	0.30	
WB left		71.8	E	174	N/A	0.66		89.7	F	228	N/A	0.81		89.7	F	228	N/A	0.81		89.7	F	228	N/A	0.81	
WB through		56.4	E	18	N/A	0.06		55.6	E	22	N/A	0.07		55.6	E	22	N/A	0.07		55.6	E	22	N/A	0.07	
WB right		60.2	E	128	N/A	0.46		60.8	E	158	N/A	0.53		60.8	E	158	N/A	0.53		60.8	E	158	N/A	0.53	
NB left		5.3	A	2	150	0.02		6.4	A	2	150	0.03		6.4	A	2	150	0.03		6.4	A	2	150	0.03	
NB through		11.0	B	336	N/A	0.62		14.0	B	442	N/A	0.77		14.2	B	446	N/A	0.78		14.2	B	446	N/A	0.78	
NB right		6.2	A	34	115	0.09		6.7	A	38	115	0.11		6.7	A	36	115	0.11		6.7	A	36	115	0.11	
SB left		11.3	B	40	150	0.44		34.0	C	138	150	0.74		36.5	D	140	150	0.76		36.5	D	140	150	0.76	
SB through		7.5	A	190	N/A	0.38		9.0	A	252	N/A	0.47		9.1	A	256	N/A	0.48		9.1	A	256	N/A	0.48	

Table 2. Intersection Analysis Results for PM Peak

Intersection	PM Peak																							
	2021 Existing						2028 Forecasted (without site)						2028 Site + Forecasted (No Improvements)						2028 Site + Forecasted (With Improvements)					
	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **	Traffic Control Type	Delay	LOS	95 th * Queue	Bay Length	V/C **
SB right		7.5	A	196	N/A	0.38		9.0	A	260	N/A	0.47		9.1	A	266	N/A	0.48		9.1	A	266	N/A	0.48
38th Street & Shoal Creek Boulevard	Signal	6.8	A				Signal	8.0	A				Signal	8.7	A				Signal	8.7	A			
EB left		3.5	A	28	150	0.44		7.3	A	66	150	0.67		11.8	B	62	150	0.65		11.8	B	62	150	0.65
EB through		2.0	A	54	N/A	0.27		2.6	A	84	N/A	0.34		3.0	A	56	N/A	0.36		3.0	A	56	N/A	0.36
WB through		4.7	A	144	N/A	0.36		6.2	A	206	N/A	0.45		7.9	A	176	N/A	0.53		7.9	A	176	N/A	0.53
WB right		3.6	A	38	75	0.13		4.5	A	54	75	0.16		5.6	A	44	75	0.19		5.6	A	44	75	0.19
SB left		66.4	E	42	230	0.25		64.9	E	50	230	0.26		38.8	D	32	230	0.25		38.8	D	32	230	0.25
SB right		65.3	E	126	N/A	0.57		63.4	E	152	N/A	0.59		56.8	E	114	N/A	0.78		56.8	E	114	N/A	0.78



SITE

SHOAL CREEK BLVD

40TH ST

38TH ST

34TH ST

LAMAR BLVD

GUADALUPE ST

LEGEND

 = STUDY INTERSECTION

STUDY INTERSECTIONS
MAP

architecture
engineering
consulting
interiors

February 15, 2002

Mike Heitz

Director
City of Austin WPDR
505 Barton Springs Road
Austin, TX 78704

Re: Administrative PUD Revision - C814-92-0006

Dear Mike,

Attached is our request for an administrative revision to the Seton Medical Center PUD documents for the Main Campus site located at 1201 West 38th Street. This package was originally submitted as a correction, but was determined to be an administrative revision by Carl McClendon. See attached correction request. We discussed this submittal with Carl McClendon and Johnny Price last summer, and have processed the revision documents in accordance with correspondence to Carl dated July 18, 2001 (copy attached).

The current PUD documents include five (5) drawings which together describe the boundary of the PUD, the existing conditions of the site as of September, 1992 when the PUD was originally submitted, the total build-out of the property allowed by the PUD, and the landscaping concept for the final build-out.

There is just under 550,000 square feet of floor area in the existing facility. The PUD allows for a total floor area of 786,600 square feet. Seton has opted to progress toward the allowable build-out in stages, and plans to construct approximately 111,500 square feet in this stage of construction.

James C. Alvis, PE
Vice President

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Austin Texas 78701 2725

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FAX 512 477 3211

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Based on conversations with your staff regarding the staging of the construction and the PUD revision process, we have prepared an additional PUD drawing to be inserted into the approved documents. This new drawing graphically describes the scope of the Stage One construction.

This stage of construction will generate minor changes to the final build-out of the PUD. Therefore, to keep the documents consistent throughout, we are proposing to update the existing PUD drawings, which show the full build-out of the PUD and the landscape concept plan. The updated plans reflect those aspects of the Stage One construction that will impact the final build-out.

Detention facilities will be provided on-site for this stage of construction. Detention pond areas have been designated on the plans. The areas designated will only be utilized as necessary to provide the required storage volumes and allowable discharge rates. Detention facilities will be designed in accordance with the requirements of the City of Austin Drainage Criteria Manual. Stage One development will have no negative effect on the existing and future drainage system in the area or on the natural and traditional character of the land and waterways.

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Extensive transportation studies were completed by WHM when the original PUD was prepared. In response to Carl's correction comments (attached), WHM has provided additional trip generation data, as it relates to the proposed stage one construction and final build-out. See attached letter from Mike McInturff dated February 15, 2002.

All construction proposed in Stage One is consistent with the PUD documents, and none of the PUD restrictions are exceeded by the Stage One development or the revised final build-out.

Attached for your staff's review and approval is a redlined set of the approved PUD documents including the inserted Stage One drawing. The changes made to each of the PUD drawings are:

Cover Sheet (Sheet 1): On the cover sheet, the sheet list has been revised to reflect the newly inserted stage one sheet, and a City of Austin standard revision/correction table has been added.

Comprehensive Plan (Sheet 2): This sheet is unchanged except for the sheet numbers.

Existing Conditions (Sheet 3): This sheet is unchanged except for the sheet numbers.

Stage One Construction (Sheet 4): This sheet has been added behind the Existing Conditions to describe the Stage One work.

Site Plan (Sheet 5): This sheet depicts the final build-out of the site. Revisions on this sheet reflect those aspects of the Stage One construction that will impact the final build-out. Revisions include:

- 1) The entry drive, drop-off area, and parking layout on the 38th street side of the building have been modified.
- 2) The building footprint has been modified slightly on the 38th street frontage to reflect the actual Stage One addition.
- 3) The building footprint has been modified at the southwest corner of the building. Specifically, the footprint expansion to the west has been rotated to the south face of the building.
- 4) The layout of the existing passenger drop-off at the southwest corner of the facility has been revised to accommodate the building modifications.
- 5) The building footprint has been modified to reflect the existing MRI building.
- 6) The new entry drive from Medical Parkway has been shifted north to line up with the existing 35th street curb lines.
- 7) The building footprint and driveway layout on the east side of the building have been modified to reflect the existing electric entrance.

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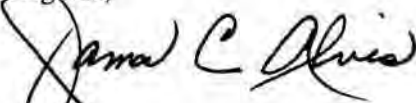
Comprehensive Landscape Plan (Sheet 6): Revisions on this sheet reflect those aspects of the Stage One construction that will impact the final build-out and the landscaped areas on the site.

For clarity, we have also included an additional, redlined copy of the PUD Site Plan. To create this sheet, we overlaid the existing PUD site plan on the proposed PUD site plan and redlined all the areas that were different.

We request that the revisions to the PUD documents be administratively approved. As soon as we receive the approval, we will provide final corrected mylars for replacement in the City file.

Please contact Judd Willmann or me at 472-6721 if you have any questions or need additional information.

Regards,



James C. Alvis, P.E.

Director of Civil Engineering

Cc: Bob Moroz (Seton), WTB, MFK, EDM, File 101030 D/GA

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WHM Transportation Engineering Consultants, Inc.

C. Michael Walton, PhD., P.E.

Mike McInturff, M.Eng., P.E.

Randy B. Machemehl, PhD., P.E.

February 15, 2002

Mr. Mike Heitz, Director
Watershed Protection and Development Review Department
City of Austin
505 Barton Springs Road
Austin, Texas 78767

Dear Mr. Heitz:

The following information is provided in response to comments received from Carl McClendon concerning the Seton PUD correction for File No. C814-92-0006.

WHM prepared a Traffic Impact Analysis (TIA) in September 1992, which was submitted for approval as a part of the original PUD application. Enclosed is a copy of Page 38 from that TIA which contains Table 9 summarizing estimated trip generation for the two proposed phases of the development. The Phase II (2010) Build Out Total was reduced from the proposed 955,000 square feet to 786,600 square feet during the review and approval of the PUD application. Since approval of the original PUD, Seton has continued planning work for the project resulting in the current site plan for which approval is being sought from the City. This plan depicts the Stage One construction to be initiated this year, resulting in a site total of 658,076 square feet. The full build out will consist of the 786,600 square feet approved by the City.

In response to Carl's review comments, WHM completed a comparison between the originally proposed Seton PUD trip generation (Phase I - 1995 and Phase II - 2010) and the currently proposed trip generation (Stage One - 2002 and Full Build Out). Enclosed is a revised Table 9, which summarizes estimated trip generation for the proposed site plan revision. As noted by comparison of the two tables, the proposed Stage One building expansion will result in a 2.3 percent increase in the daily trips estimated for the previous Phase I plans. The Full Build Out is reduced to the 786,600 square feet previously approved by the City and results in 16 percent less daily trips than estimated in the TIA.

Please contact me if you have any questions concerning this information.

Sincerely,



Mike McInturff, P.E.
President

Enclosures

cc: Jim Alvis, P.E. - Page Southerland Page

account for approximately 50 percent of the peak hour trips. The directional distribution is unchanged from Phase One and has been previously shown in Table 7.

Table 9. Phase Two Summary of Trip Generation Daily and Peak Hour

<u>Land Use</u>	<u>Size SF</u>	<u>24 Hour Two-Way Volume</u>	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
			<u>Enter</u>	<u>Exit</u>	<u>Enter</u>	<u>Exit</u>
PHASE I (1995)						
Hospital	590,598	9,780	529	205	160	418
Clinic	52,002	1,529	67	33	87	139
Subtotal	642,600	11,309	596	238	247	557
PHASE II (2010)						
Hospital	877,998	12,362	794	308	233	607
Clinic	77,002	2,264	99	48	128	205
Build Out Total	955,000	14,626	893	356	361	812

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

The total 2010 traffic demand placed upon these key locations will be the sum of traffic generated by this proposed development, traffic generated by other development projects, and changes in existing traffic. In order to approximate the effects of other development activities that are not specifically addressed in this analysis and as discussed previously, an annual growth rate of 1.0 percent has been applied to forecasted 1995 traffic volumes, exclusive of existing site traffic volumes. It should be emphasized that this analysis has assumed a scenario that does not account for trip reduction through the use of public transportation.

Again, it should be noted that traffic generated by two proposed projects in close proximity to this project are specifically included in this traffic analysis. The West 38th Street PUD has an approved TIA which was used to determine the appropriate 2010 traffic volumes. Medical Park

Table 9. Summary of Trip Generation Daily and Peak Hour

<u>Land Use</u>	Size <u>SF</u>	24-Hour Two-Way <u>Volume</u>	AM Peak Hour		PM Peak Hour	
			<u>Enter</u>	<u>Exit</u>	<u>Enter</u>	<u>Exit</u>
Stage One (2002)						
Hospital	606,074	10,036	543	210	164	429
Clinic	52,002	1,529	67	33	87	139
TOTAL	658,076	11,565	610	243	251	568

Full Build Out						
Hospital	709,598	9,991	642	249	188	491
Clinic	77,002	2,264	99	48	128	205
TOTAL	786,600	12,255	741	297	316	696

Ascension Seton 38th TIA Compliance

Direction Distribution Calculation

AM Peak

Roadway	Volume		%	%	%
Direction	Enter	Exit	Enter	Exit	AVG
West 38th St	1159	980	20.6%	20.0%	20.3%
East 38th St	720	498	12.8%	10.2%	11.5%
North Lamar Blvd	1443	697	25.6%	14.2%	19.9%
South Lamar Blvd	711	1189	12.6%	24.3%	18.5%
North Guadalupe St	926	448	16.4%	9.2%	12.8%
South Guadalupe St	425	864	7.5%	17.7%	12.6%
North Shoal Creek Blvd	249	216	4.4%	4.4%	4.4%
	5633	4892	100.0%	100.0%	100.0%

PM Peak

Roadway	Volume		%	%	%
Direction	Enter	Exit	Enter	Exit	AVG
West 38th St	994	1091	15.4%	15.8%	15.6%
East 38th St	636	746	9.9%	10.8%	10.3%
North Lamar Blvd	1053	1617	16.3%	23.5%	19.9%
South Lamar Blvd	1718	1115	26.7%	16.2%	21.4%
North Guadalupe St	782	1146	12.1%	16.6%	14.4%
South Guadalupe St	1142	828	17.7%	12.0%	14.9%
North Shoal Creek Blvd	121	344	1.9%	5.0%	3.4%
	6446	6887	100.0%	100.0%	100.0%

Roadway	%	%	%	%
Direction	AM AVG	PM AVG	AVG	Assumed
West 38th St	20.3%	15.6%	18.0%	20.0%
East 38th St	11.5%	10.3%	10.9%	10.0%
North Lamar Blvd	19.9%	19.9%	19.9%	20.0%
South Lamar Blvd	18.5%	21.4%	19.9%	20.0%
North Guadalupe St	12.8%	14.4%	13.6%	10.0%
South Guadalupe St	12.6%	14.9%	13.7%	15.0%
North Shoal Creek Blvd	4.4%	3.4%	3.9%	5.0%
	100.0%	100.0%	100.0%	100.0%

38th Street and Guadalupe Street - TMC

Tue Mar 1, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926439, Location: 30.302738, -97.738178



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	38th Eastbound						38th Westbound						Guadalupe Northbound						Guadalupe Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2022-03-01 7:00AM	18	60	17	0	95	1	13	82	5	0	100	1	18	27	3	0	48	3	13	72	25	0	110	2	353
7:15AM	31	74	12	0	117	1	19	102	10	0	131	0	5	31	5	0	41	0	12	77	30	0	119	1	408
7:30AM	47	76	25	0	148	1	26	151	8	0	185	6	19	42	9	0	70	0	20	131	48	0	199	3	602
7:45AM	45	83	30	0	158	2	35	194	10	0	239	2	25	49	7	0	81	0	17	151	63	0	231	1	709
Hourly Total	141	293	84	0	518	5	93	529	33	0	655	9	67	149	24	0	240	3	62	431	166	0	659	7	2072
8:00AM	24	90	30	0	144	5	24	154	15	0	193	4	26	71	10	0	107	3	19	149	45	0	213	0	657
8:15AM	31	78	30	0	139	3	23	149	11	0	183	4	20	63	18	0	101	1	24	152	49	0	225	2	648
8:30AM	32	81	40	0	153	2	23	134	8	0	165	3	26	64	9	0	99	2	25	153	48	0	226	3	643
8:45AM	32	99	41	0	172	4	18	143	18	0	179	2	31	79	8	0	118	1	37	181	44	0	262	3	731
Hourly Total	119	348	141	0	608	14	88	580	52	0	720	13	103	277	45	0	425	7	105	635	186	0	926	8	2679
4:00PM	47	139	33	0	219	6	38	114	25	0	177	3	39	163	28	0	230	1	20	120	29	0	169	5	795
4:15PM	34	134	34	0	202	2	23	79	26	0	128	4	44	154	25	0	223	2	11	108	33	0	152	2	705
4:30PM	69	168	26	0	263	5	22	101	19	0	142	5	36	158	19	0	213	1	25	107	26	0	158	7	776
4:45PM	57	134	45	0	236	1	36	94	21	0	151	7	43	171	24	0	238	5	18	145	23	0	186	7	811
Hourly Total	207	575	138	0	920	14	119	388	91	0	598	19	162	646	96	0	904	9	74	480	111	0	665	21	3087
5:00PM	58	159	39	0	256	5	28	94	23	0	145	10	51	195	35	0	281	4	19	145	40	0	204	5	886
5:15PM	51	144	28	0	223	1	30	93	26	0	149	4	52	238	29	0	319	5	28	153	24	0	205	9	896
5:30PM	48	138	35	0	221	9	32	114	21	0	167	0	48	213	26	0	287	1	18	130	27	0	175	2	850
5:45PM	60	98	30	0	188	3	34	109	32	0	175	4	45	181	29	0	255	2	23	144	31	0	198	5	816
Hourly Total	217	539	132	0	888	18	124	410	102	0	636	18	196	827	119	0	1142	12	88	572	122	0	782	21	3448
Total	684	1755	495	0	2934	51	424	1907	278	0	2609	59	528	1899	284	0	2711	31	329	2118	585	0	3032	57	11286
% Approach	23.3%	59.8%	16.9%	0%	-	-	16.3%	73.1%	10.7%	0%	-	-	19.5%	70.0%	10.5%	0%	-	-	10.9%	69.9%	19.3%	0%	-	-	-
% Total	6.1%	15.6%	4.4%	0%	26.0%	-	3.8%	16.9%	2.5%	0%	23.1%	-	4.7%	16.8%	2.5%	0%	24.0%	-	2.9%	18.8%	5.2%	0%	26.9%	-	-
Lights	679	1734	449	0	2862	-	421	1877	276	0	2574	-	478	1856	281	0	2615	-	324	2074	580	0	2978	-	11029
% Lights	99.3%	98.8%	90.7%	0%	97.5%	-	99.3%	98.4%	99.3%	0%	98.7%	-	90.5%	97.7%	98.9%	0%	96.5%	-	98.5%	97.9%	99.1%	0%	98.2%	-	97.7%
Articulated Trucks	1	2	0	0	3	-	1	2	0	0	3	-	1	2	0	0	3	-	2	2	0	0	4	-	13
% Articulated Trucks	0.1%	0.1%	0%	0%	0.1%	-	0.2%	0.1%	0%	0%	0.1%	-	0.2%	0.1%	0%	0%	0.1%	-	0.6%	0.1%	0%	0%	0.1%	-	0.1%
Buses and Single-Unit Trucks	4	19	46	0	69	-	2	28	2	0	32	-	49	41	3	0	93	-	3	42	5	0	50	-	244
% Buses and Single-Unit Trucks	0.6%	1.1%	9.3%	0%	2.4%	-	0.5%	1.5%	0.7%	0%	1.2%	-	9.3%	2.2%	1.1%	0%	3.4%	-	0.9%	2.0%	0.9%	0%	1.6%	-	2.2%
Pedestrians	-	-	-	-	-	51	-	-	-	-	-	59	-	-	-	-	-	31	-	-	-	-	-	57	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	100%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

38th Street and Guadalupe Street - TMC

Tue Mar 1, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926439, Location: 30.302738, -97.738178



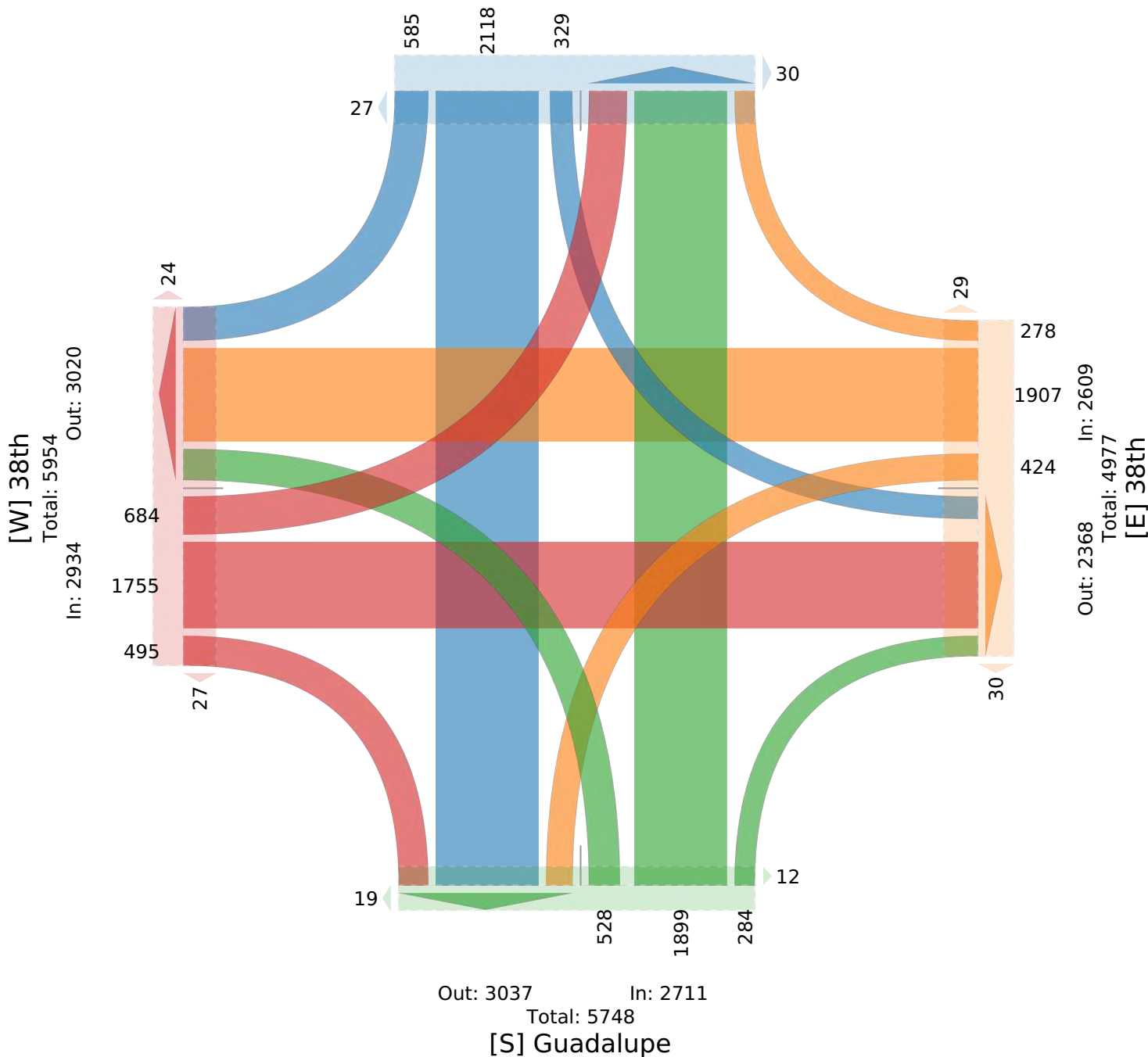
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Guadalupe

Total: 5893

In: 3032

Out: 2861



38th Street and Guadalupe Street - TMC

Tue Mar 1, 2022

AM Peak (8 AM - 9 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926439, Location: 30.302738, -97.738178



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	38th Eastbound						38th Westbound						Guadalupe Northbound						Guadalupe Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2022-03-01 8:00AM	24	90	30	0	144	5	24	154	15	0	193	4	26	71	10	0	107	3	19	149	45	0	213	0	657
8:15AM	31	78	30	0	139	3	23	149	11	0	183	4	20	63	18	0	101	1	24	152	49	0	225	2	648
8:30AM	32	81	40	0	153	2	23	134	8	0	165	3	26	64	9	0	99	2	25	153	48	0	226	3	643
8:45AM	32	99	41	0	172	4	18	143	18	0	179	2	31	79	8	0	118	1	37	181	44	0	262	3	731
Total	119	348	141	0	608	14	88	580	52	0	720	13	103	277	45	0	425	7	105	635	186	0	926	8	2679
% Approach	19.6%	57.2%	23.2%	0%	-	-	12.2%	80.6%	7.2%	0%	-	-	24.2%	65.2%	10.6%	0%	-	-	11.3%	68.6%	20.1%	0%	-	-	-
% Total	4.4%	13.0%	5.3%	0%	22.7%	-	3.3%	21.6%	1.9%	0%	26.9%	-	3.8%	10.3%	1.7%	0%	15.9%	-	3.9%	23.7%	6.9%	0%	34.6%	-	-
PHF	0.930	0.879	0.860	-	0.884	-	0.917	0.942	0.722	-	0.933	-	0.831	0.877	0.625	-	0.900	-	0.709	0.877	0.949	-	0.884	-	0.916
Lights	118	339	127	0	584	-	87	570	52	0	709	-	88	260	44	0	392	-	104	624	184	0	912	-	2597
% Lights	99.2%	97.4%	90.1%	0%	96.1%	-	98.9%	98.3%	100%	0%	98.5%	-	85.4%	93.9%	97.8%	0%	92.2%	-	99.0%	98.3%	98.9%	0%	98.5%	-	96.9%
Articulated Trucks	1	1	0	0	2	-	1	1	0	0	2	-	0	1	0	0	1	-	0	1	0	0	1	-	6
% Articulated Trucks	0.8%	0.3%	0%	0%	0.3%	-	1.1%	0.2%	0%	0%	0.3%	-	0%	0.4%	0%	0%	0.2%	-	0%	0.2%	0%	0%	0.1%	-	0.2%
Buses and Single-Unit Trucks	0	8	14	0	22	-	0	9	0	0	9	-	15	16	1	0	32	-	1	10	2	0	13	-	76
% Buses and Single-Unit Trucks	0%	2.3%	9.9%	0%	3.6%	-	0%	1.6%	0%	0%	1.3%	-	14.6%	5.8%	2.2%	0%	7.5%	-	1.0%	1.6%	1.1%	0%	1.4%	-	2.8%
Pedestrians	-	-	-	-	-	14	-	-	-	-	-	13	-	-	-	-	-	7	-	-	-	-	-	8	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

38th Street and Guadalupe Street - TMC

Tue Mar 1, 2022

AM Peak (8 AM - 9 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926439, Location: 30.302738, -97.738178



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Guadalupe

Total: 1374

In: 926

Out: 448

186

105

4

4

6

7

52

In: 720

580

88

Out: 498

Total: 1218

[E] 38th

6

4

3

103

277

45

Out: 864

In: 425

Total: 1289

[S] Guadalupe

[W] 38th

Total: 1477

In: 608

Out: 869

119

348

141

8

38th Street and Guadalupe Street - TMC

Tue Mar 1, 2022

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926439, Location: 30.302738, -97.738178



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	38th Eastbound						38th Westbound						Guadalupe Northbound						Guadalupe Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2022-03-01 5:00PM	58	159	39	0	256	5	28	94	23	0	145	10	51	195	35	0	281	4	19	145	40	0	204	5	886
5:15PM	51	144	28	0	223	1	30	93	26	0	149	4	52	238	29	0	319	5	28	153	24	0	205	9	896
5:30PM	48	138	35	0	221	9	32	114	21	0	167	0	48	213	26	0	287	1	18	130	27	0	175	2	850
5:45PM	60	98	30	0	188	3	34	109	32	0	175	4	45	181	29	0	255	2	23	144	31	0	198	5	816
Total	217	539	132	0	888	18	124	410	102	0	636	18	196	827	119	0	1142	12	88	572	122	0	782	21	3448
% Approach	24.4%	60.7%	14.9%	0%	-	-	19.5%	64.5%	16.0%	0%	-	-	17.2%	72.4%	10.4%	0%	-	-	11.3%	73.1%	15.6%	0%	-	-	-
% Total	6.3%	15.6%	3.8%	0%	25.8%	-	3.6%	11.9%	3.0%	0%	18.4%	-	5.7%	24.0%	3.5%	0%	33.1%	-	2.6%	16.6%	3.5%	0%	22.7%	-	-
PHF	0.904	0.847	0.846	-	0.867	-	0.912	0.899	0.797	-	0.909	-	0.942	0.869	0.850	-	0.895	-	0.786	0.935	0.763	-	0.954	-	0.962
Lights	215	536	122	0	873	-	124	406	102	0	632	-	185	821	118	0	1124	-	88	561	121	0	770	-	3399
% Lights	99.1%	99.4%	92.4%	0%	98.3%	-	100%	99.0%	100%	0%	99.4%	-	94.4%	99.3%	99.2%	0%	98.4%	-	100%	98.1%	99.2%	0%	98.5%	-	98.6%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	2	3	10	0	15	-	0	4	0	0	4	-	11	6	1	0	18	-	0	11	1	0	12	-	49
% Buses and Single-Unit Trucks	0.9%	0.6%	7.6%	0%	1.7%	-	0%	1.0%	0%	0%	0.6%	-	5.6%	0.7%	0.8%	0%	1.6%	-	0%	1.9%	0.8%	0%	1.5%	-	1.4%
Pedestrians	-	-	-	-	-	18	-	-	-	-	-	18	-	-	-	-	-	12	-	-	-	-	-	21	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

38th Street and Guadalupe Street - TMC

Tue Mar 1, 2022

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926439, Location: 30.302738, -97.738178



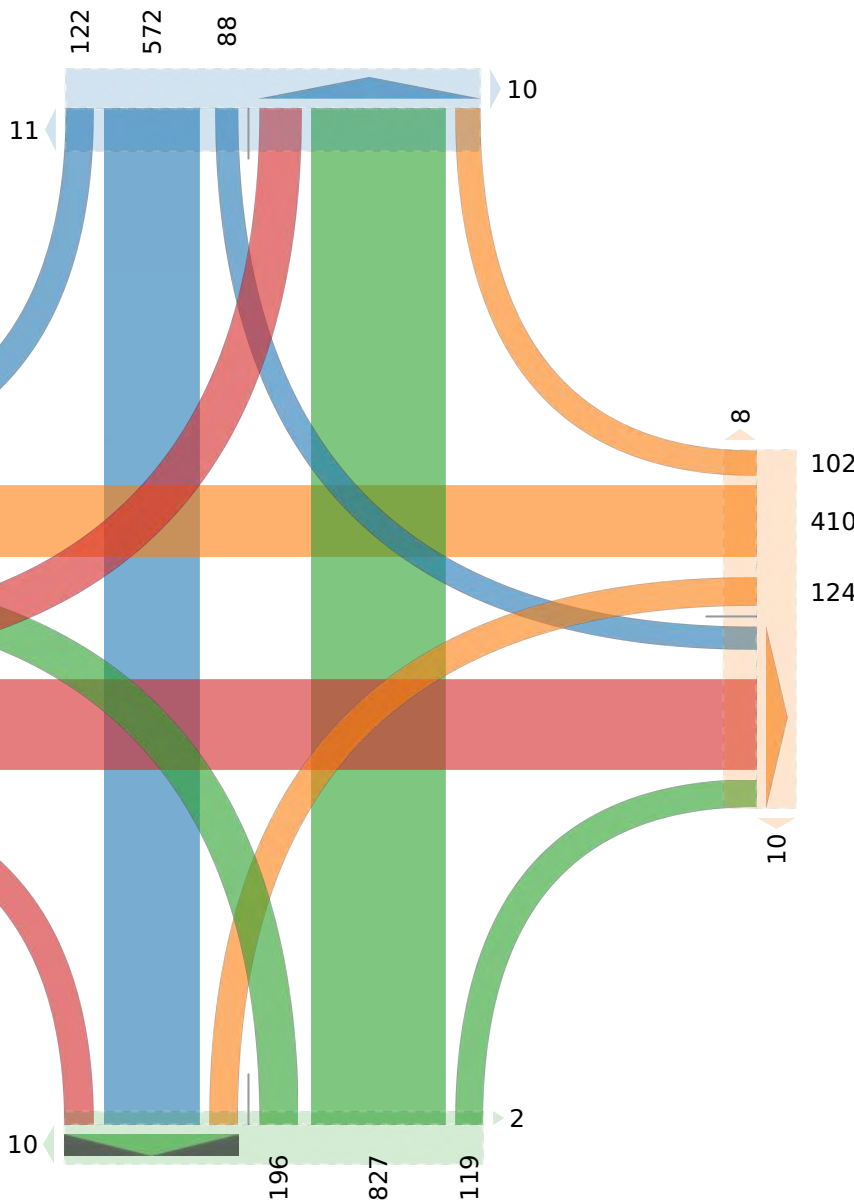
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Guadalupe

Total: 1928

In: 782

Out: 1146



Out: 828

In: 1142

Total: 1970

[S] Guadalupe

38th Street and Lamar Boulevard - TMC

Tue Mar 1, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926437, Location: 30.305179, -97.743069



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	38th Eastbound						38th Westbound						Lamar Northbound						Lamar Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2022-03-01																									
7:00AM	23	107	21	0	151	0	24	73	16	0	113	0	13	56	17	0	86	0	17	105	37	0	159	0	509
7:15AM	16	102	18	0	136	0	22	57	20	0	99	2	14	81	21	0	116	1	31	151	39	0	221	2	572
7:30AM	16	130	26	0	172	1	36	139	26	0	201	3	21	97	39	0	157	0	40	188	48	0	276	1	806
7:45AM	23	136	39	0	198	0	33	144	34	0	211	2	21	120	35	0	176	0	33	226	71	0	330	2	915
Hourly Total	78	475	104	0	657	1	115	413	96	0	624	7	69	354	112	0	535	1	121	670	195	0	986	5	2802
8:00AM	18	135	30	0	183	0	41	122	32	0	195	0	32	113	26	0	171	2	26	229	73	0	328	0	877
8:15AM	27	123	28	0	178	0	29	107	32	0	168	0	18	116	29	0	163	2	49	223	62	0	334	3	843
8:30AM	26	113	35	0	174	0	30	97	22	0	149	3	34	129	27	0	190	2	59	244	83	0	386	1	899
8:45AM	51	148	41	0	240	0	35	100	38	0	173	1	27	129	31	0	187	2	38	224	63	0	325	3	925
Hourly Total	122	519	134	0	775	0	135	426	124	0	685	4	111	487	113	0	711	8	172	920	281	0	1373	7	3544
4:00PM	55	115	25	0	195	1	35	129	48	0	212	3	48	304	31	0	383	2	26	205	52	0	283	2	1073
4:15PM	50	109	29	0	188	0	31	133	45	0	209	1	68	312	43	0	423	2	36	204	30	0	270	1	1090
4:30PM	51	118	26	0	195	1	34	150	42	0	226	2	50	303	66	0	419	2	24	175	52	0	251	1	1091
4:45PM	48	128	20	0	196	0	34	125	43	0	202	4	54	314	44	0	412	2	25	239	28	0	292	1	1102
Hourly Total	204	470	100	0	774	2	134	537	178	0	849	10	220	1233	184	0	1637	8	111	823	162	0	1096	5	4356
5:00PM	51	125	29	0	205	0	25	115	41	0	181	4	49	324	61	0	434	3	40	220	46	0	306	1	1126
5:15PM	41	112	29	0	182	0	38	138	37	0	213	1	48	351	37	0	436	1	29	217	28	0	274	0	1105
5:30PM	43	130	33	0	206	0	31	110	49	0	190	0	42	353	41	0	436	0	35	200	39	0	274	3	1106
5:45PM	44	115	27	0	186	0	32	124	32	0	188	2	51	302	41	0	394	0	34	191	34	0	259	0	1027
Hourly Total	179	482	118	0	779	0	126	487	159	0	772	7	190	1330	180	0	1700	4	138	828	147	0	1113	4	4364
Total	583	1946	456	0	2985	3	510	1863	557	0	2930	28	590	3404	589	0	4583	21	542	3241	785	0	4568	21	15066
% Approach	19.5%	65.2%	15.3%	0%	-	-	17.4%	63.6%	19.0%	0%	-	-	12.9%	74.3%	12.9%	0%	-	-	11.9%	71.0%	17.2%	0%	-	-	-
% Total	3.9%	12.9%	3.0%	0%	19.8%	-	3.4%	12.4%	3.7%	0%	19.4%	-	3.9%	22.6%	3.9%	0%	30.4%	-	3.6%	21.5%	5.2%	0%	30.3%	-	-
Lights	576	1895	450	0	2921	-	503	1811	529	0	2843	-	587	3369	587	0	4543	-	518	3206	776	0	4500	-	14807
% Lights	98.8%	97.4%	98.7%	0%	97.9%	-	98.6%	97.2%	95.0%	0%	97.0%	-	99.5%	99.0%	99.7%	0%	99.1%	-	95.6%	98.9%	98.9%	0%	98.5%	-	98.3%
Articulated Trucks	1	1	0	0	2	-	0	0	2	0	2	-	0	2	0	0	2	-	1	1	1	0	3	-	9
% Articulated Trucks	0.2%	0.1%	0%	0%	0.1%	-	0%	0%	0.4%	0%	0.1%	-	0%	0.1%	0%	0%	0%	-	0.2%	0%	0.1%	0%	0.1%	-	0.1%
Buses and Single-Unit Trucks	6	50	6	0	62	-	7	52	26	0	85	-	3	33	2	0	38	-	23	34	8	0	65	-	250
% Buses and Single-Unit Trucks	1.0%	2.6%	1.3%	0%	2.1%	-	1.4%	2.8%	4.7%	0%	2.9%	-	0.5%	1.0%	0.3%	0%	0.8%	-	4.2%	1.0%	1.0%	0%	1.4%	-	1.7%
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	28	-	-	-	-	-	21	-	-	-	-	-	21	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	100%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

38th Street and Lamar Boulevard - TMC

Tue Mar 1, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926437, Location: 30.305179, -97.743069



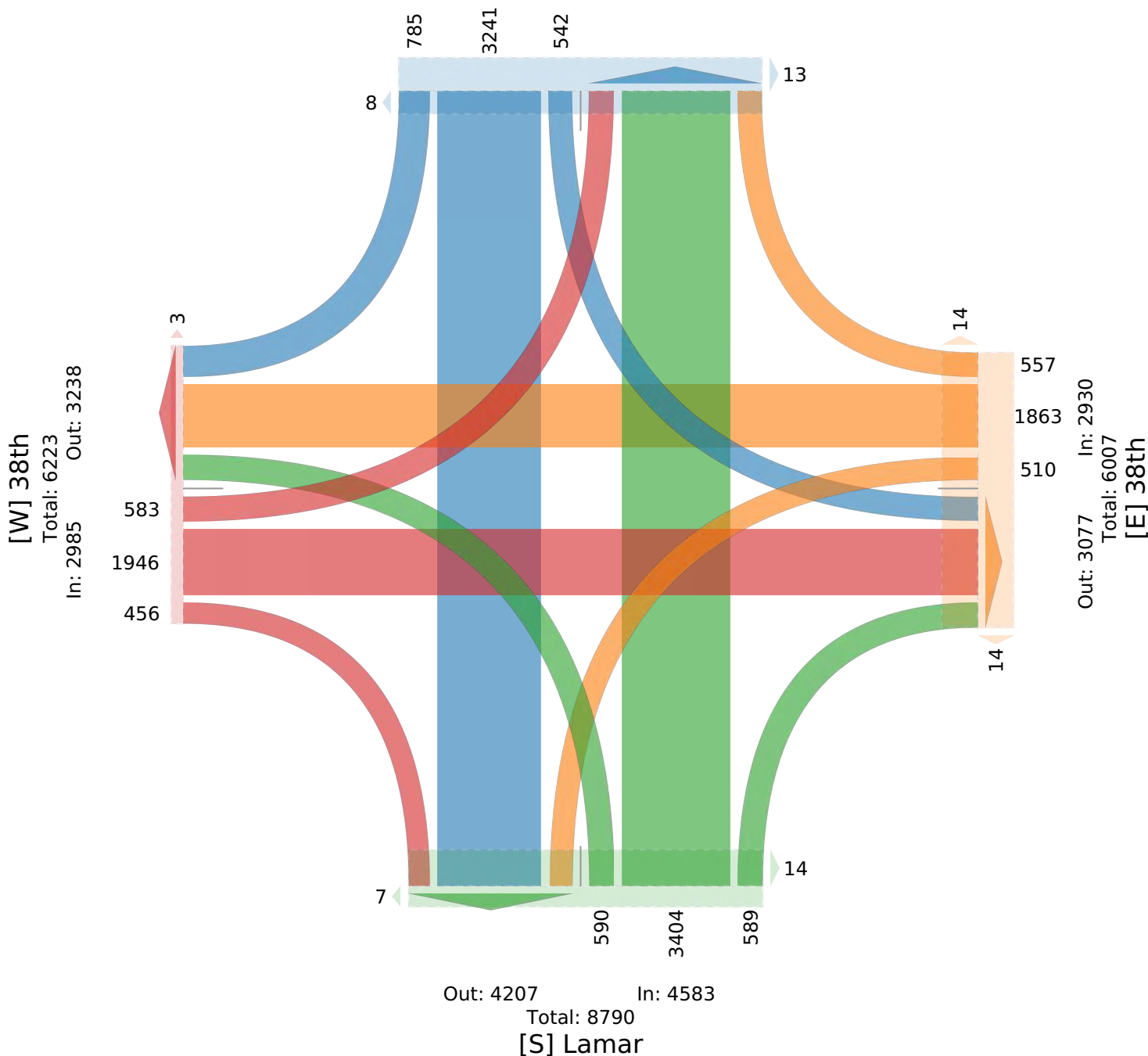
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Lamar

Total: 9112

In: 4568

Out: 4544



38th Street and Lamar Boulevard - TMC

Tue Mar 1, 2022

AM Peak (8 AM - 9 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926437, Location: 30.305179, -97.743069



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	38th Eastbound						38th Westbound						Lamar Northbound						Lamar Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2022-03-01 8:00AM	18	135	30	0	183	0	41	122	32	0	195	0	32	113	26	0	171	2	26	229	73	0	328	0	877
8:15AM	27	123	28	0	178	0	29	107	32	0	168	0	18	116	29	0	163	2	49	223	62	0	334	3	843
8:30AM	26	113	35	0	174	0	30	97	22	0	149	3	34	129	27	0	190	2	59	244	83	0	386	1	899
8:45AM	51	148	41	0	240	0	35	100	38	0	173	1	27	129	31	0	187	2	38	224	63	0	325	3	925
Total	122	519	134	0	775	0	135	426	124	0	685	4	111	487	113	0	711	8	172	920	281	0	1373	7	3544
% Approach	15.7%	67.0%	17.3%	0%	-	-	19.7%	62.2%	18.1%	0%	-	-	15.6%	68.5%	15.9%	0%	-	-	12.5%	67.0%	20.5%	0%	-	-	-
% Total	3.4%	14.6%	3.8%	0%	21.9%	-	3.8%	12.0%	3.5%	0%	19.3%	-	3.1%	13.7%	3.2%	0%	20.1%	-	4.9%	26.0%	7.9%	0%	38.7%	-	-
PHF	0.598	0.877	0.817	-	0.807	-	0.823	0.873	0.816	-	0.878	-	0.816	0.944	0.911	-	0.936	-	0.729	0.943	0.846	-	0.889	-	0.958
Lights	119	504	131	0	754	-	132	413	115	0	660	-	111	479	112	0	702	-	164	909	278	0	1351	-	3467
% Lights	97.5%	97.1%	97.8%	0%	97.3%	-	97.8%	96.9%	92.7%	0%	96.4%	-	100%	98.4%	99.1%	0%	98.7%	-	95.3%	98.8%	98.9%	0%	98.4%	-	97.8%
Articulated Trucks	1	0	0	0	1	-	0	0	1	0	1	-	0	1	0	0	1	-	1	0	0	0	1	-	4
% Articulated Trucks	0.8%	0%	0%	0%	0.1%	-	0%	0%	0.8%	0%	0.1%	-	0%	0.2%	0%	0%	0.1%	-	0.6%	0%	0%	0%	0.1%	-	0.1%
Buses and Single-Unit Trucks	2	15	3	0	20	-	3	13	8	0	24	-	0	7	1	0	8	-	7	11	3	0	21	-	73
% Buses and Single-Unit Trucks	1.6%	2.9%	2.2%	0%	2.6%	-	2.2%	3.1%	6.5%	0%	3.5%	-	0%	1.4%	0.9%	0%	1.1%	-	4.1%	1.2%	1.1%	0%	1.5%	-	2.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	8	-	-	-	-	-	7	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	100%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

38th Street and Lamar Boulevard - TMC

Tue Mar 1, 2022

AM Peak (8 AM - 9 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926437, Location: 30.305179, -97.743069



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Lamar

Total: 2106

In: 1373

Out: 733

281

920

172

4

3

3

124

426

135

Out: 804 In: 685

Total: 1489

[E] 38th

1

6

111

487

113

Out: 1189

In: 711

Total: 1900

[S] Lamar

[W] 38th

Total: 1593

In: 775 Out: 818

122

519

134

2

38th Street and Lamar Boulevard - TMC

Tue Mar 1, 2022

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926437, Location: 30.305179, -97.743069



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	38th Eastbound						38th Westbound						Lamar Northbound						Lamar Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2022-03-01 4:45PM	48	128	20	0	196	0	34	125	43	0	202	4	54	314	44	0	412	2	25	239	28	0	292	1	1102
5:00PM	51	125	29	0	205	0	25	115	41	0	181	4	49	324	61	0	434	3	40	220	46	0	306	1	1126
5:15PM	41	112	29	0	182	0	38	138	37	0	213	1	48	351	37	0	436	1	29	217	28	0	274	0	1105
5:30PM	43	130	33	0	206	0	31	110	49	0	190	0	42	353	41	0	436	0	35	200	39	0	274	3	1106
Total	183	495	111	0	789	0	128	488	170	0	786	9	193	1342	183	0	1718	6	129	876	141	0	1146	5	4439
% Approach	23.2%	62.7%	14.1%	0%	-	-	16.3%	62.1%	21.6%	0%	-	-	11.2%	78.1%	10.7%	0%	-	-	11.3%	76.4%	12.3%	0%	-	-	-
% Total	4.1%	11.2%	2.5%	0%	17.8%	-	2.9%	11.0%	3.8%	0%	17.7%	-	4.3%	30.2%	4.1%	0%	38.7%	-	2.9%	19.7%	3.2%	0%	25.8%	-	-
PHF	0.897	0.952	0.841	-	0.958	-	0.842	0.884	0.867	-	0.923	-	0.894	0.950	0.750	-	0.985	-	0.806	0.916	0.766	-	0.936	-	0.986
Lights	182	484	111	0	777	-	127	477	165	0	769	-	193	1329	183	0	1705	-	122	870	138	0	1130	-	4381
% Lights	99.5%	97.8%	100%	0%	98.5%	-	99.2%	97.7%	97.1%	0%	97.8%	-	100%	99.0%	100%	0%	99.2%	-	94.6%	99.3%	97.9%	0%	98.6%	-	98.7%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	1	-	0	0	0	0	0	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.1%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	1	11	0	0	12	-	1	11	5	0	17	-	0	12	0	0	12	-	7	6	3	0	16	-	57
% Buses and Single-Unit Trucks	0.5%	2.2%	0%	0%	1.5%	-	0.8%	2.3%	2.9%	0%	2.2%	-	0%	0.9%	0%	0%	0.7%	-	5.4%	0.7%	2.1%	0%	1.4%	-	1.3%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	9	-	-	-	-	-	6	-	-	-	-	-	5	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-100%	-	-	-	-	-	-100%	-	-	-	-	-	-100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

38th Street and Lamar Boulevard - TMC

Tue Mar 1, 2022

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926437, Location: 30.305179, -97.743069



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Lamar

Total: 2841

In: 1146

Out: 1695

141 876 129 2 3

[W] 38th
Total: 1611
In: 789 Out: 822

183
495
111

2 193 1342 183 4

Out: 1115

In: 1718

Total: 2833

[S] Lamar

170
488
128
Out: 807 In: 786
Total: 1593
[E] 38th

38th Street and Shoal Creek Boulevard - TMC

Tue Mar 1, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926438, Location: 30.307067, -97.747518



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	38th Eastbound					38th Westbound					Shoal Creek Southbound					
Time	L	T	U	App	Ped*	T	R	U	App	Ped*	L	R	U	App	Ped*	Int
2022-03-01 7:00AM	11	184	0	195	0	112	5	0	117	0	7	13	0	20	0	332
7:15AM	20	234	0	254	0	140	4	0	144	0	8	25	0	33	3	431
7:30AM	53	262	0	315	0	190	9	0	199	0	13	47	0	60	1	574
7:45AM	42	283	0	325	0	223	19	0	242	0	25	43	0	68	3	635
Hourly Total	126	963	0	1089	0	665	37	0	702	0	53	128	0	181	7	1972
8:00AM	37	225	0	262	2	212	13	0	225	0	23	35	0	58	0	545
8:15AM	28	229	0	257	1	194	15	0	209	1	27	36	0	63	1	529
8:30AM	17	232	0	249	0	225	14	0	239	0	27	38	0	65	0	553
8:45AM	22	279	0	301	0	187	15	0	202	0	22	35	0	57	1	560
Hourly Total	104	965	0	1069	3	818	57	0	875	1	99	144	0	243	2	2187
4:00PM	39	174	0	213	2	279	19	0	298	0	8	34	0	42	1	553
4:15PM	54	220	0	274	0	249	43	0	292	0	3	19	0	22	2	588
4:30PM	41	185	0	226	0	253	43	0	296	1	12	21	0	33	2	555
4:45PM	44	195	0	239	0	235	36	0	271	0	8	27	0	35	3	545
Hourly Total	178	774	0	952	2	1016	141	0	1157	1	31	101	0	132	8	2241
5:00PM	49	206	0	255	0	263	34	0	297	0	7	24	0	31	2	583
5:15PM	41	195	0	236	0	213	36	0	249	0	10	37	0	47	2	532
5:30PM	24	181	0	205	0	200	34	0	234	0	7	17	0	24	4	463
5:45PM	26	201	0	227	0	210	19	0	229	1	8	21	0	29	5	485
Hourly Total	140	783	0	923	0	886	123	0	1009	1	32	99	0	131	13	2063
Total	548	3485	0	4033	5	3385	358	0	3743	3	215	472	0	687	30	8463
% Approach	13.6%	86.4%	0%	-	-	90.4%	9.6%	0%	-	-	31.3%	68.7%	0%	-	-	-
% Total	6.5%	41.2%	0%	47.7%	-	40.0%	4.2%	0%	44.2%	-	2.5%	5.6%	0%	8.1%	-	-
Lights	544	3429	0	3973	-	3332	358	0	3690	-	213	468	0	681	-	8344
% Lights	99.3%	98.4%	0%	98.5%	-	98.4%	100%	0%	98.6%	-	99.1%	99.2%	0%	99.1%	-	98.6%
Articulated Trucks	0	1	0	1	-	1	0	0	1	-	0	0	0	0	-	2
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	4	55	0	59	-	52	0	0	52	-	2	4	0	6	-	117
% Buses and Single-Unit Trucks	0.7%	1.6%	0%	1.5%	-	1.5%	0%	0%	1.4%	-	0.9%	0.8%	0%	0.9%	-	1.4%
Pedestrians	-	-	-	-	5	-	-	-	-	3	-	-	-	-	30	-
% Pedestrians	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	100%	-

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

38th Street and Shoal Creek Boulevard - TMC

Tue Mar 1, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926438, Location: 30.307067, -97.747518



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Shoal Creek

Total: 1593

In: 687 Out: 906

472
215

12

18

[W] 38th

Total: 7890

In: 4033

Out: 3857

548
3485

1

4

2

358
3385

Out: 3700 In: 3743

Total: 7443

[E] 38th

38th Street and Shoal Creek Boulevard - TMC

Tue Mar 1, 2022

AM Peak (7:30 AM - 8:30 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926438, Location: 30.307067, -97.747518



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	38th Eastbound					38th Westbound					Shoal Creek Southbound					
Time	L	T	U	App	Ped*	T	R	U	App	Ped*	L	R	U	App	Ped*	Int
2022-03-01 7:30AM	53	262	0	315	0	190	9	0	199	0	13	47	0	60	1	574
7:45AM	42	283	0	325	0	223	19	0	242	0	25	43	0	68	3	635
8:00AM	37	225	0	262	2	212	13	0	225	0	23	35	0	58	0	545
8:15AM	28	229	0	257	1	194	15	0	209	1	27	36	0	63	1	529
Total	160	999	0	1159	3	819	56	0	875	1	88	161	0	249	5	2283
% Approach	13.8%	86.2%	0%	-	-	93.6%	6.4%	0%	-	-	35.3%	64.7%	0%	-	-	-
% Total	7.0%	43.8%	0%	50.8%	-	35.9%	2.5%	0%	38.3%	-	3.9%	7.1%	0%	10.9%	-	-
PHF	0.755	0.883	-	0.892	-	0.918	0.737	-	0.904	-	0.815	0.856	-	0.915	-	0.899
Lights	160	982	0	1142	-	801	56	0	857	-	87	158	0	245	-	2244
% Lights	100%	98.3%	0%	98.5%	-	97.8%	100%	0%	97.9%	-	98.9%	98.1%	0%	98.4%	-	98.3%
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	17	0	17	-	18	0	0	18	-	1	3	0	4	-	39
% Buses and Single-Unit Trucks	0%	1.7%	0%	1.5%	-	2.2%	0%	0%	2.1%	-	1.1%	1.9%	0%	1.6%	-	1.7%
Pedestrians	-	-	-	-	3	-	-	-	-	1	-	-	-	-	5	
% Pedestrians	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

38th Street and Shoal Creek Boulevard - TMC

Tue Mar 1, 2022

AM Peak (7:30 AM - 8:30 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926438, Location: 30.307067, -97.747518

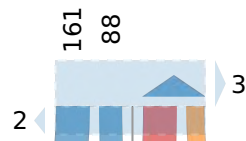


Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Shoal Creek

Total: 465

In: 249 Out: 216



[W] 38th

Total: 2139
In: 1159 Out: 980



Out: 1087 In: 875

[E] 38th

Total: 1962

38th Street and Shoal Creek Boulevard - TMC

Tue Mar 1, 2022

PM Peak (4:15 PM - 5:15 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926438, Location: 30.307067, -97.747518



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	38th Eastbound					38th Westbound					Shoal Creek Southbound					
Time	L	T	U	App	Ped*	T	R	U	App	Ped*	L	R	U	App	Ped*	Int
2022-03-01 4:15PM	54	220	0	274	0	249	43	0	292	0	3	19	0	22	2	588
4:30PM	41	185	0	226	0	253	43	0	296	1	12	21	0	33	2	555
4:45PM	44	195	0	239	0	235	36	0	271	0	8	27	0	35	3	545
5:00PM	49	206	0	255	0	263	34	0	297	0	7	24	0	31	2	583
Total	188	806	0	994	0	1000	156	0	1156	1	30	91	0	121	9	2271
% Approach	18.9%	81.1%	0%	-	-	86.5%	13.5%	0%	-	-	24.8%	75.2%	0%	-	-	-
% Total	8.3%	35.5%	0%	43.8%	-	44.0%	6.9%	0%	50.9%	-	1.3%	4.0%	0%	5.3%	-	-
PHF	0.870	0.916	-	0.907	-	0.951	0.907	-	0.973	-	0.625	0.843	-	0.864	-	0.966
Lights	185	792	0	977	-	989	156	0	1145	-	30	91	0	121	-	2243
% Lights	98.4%	98.3%	0%	98.3%	-	98.9%	100%	0%	99.0%	-	100%	100%	0%	100%	-	98.8%
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	3	14	0	17	-	11	0	0	11	-	0	0	0	0	-	28
% Buses and Single-Unit Trucks	1.6%	1.7%	0%	1.7%	-	1.1%	0%	0%	1.0%	-	0%	0%	0%	0%	-	1.2%
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	9	-
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

38th Street and Shoal Creek Boulevard - TMC

Tue Mar 1, 2022

PM Peak (4:15 PM - 5:15 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926438, Location: 30.307067, -97.747518



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Shoal Creek

Total: 465

In: 121 Out: 344

91 30

5

4

[W] 38th
Total: 2085
In: 994 Out: 1091

188

806

156

1000

Out: 836 In: 1156
Total: 1992
[E] 38th

1

40th Street and Lamar - TMC

Wed Mar 2, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926440, Location: 30.307848, -97.741389



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	40th St Eastbound						Central Market Westbound						Lamar Northbound						Lamar Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2022-03-02 7:00AM	2	1	8	0	11	1	2	0	2	0	4	0	4	75	10	0	89	1	1	129	1	0	131	3	235
7:15AM	5	0	6	0	11	2	1	0	4	0	5	3	5	101	5	0	111	0	2	224	5	0	231	3	358
7:30AM	4	1	6	0	11	0	5	2	3	0	10	2	8	112	3	0	123	0	5	265	1	0	271	1	415
7:45AM	10	1	5	0	16	2	5	0	0	0	5	0	9	111	10	0	130	0	10	315	6	0	331	1	482
Hourly Total	21	3	25	0	49	5	13	2	9	0	24	5	26	399	28	0	453	1	18	933	13	0	964	8	1490
8:00AM	5	2	11	0	18	0	6	2	8	0	16	0	6	164	14	0	184	0	14	369	3	0	386	1	604
8:15AM	6	1	7	0	14	0	11	3	11	0	25	0	4	159	20	0	183	0	9	316	5	0	330	2	552
8:30AM	8	2	15	0	25	0	18	3	12	0	33	0	1	149	10	0	160	1	12	403	3	0	418	2	636
8:45AM	7	2	12	0	21	1	15	1	15	0	31	1	4	153	13	0	170	0	12	294	3	0	309	3	531
Hourly Total	26	7	45	0	78	1	50	9	46	0	105	1	15	625	57	0	697	1	47	1382	14	0	1443	8	2323
4:00PM	11	6	5	0	22	1	32	5	20	0	57	0	4	311	25	0	340	1	11	213	1	0	225	4	644
4:15PM	5	7	1	0	13	1	21	4	23	0	48	1	4	349	16	0	369	2	18	193	0	0	211	4	641
4:30PM	13	12	10	0	35	2	14	5	25	0	44	0	3	317	21	0	341	1	22	215	3	0	240	2	660
4:45PM	14	6	7	0	27	1	31	3	17	0	51	0	1	304	20	0	325	1	19	242	2	0	263	4	666
Hourly Total	43	31	23	0	97	5	98	17	85	0	200	1	12	1281	82	0	1375	5	70	863	6	0	939	14	2611
5:00PM	20	9	9	0	38	1	27	4	23	0	54	1	3	420	26	0	449	2	23	250	1	0	274	5	815
5:15PM	23	9	9	0	41	0	29	4	22	0	55	0	2	376	18	0	396	2	26	239	2	0	267	9	759
5:30PM	13	3	3	0	19	2	26	3	29	0	58	2	1	356	30	0	387	2	32	217	0	0	249	6	713
5:45PM	14	4	5	0	23	0	24	6	30	0	60	2	3	312	15	0	330	5	22	217	0	0	239	2	652
Hourly Total	70	25	26	0	121	3	106	17	104	0	227	5	9	1464	89	0	1562	11	103	923	3	0	1029	22	2939
Total	160	66	119	0	345	14	267	45	244	0	556	12	62	3769	256	0	4087	18	238	4101	36	0	4375	52	9363
% Approach	46.4%	19.1%	34.5%	0%	-	-	48.0%	8.1%	43.9%	0%	-	-	1.5%	92.2%	6.3%	0%	-	-	5.4%	93.7%	0.8%	0%	-	-	-
% Total	1.7%	0.7%	1.3%	0%	3.7%	-	2.9%	0.5%	2.6%	0%	5.9%	-	0.7%	40.3%	2.7%	0%	43.7%	-	2.5%	43.8%	0.4%	0%	46.7%	-	-
Lights	160	65	117	0	342	-	266	45	243	0	554	-	62	3701	256	0	4019	-	236	4026	34	0	4296	-	9211
% Lights	100%	98.5%	98.3%	0%	99.1%	-	99.6%	100%	99.6%	0%	99.6%	-	100%	98.2%	100%	0%	98.3%	-	99.2%	98.2%	94.4%	0%	98.2%	-	98.4%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	5	0	0	5	-	1	6	0	0	7	-	12
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.1%	0%	0%	0.1%	-	0.4%	0.1%	0%	0%	0.2%	-	0.1%
Buses and Single-Unit Trucks	0	1	2	0	3	-	1	0	1	0	2	-	0	63	0	0	63	-	1	69	2	0	72	-	140
% Buses and Single-Unit Trucks	0%	1.5%	1.7%	0%	0.9%	-	0.4%	0%	0.4%	0%	0.4%	-	0%	1.7%	0%	0%	1.5%	-	0.4%	1.7%	5.6%	0%	1.6%	-	1.5%
Pedestrians	-	-	-	-	-	14	-	-	-	-	-	12	-	-	-	-	-	18	-	-	-	-	-	52	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

40th Street and Lamar - TMC

Wed Mar 2, 2022

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926440, Location: 30.307848, -97.741389



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Lamar

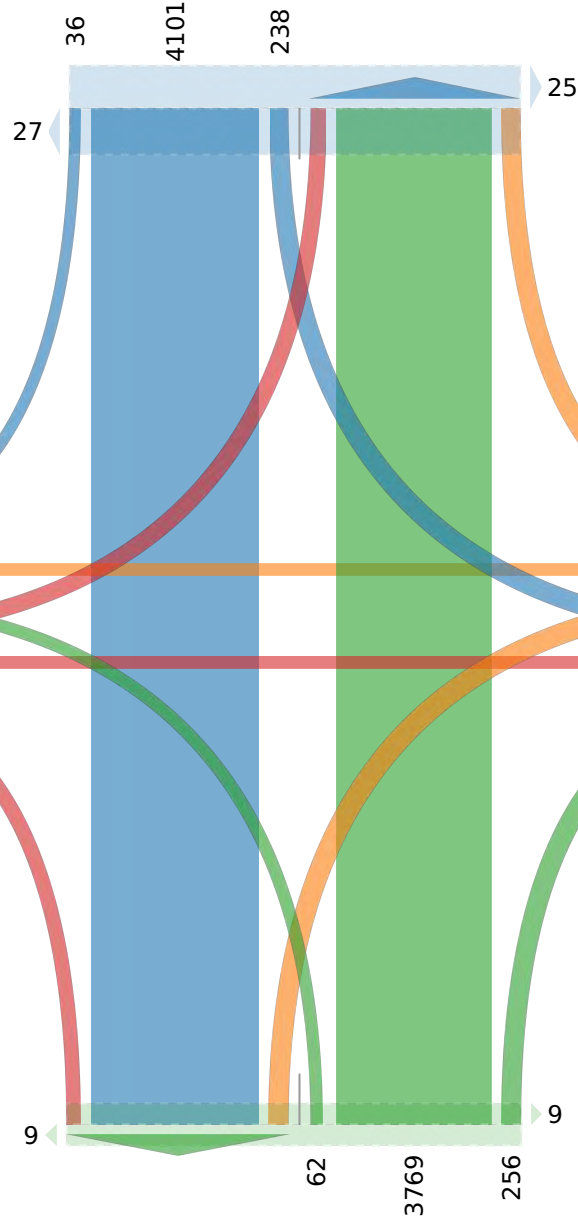
Total: 8548

In: 4375

Out: 4173

[W] 40th St
Total: 488
In: 345 Out: 143

166
66
119
5
9



Out: 4487

In: 4087

Total: 8574

[S] Lamar

40th Street and Lamar - TMC

Wed Mar 2, 2022

AM Peak (8 AM - 9 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926440, Location: 30.307848, -97.741389



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	40th St Eastbound							Central Market Westbound							Lamar Northbound							Lamar Southbound							
Time	L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		Int
2022-03-02 8:00AM	5	2	11	0	18	0		6	2	8	0	16	0		6	164	14	0	184	0		14	369	3	0	386	1		604
8:15AM	6	1	7	0	14	0		11	3	11	0	25	0		4	159	20	0	183	0		9	316	5	0	330	2		552
8:30AM	8	2	15	0	25	0		18	3	12	0	33	0		1	149	10	0	160	1		12	403	3	0	418	2		636
8:45AM	7	2	12	0	21	1		15	1	15	0	31	1		4	153	13	0	170	0		12	294	3	0	309	3		531
Total	26	7	45	0	78	1		50	9	46	0	105	1		15	625	57	0	697	1		47	1382	14	0	1443	8		2323
% Approach	33.3%	9.0%	57.7%	0%	-	-		47.6%	8.6%	43.8%	0%	-	-		2.2%	89.7%	8.2%	0%	-	-		3.3%	95.8%	1.0%	0%	-	-		-
% Total	1.1%	0.3%	1.9%	0%	3.4%	-		2.2%	0.4%	2.0%	0%	4.5%	-		0.6%	26.9%	2.5%	0%	30.0%	-		2.0%	59.5%	0.6%	0%	62.1%	-		-
PHF	0.813	0.875	0.750	-	0.780	-		0.694	0.750	0.767	-	0.795	-		0.625	0.953	0.713	-	0.947	-		0.839	0.857	0.700	-	0.863	-		0.913
Lights	26	7	43	0	76	-		50	9	45	0	104	-		15	604	57	0	676	-		46	1358	14	0	1418	-		2274
% Lights	100%	100%	95.6%	0%	97.4%	-		100%	100%	97.8%	0%	99.0%	-		100%	96.6%	100%	0%	97.0%	-		97.9%	98.3%	100%	0%	98.3%	-		97.9%
Articulated Trucks	0	0	0	0	0	-		0	0	0	0	0	-		0	1	0	0	1	-		1	1	0	0	2	-		3
% Articulated Trucks	0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0.2%	0%	0%	0.1%	-		2.1%	0.1%	0%	0%	0.1%	-		0.1%
Buses and Single-Unit Trucks	0	0	2	0	2	-		0	0	1	0	1	-		0	20	0	0	20	-		0	23	0	0	23	-		46
% Buses and Single-Unit Trucks	0%	0%	4.4%	0%	2.6%	-		0%	0%	2.2%	0%	1.0%	-		0%	3.2%	0%	0%	2.9%	-		0%	1.7%	0%	0%	1.6%	-		2.0%
Pedestrians	-	-	-	-	-	1		-	-	-	-	-	1		-	-	-	-	-	1		-	-	-	-	-	8		
% Pedestrians	-	-	-	-	-	100%		-	-	-	-	-	100%		-	-	-	-	-	100%		-	-	-	-	-	100%		-

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

40th Street and Lamar - TMC

Wed Mar 2, 2022

AM Peak (8 AM - 9 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926440, Location: 30.307848, -97.741389



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Lamar

Total: 2140

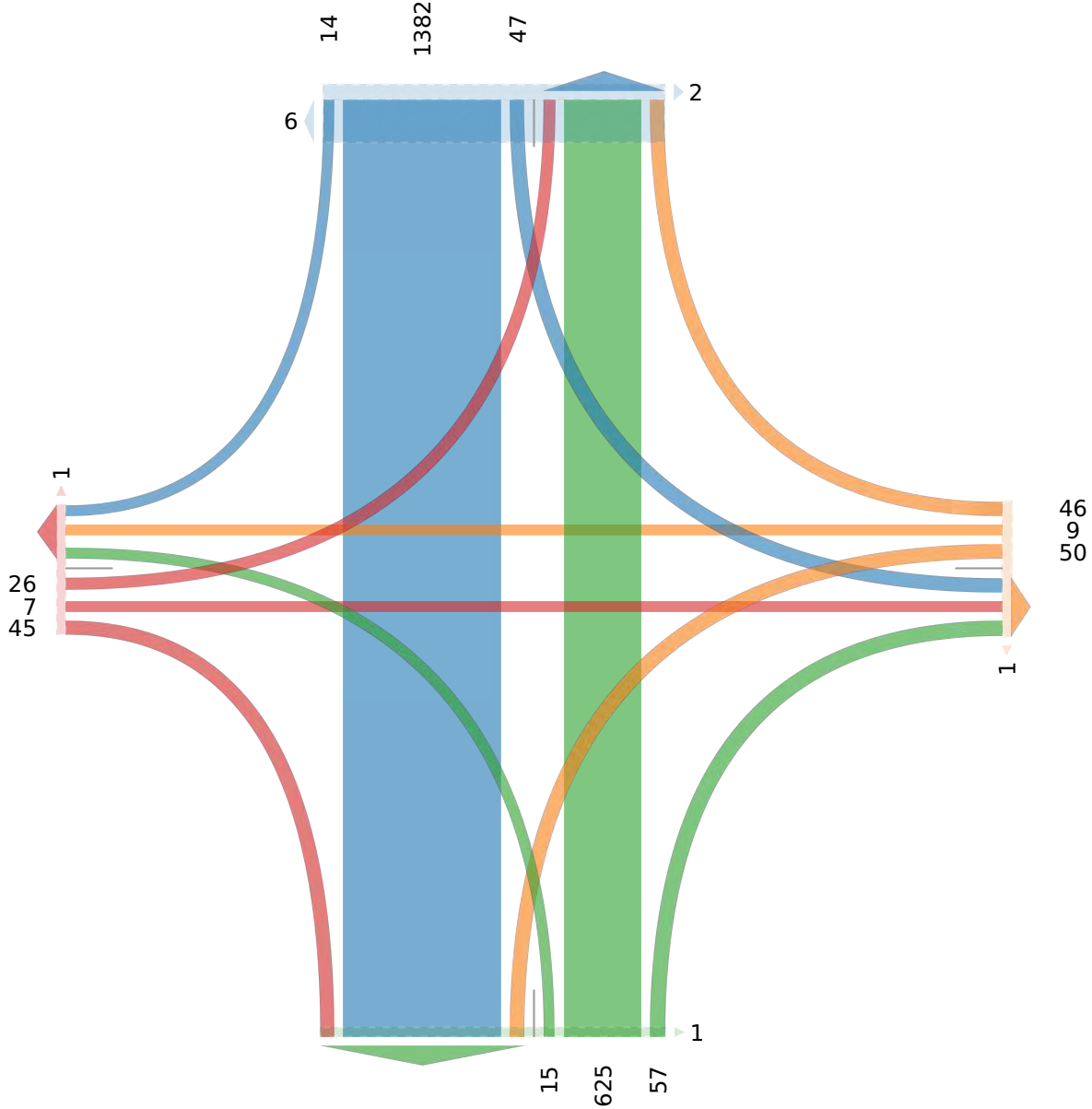
In: 1443

Out: 697

[W] 40th St

Total: 116

In: 78 Out: 38



40th Street and Lamar - TMC

Wed Mar 2, 2022

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926440, Location: 30.307848, -97.741389



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	40th St Eastbound							Central Market Westbound							Lamar Northbound							Lamar Southbound							
Time	L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		Int
2022-03-02 4:45PM	14	6	7	0	27	1		31	3	17	0	51	0		1	304	20	0	325	1		19	242	2	0	263	4		666
5:00PM	20	9	9	0	38	1		27	4	23	0	54	1		3	420	26	0	449	2		23	250	1	0	274	5		815
5:15PM	23	9	9	0	41	0		29	4	22	0	55	0		2	376	18	0	396	2		26	239	2	0	267	9		759
5:30PM	13	3	3	0	19	2		26	3	29	0	58	2		1	356	30	0	387	2		32	217	0	0	249	6		713
Total	70	27	28	0	125	4		113	14	91	0	218	3		7	1456	94	0	1557	7		100	948	5	0	1053	24		2953
% Approach	56.0%	21.6%	22.4%	0%	-	-		51.8%	6.4%	41.7%	0%	-	-		0.4%	93.5%	6.0%	0%	-	-		9.5%	90.0%	0.5%	0%	-	-		-
% Total	2.4%	0.9%	0.9%	0%	4.2%	-		3.8%	0.5%	3.1%	0%	7.4%	-		0.2%	49.3%	3.2%	0%	52.7%	-		3.4%	32.1%	0.2%	0%	35.7%	-		-
PHF	0.761	0.750	0.778	-	0.762	-		0.911	0.875	0.784	-	0.940	-		0.583	0.867	0.783	-	0.867	-		0.781	0.948	0.625	-	0.961	-		0.906
Lights	70	26	28	0	124	-		112	14	91	0	217	-		7	1443	94	0	1544	-		100	936	5	0	1041	-		2926
% Lights	100%	96.3%	100%	0%	99.2%	-		99.1%	100%	100%	0%	99.5%	-		100%	99.1%	100%	0%	99.2%	-		100%	98.7%	100%	0%	98.9%	-		99.1%
Articulated Trucks	0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-		0
% Articulated Trucks	0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%
Buses and Single-Unit Trucks	0	1	0	0	1	-		1	0	0	0	1	-		0	13	0	0	13	-		0	12	0	0	12	-		27
% Buses and Single-Unit Trucks	0%	3.7%	0%	0%	0.8%	-		0.9%	0%	0%	0%	0.5%	-		0%	0.9%	0%	0%	0.8%	-		0%	1.3%	0%	0%	1.1%	-		0.9%
Pedestrians	-	-	-	-	-	4		-	-	-	-	-	3		-	-	-	-	-	7		-	-	-	-	-	24		
% Pedestrians	-	-	-	-	-	100%		-	-	-	-	-	100%		-	-	-	-	-	100%		-	-	-	-	-	100%		-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

40th Street and Lamar - TMC

Wed Mar 2, 2022

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians)

All Movements

ID: 926440, Location: 30.307848, -97.741389



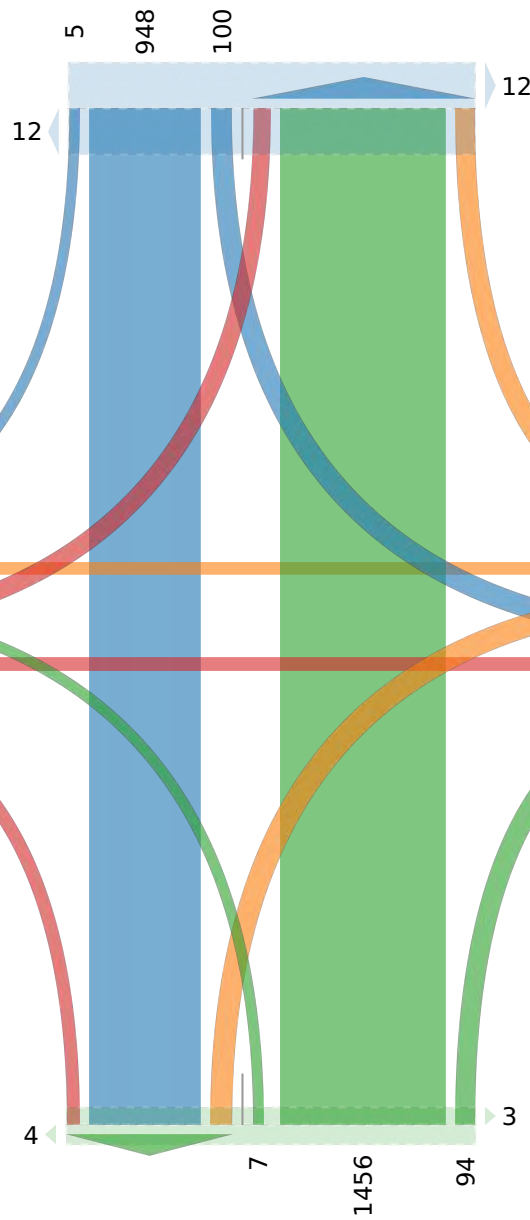
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

[N] Lamar

Total: 2670

In: 1053

Out: 1617



[S] Lamar

Total: 2646

Out: 1089

In: 1557

[E] Central Market

Out: 221 In: 218

Total: 439

Ascension Seton 38th TIA Compliance

DISTRIBUTION SPREADSHEET

AM Peak

2022 Existing Traffic Conditions

X.X%	= Percent Heavy Vehicles
XXXX	= Intersection Total Volume
X.XX	= Peak Hour Factor

										N Lamar Blvd																																																	
										right	thru	left											46	right																																			
										14	1382	47	2.1%										9	thru																																			
										40th St			2323										Central Market Dr																																				
													0.91										15	625	57	Guadalupe St																																	
																							left	thru	right																																		
																							left	thru	right																																		
																							124	right																																			
										right	thru	left											426	thru		right	thru	left																															
										281	920	172	2.2%										135	left		186	635	105	3.1%																														
Shoal Creek Blvd																																																											
right	left			56	right																																																						
161	88	1.7%		819	thru																																																						
38th St										2283																																																	
left	160													left	122																																												
thru	999	0.90												thru	519											111	487	113	left	119																													
																				right	134	0.96										left	thru	right	thru	348																							

DISTRIBUTION SPREADSHEET

2028 Forecasted (without Site) Traffic Conditions

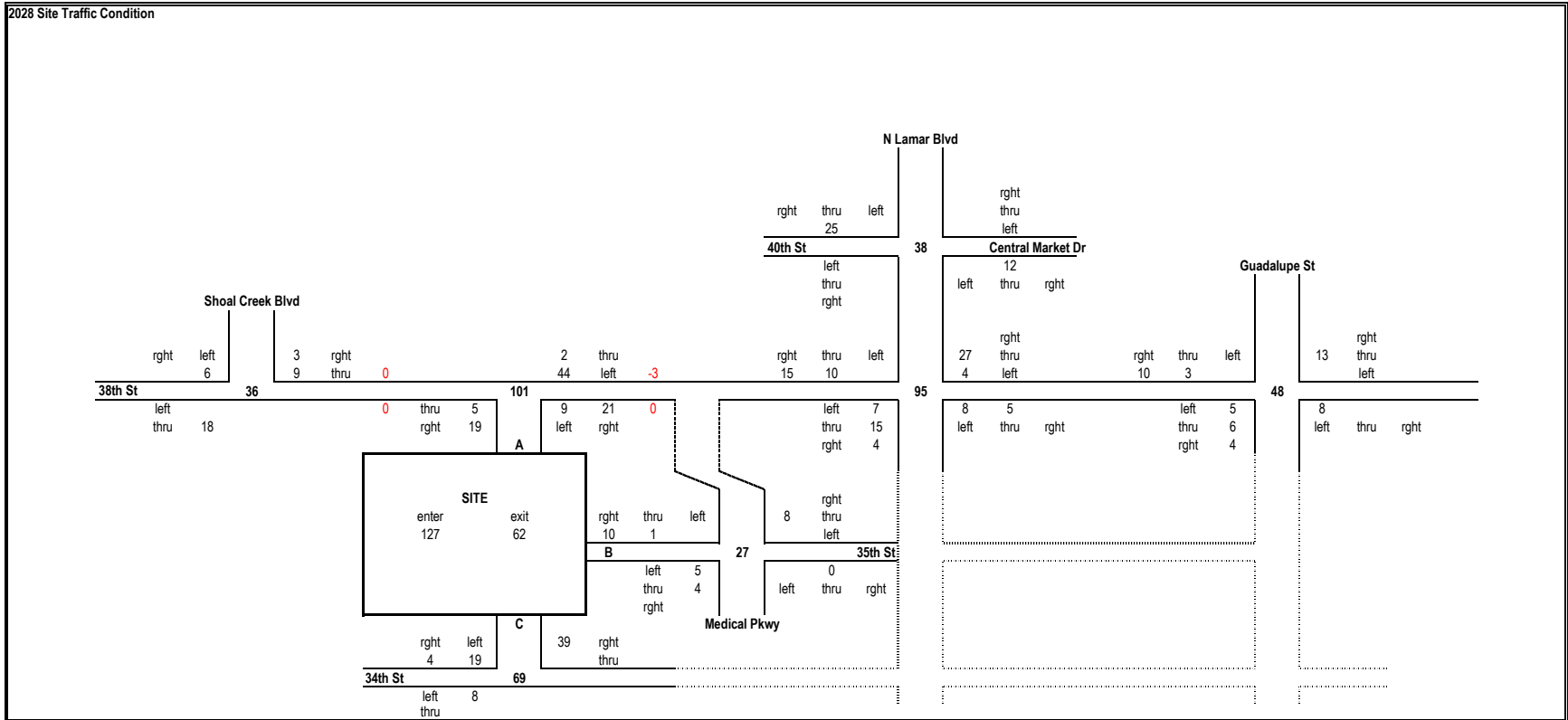
[illegible]

Ascension Seton 38th TIA Compliance

DISTRIBUTION SPREADSHEET

AM Peak

2028 Site Traffic Condition



Ascension Seton 38th TIA Compliance

DISTRIBUTION SPREADSHEET

AM Peak

2028 Site + Forecasted Traffic Conditions

X.X% = Percent Site Traffic
 XXXX = Intersection Total Volume

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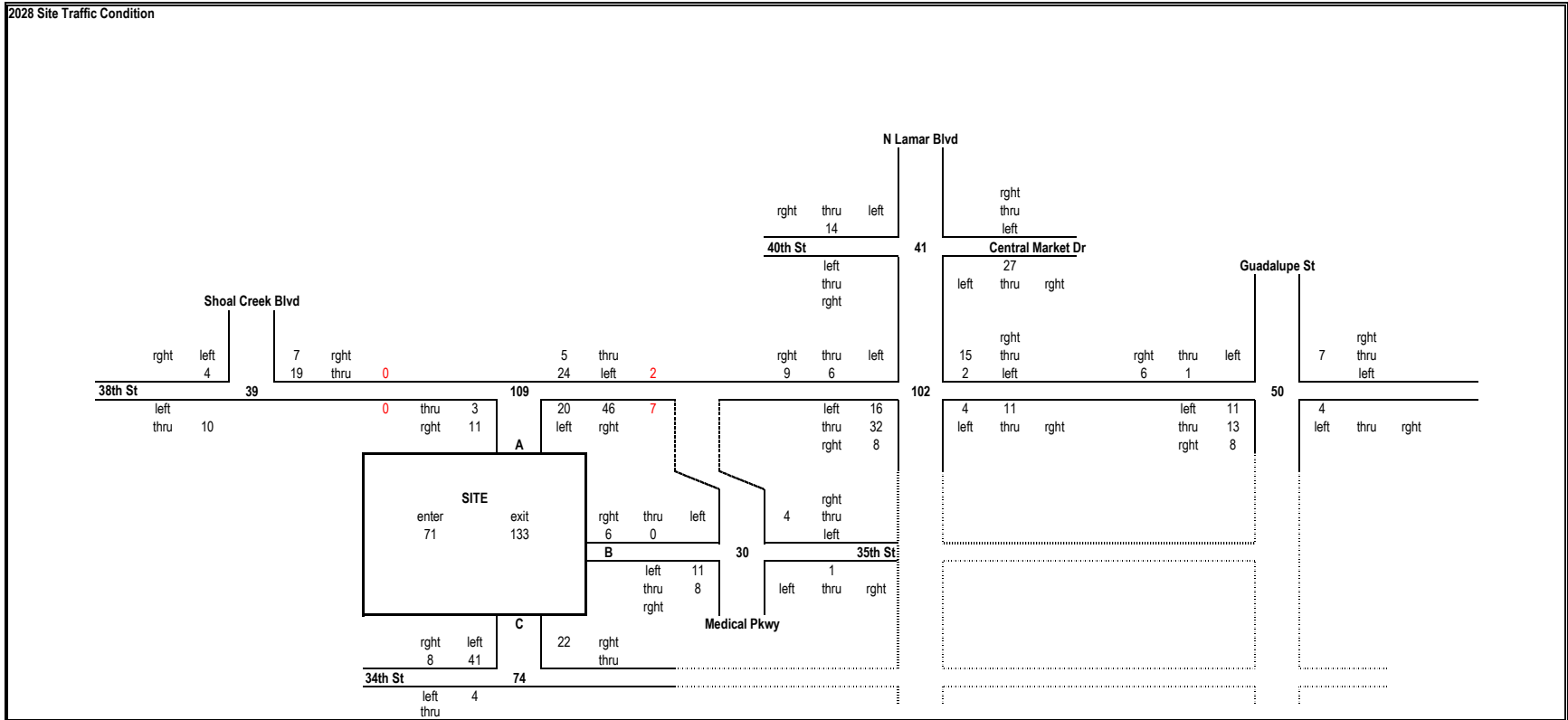
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	OVL D	2	P																						ALT FLASH HZ																						
	OVL E	2	P																					FLAGS	RECALL PRIMARY																						
	OVL F	2	P																						RECALL SEC																						
	OVL G	2	P																						PED RECALL																						
	OVL H	2	P																						PED RECYCLE																						
	OVL I	2	P																						PARAMETERS	AUTO EXTEND																					
		1/2	P		X																					MIN GREEN																					
			S																							MAX GREEN																					
	M		X																					GREEN CLEAR																							
	OVL J	2	P																					YEL CLEAR																							
		1/2	P					X																RED CLEAR																							
			S																					WALK																							
	M					X																		PED CLEAR																							
	OVL K	2	P																					RESERVICE																							
		1/2	P								X													PRE - EMPT	1	3	4	5	6	SETTINGS	1	3	4	5	6												
			S																						ENABLE																						
	OVL L		2	P									X											NO MEM LOK																							
1/2		P																				MAN ENABLE																									
		S																					NO OVER FLSH																								
	M									X												NO OVER NEXT																									
OVL M	2	P																				OMIT IN DELAY																									
OVL N	2	P																				RE MAX PRES																									
OVL O	2	P																				PED NOT DARK																									
OVL P	2	P																				TIME	MIN PRESENCE																								
																						DELAY																									
																							PHASE FLAGS	ENT 1 PHASE																							
																						ENT 2 PHASE																									
																						DWELL PHASE																									
																							INITIAL DWELL																								
																							DWELL PED																								
																							RECAL PHASE																								
																							EXIT PHASE																								

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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		PHASE TIMING																		
OMIT PED																				
MIN RECAL																				
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																		
MAX LOK		MAX INIT GRN																		

NOTES:

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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		PHASE TIMING																		
MIN RECAL																				
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 # 5	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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FLAGS		PHASES			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							
								SB "P" L/T		NB LAMAR		EB 40 TH		SB LAMAR				WB CENTRAL MKT																															
OMITPHAS		3, 5, 7, 11 - 20			PHASE TIMING			3.0		15.0		5.0		15.0		5.0		15.0		5.0																													
OMIT PED		1, 3, 5, 7, 9 - 20																																															
MIN RECAL		2, 6																																															
MAXRECAL																																																	
SOFT RCL																																																	
CDT'L SRVC																																																	
PED RECAL		2, 6			MIN GREEN			3.0		15.0		5.0		15.0		5.0		15.0		5.0																													
DUAL ETRY		4, 8			PASSAGE			1.0		2.0		1.5		2.0		1.5																																	
SIMGAP					MAXGRN 1			20.0		30.0		30.0		30.0		30.0		30.0																															
REDREST					MAXGRN 2			20.0		30.0		30.0		30.0		30.0		30.0																															
AUTO PED		2, 4, 6, 8			CONDSERV			0.0		0.0		0.0		0.0		0.0		0.0																															
REST WALK		2, 6			YEL CHG			4.0		4.0		3.5		4.0		3.0																																	
PED RECY					RED CLR			1.0		1.0		1.5		1.0		3.5																																	
RED LOCK					WALK					7.0		7.0		7.0		7.0																																	
YEL LOCK					PED CLR					23.0		23.0		13.0		18.0																																	
NO EXT					ADDED INI																																												
NO RANGE					TIME TO RED																																												
NOGAPRED					TIME BEFOR																																												
NOMAX LOK		1, 3 - 5, 7 - 10			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	8	20		8		20		8											MIN	PLAN	7		20		8		20		8																	
NOM SPLIT		CYCLE	130	11	94		25		105		25											NOM	CYCLE	60		35		25		35		25																	
MAX SPLIT				20	115		35		115		35											MAX				115		35		115		35																	
NOTE: PLAN 20 = FREE MODE PLAN 33 = FLASH MODE		PLAN	2		10		8	8	10		8											MIN	PLAN	8	8	20		8		20		8																	
		CYCLE	140		125		15	10	115		15											NOM	CYCLE	130	11	94		25		105		25																	
					130		25	20	125		25											MAX				25	105		35		130		35																
		PLAN	3	8	20		8	8	20		8											MIN	PLAN																										
		CYCLE	150	15	107		28	15	107		28											NOM	CYCLE																										
				25	140		45	25	140		45											MAX																											
		PLAN	5	8	20		8		20		8											MIN	PLAN																										
		CYCLE	130	11	94		25		105		25											NOM	CYCLE																										
Change ONLY the following:				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15																															
INPUT CHANNELS	FUNCTION TYPE																																								VEH	VEH	VEH	VEH					
	FUNCTION INDEX																																							13	14	15	16						
	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																																																	

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	1, 3, 5, 7, 9 - 20		PHASE TIMING	SB "p" L/T	NB LAMAR		EB 40 TH	NB "p" L/T	SB LAMAR		WB CENTRAL MK										
OMIT PED	1, 3, 5, 7, 9 - 20																				
MIN RECAL	2, 6																				
MAXRECAL																					
SOFT RCL																					
CDT'L SRVC																					
PED RECAL	2, 6	MIN GREEN	3.0	15.0		5.0	3.0	15.0		5.0											
DUAL ETRY	4, 8	PASSAGE	1.0	2.0		1.5	1.0	2.0		1.5											
SIMGAP		MAXGRN 1	20.0	30.0		30.0	20.0	30.0		30.0											
REDREST		MAXGRN 2	20.0	30.0		30.0	20.0	30.0		30.0											
AUTO PED	2, 4, 6, 8	CONDSERV	0.0	0.0		0.0	0.0	0.0		0.0											
REST WALK	2, 6	YEL CHG	4.0	4.0		3.5	4.0	4.0		3.0											
PED RECY		RED CLR	1.0	1.0		1.5	1.0	1.0		3.5											
RED LOCK		WALK		7.0		7.0		7.0		7.0											
YEL LOCK		PED CLR		23.0		23.0		13.0		18.0											
NO EXT	9, 10	ADDED INI																			
NO ADD INI		TIME TO RED																			
NOGAPRED		TIME BEFOR																			
NO RANGE	9, 10	MIN GAP																			
NOMAX LOK	1, 3 - 5, 7 - 10	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	9 - 20		PHASE TIMING	NB LAMAR	EB 40 TH	SB LAMAR	WB CENTRAL MK														
OMIT PED	1, 3, 5, 7, 9 - 20																				
MIN RECAL	2, 6																				
MAXRECAL																					
SOFT RCL																					
CDT'L SRVC																					
PED RECAL	2, 6	MIN GREEN		15.0		5.0		15.0		5.0											
DUAL ETRY	4, 8	PASSAGE		2.0		1.5		2.0		1.5											
SIMGAP		MAXGRN 1		30.0		30.0		30.0		30.0											
REDREST		MAXGRN 2		30.0		30.0		30.0		30.0											
AUTO PED	2, 4, 6, 8	CONDSERV		0.0		0.0		0.0		0.0											
REST WALK	2, 6	YEL CHG		4.0		3.5		4.0		3.0											
PED RECY		RED CLR		1.0		1.5		1.0		3.5											
RED LOCK		WALK		7.0		7.0		7.0		7.0											
YEL LOCK		PED CLR		23.0		23.0		13.0		18.0											
NO EXT	9, 10	ADDED INI																			
NO ADD INI		TIME TO RED																			
NOGAPRED		TIME BEFOR																			
NO RANGE	9, 10	MIN GAP																			
NOMAX LOK	1, 3 - 5, 7 - 10	MAX INIT GRN																			

NOTES:

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FLAGS			PHASES								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	
OMITPHAS		1, 9 - 20								EB 38TH			SB LT SHOAL CREEE		EAST SIDE N-S PED		EB LT		WB 38TH		SB RT SHOAL CREEE		WEST SIDE N-S PED																									
OMIT PED		1, 2, 3, 5, 7, 9 - 20																																														
MIN RECAL		2, 6								PHASE TIMING																																						
MAXRECAL		2, 6																																														
SOFT RCL																																																
CDT'L SRVC																																																
PED RECAL		6								MIN GREEN				15.0		5.0		5.0		4.0		15.0		5.0		5.0																						
DUAL ETRY		2, 6								PASSAGE				2.0		2.0		2.0		1.0		2.0		2.0		2.0																						
SIMGAP		2, 6								MAXGRN 1				40.0		25.0		25.0		25.0		40.0		25.0		25.0																						
REDREST										MAXGRN 2				30.0		25.0		25.0		15.0		30.0		25.0		25.0																						
AUTO PED										CONDSERV				0.0		0.0		0.0		0.0		0.0		0.0		0.0																						
REST WALK		6								YEL CHG				4.0		3.0		3.0		4.0		4.0		3.0		3.0																						
PED RECY										RED CLR				1.5		2.5		2.5		1.5		1.5		2.5		2.5																						
RED LOCK										WALK								7.0		7.0		7.0		7.0																								
YEL LOCK										PED CLR								22.0				18.0		24.0																								
NO EXT										ADDED INI																																						
NO ADD INI										TIME TO RED																																						
NOGAPRED										TIME BEFOR																																						
NOMAX LOK										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		25	10		10	25	10												MIN	PLAN	7		25	10			25	10																	
NOM SPLIT		CYCLE	130		101	29		10	91	29												NOM	CYCLE	60		38	22			38	22																	
MAX SPLIT					125	45		25	125	45												MAX				65	45			125	45																	
NOTE: PLAN 20 = FREE MODE PLAN 33 = FLASH MODE		PLAN	2</																																													

OUTPUT CHANNELS		PHASES																			OVERLAPS																																
		FUNCTION TYPE																				A		B		C		D		E		F		G		H		I		J		K		L		M		N		O		P	
		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										
OVERLAP CONFIGURATION	OVL A	2	P																				OVERLAP SETTINGS	FLAGS / PARAM	ENABLE											X	X	X															
	OVL B	2	P																						PED OVERLAP																												
	OVL C	2	P																						FLASH YELLOW																												
	OVL D	2	P																						ALT FLASH HZ																												
	OVL E	2	P																					RECALL PRIMARY																													
	OVL F	2	P																					RECALL SEC																													
	OVL G	2	P																					PED RECALL																													
	OVL H	2	P																					PED RECYCLE																													
	OVL I	2	P																						AUTO EXTEND																												
		142	P																						MIN GREEN																												
			M																						MAX GREEN																												
	OVL J	2	P					X																	GREEN CLEAR																												
		142	P																					YEL CLEAR									3	4	3																		
			S																						RED CLEAR								2.5	1.5	2.5																		
	OVL K	2	P																					WALK																													
		142	P																					PED CLEAR																													
			M					X																RESERVICE																													
	OVL L	2	P																					PRE - EMPT	1	3	4	5	6	SETTINGS			1	3	4	5	6																
		142	P																					ENABLE																													
			S																					NO MEM LOK																													
	OVL M	2	P																					MAN ENABLE																													
		142	P																					NO OVER FLSH																													
			M																					NO OVER NEXT																													
	OVL N	2	P																					OMIT IN DELAY																													
142		P																					RE MAX PRES																														
		M																					PED NOT DARK																														
OVL O	2	P																				TIME	MIN PRESENCE																														
OVL P	2	P																				DELAY																															

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, 5, 9 - 20	PHASE TIMING	EB 38TH	SB LT SHOAL CREE	EAST SIDE N-S PED			WB 38TH	SB RT SHOAL CREE	WEST SIDE N-S PED										
OMIT PED		1, 2, 3, 5, 7, 9 - 20																			
MIN RECAL		2, 6																			
MAXRECAL		2, 6																			
SOFT RCL																					
CDT'L SRVC			MIN GREEN	15.0	5.0	5.0			15.0	5.0	5.0										
PED RECAL		6																			
DUAL ETRY		2, 6																			
SIMGAP		2, 6																			
REDREST																					
		MAXGRN 1	30.0	25.0	25.0			30.0	25.0	25.0											
AUTO PED		CONDSEV																			
REST WALK		6																			
PED RECY																					
RED LOCK																					
YEL LOCK			4.0	3.0	3.0			4.0	3.0	3.0											
NO EXT																					
NO ADD INI																					
NOGAPRED																					
NO RANGE																					
NOMAX LOK			22.0					18.0		24.0											
NO EXT																					
NO ADD INI																					
NOGAPRED																					
NO RANGE																					
NOMAX LOK			7.0																		
NO EXT																					
NO ADD INI																					
NOGAPRED																					
NO RANGE																					
NOMAX LOK			7.0																		
NO EXT																					
NO ADD INI																					
NOGAPRED																					
NO RANGE																					
NOMAX LOK			24.0																		
NO EXT																					
NO ADD INI																					
NOGAPRED																					
NO RANGE																					
NOMAX LOK			24.0																		
NO EXT																					
NO ADD INI																					
NOGAPRED																					
NO RANGE																					
NOMAX LOK			24.0																		
NO EXT																					
NO ADD INI																					
NOGAPRED																					
NO RANGE																					
NOMAX LOK			24.0																		
NO EXT																					
NO ADD INI																					
NOGAPRED																					
NO RANGE																					
NOMAX LOK			24.0																		

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			PHASE TIMING																		
MIN RECAL																					
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:

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2022 Existing AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	519	134	135	426	124	111	487	113	172	920	281
Future Volume (vph)	122	519	134	135	426	124	111	487	113	172	920	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		260	150		160	150		120	150		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	50			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3505	1583	1770	3505	1509	1805	3539	1599	1719	3449	0
Flt Permitted	0.222			0.163			0.133			0.430		
Satd. Flow (perm)	410	3505	1583	304	3505	1509	253	3539	1599	778	3449	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			136			140		42	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1022			1081			615			1085	
Travel Time (s)		19.9			21.1			12.0			21.1	
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 (%)	3%	3%	2%	2%	3%	7%	0%	2%	1%	5%	1%	1%
Adj. Flow (vph)	127	541	140	141	444	129	116	507	118	179	958	293
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	541	140	141	444	129	116	507	118	179	1251	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes			Yes	
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	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	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	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	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	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	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	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2022 Existing AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8		4	6		2	2		
Detector Phase	3	8	8	7	4	4	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.0	31.0	31.0	10.0	32.0	32.0	10.0	36.0	
Total Split (s)	17.0	34.0	34.0	15.0	32.0	32.0	14.0	75.0	75.0	16.0	77.0	
Total Split (%)	12.1%	24.3%	24.3%	10.7%	22.9%	22.9%	10.0%	53.6%	53.6%	11.4%	55.0%	
Maximum Green (s)	11.5	28.5	28.5	10.0	27.0	27.0	9.0	70.0	70.0	11.0	72.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5	1.5	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		18.0	18.0		19.0	19.0		20.0	20.0		24.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	32.8	24.5	24.5	33.8	22.6	22.6	86.2	77.3	77.3	86.2	77.2	
Actuated g/C Ratio	0.23	0.18	0.18	0.24	0.16	0.16	0.62	0.55	0.55	0.62	0.55	
v/c Ratio	0.64	0.88	0.36	0.85	0.78	0.36	0.45	0.26	0.12	0.33	0.65	
Control Delay	58.6	73.3	14.7	96.2	66.3	9.5	28.1	17.9	2.0	9.4	21.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	58.6	73.3	14.7	96.2	66.3	9.5	28.1	17.9	2.0	9.4	21.2	
LOS	E	E	B	F	E	A	C	B	A	A	C	
Approach Delay		60.9			62.0			16.9			19.7	
Approach LOS		E			E			B			B	
Queue Length 50th (ft)	97	257	10	100	206	0	38	125	0	58	180	
Queue Length 95th (ft)	154	317	70	#181	259	51	69	177	22	62	526	
Internal Link Dist (ft)		942			1001			535			1005	
Turn Bay Length (ft)	150		260	150		160	150		120	150		
Base Capacity (vph)	208	713	433	183	675	400	255	1954	945	564	1921	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.61	0.76	0.32	0.77	0.66	0.32	0.45	0.26	0.12	0.32	0.65	
Intersection Summary												
Area Type:	Other											
Cycle Length: 140												
Actuated Cycle Length: 140												
Offset: 44 (31%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.88												
Intersection Signal Delay: 36.3				Intersection LOS: D								
Intersection Capacity Utilization 79.5%				ICU Level of Service D								
Analysis Period (min) 15												

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2022 Existing AM

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Lamar Blvd & 38th St



Ascension Seton 38th TIA Compliance
HCM 2010 Signalized Intersection Summary

1: Lamar Blvd & 38th St
2022 Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	519	134	135	426	124	111	487	113	172	920	281
Future Volume (veh/h)	122	519	134	135	426	124	111	487	113	172	920	281
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1863	1863	1845	1776	1900	1863	1881	1810	1881	1900
Adj Flow Rate, veh/h	127	541	140	141	444	0	116	507	0	179	958	293
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
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
Percent Heavy Veh, %	3	3	2	2	3	7	0	2	1	5	1	1
Cap, veh/h	209	601	271	164	533	230	488	2007	907	582	1389	423
Arrive On Green	0.07	0.17	0.17	0.05	0.15	0.00	0.11	0.57	0.00	0.12	1.00	1.00
Sat Flow, veh/h	1757	3505	1583	1774	3505	1509	1810	3539	1599	1723	2701	823
Grp Volume(v), veh/h	127	541	140	141	444	0	116	507	0	179	633	618
Grp Sat Flow(s),veh/h/ln	1757	1752	1583	1774	1752	1509	1810	1770	1599	1723	1787	1736
Q Serve(g_s), s	8.4	21.2	9.4	5.7	17.2	0.0	0.0	10.1	0.0	6.4	0.0	0.0
Cycle Q Clear(g_c), s	8.4	21.2	9.4	5.7	17.2	0.0	0.0	10.1	0.0	6.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	209	601	271	164	533	230	488	2007	907	582	919	893
V/C Ratio(X)	0.61	0.90	0.52	0.86	0.83	0.00	0.24	0.25	0.00	0.31	0.69	0.69
Avail Cap(c_a), veh/h	223	713	322	193	676	291	488	2007	907	614	919	893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	46.4	56.8	36.9	63.7	57.6	0.0	13.1	15.3	0.0	10.6	0.0	0.0
Incr Delay (d2), s/veh	2.7	11.9	0.6	24.3	5.7	0.0	0.1	0.3	0.0	0.1	3.6	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.6	16.7	7.9	10.6	13.6	0.0	4.0	8.7	0.0	5.3	1.6	1.7
LnGrp Delay(d),s/veh	49.1	68.7	37.5	88.0	63.4	0.0	13.2	15.6	0.0	10.7	3.6	3.8
LnGrp LOS	D	E	D	F	E		B	B		B	A	A
Approach Vol, veh/h		808			585			623			1430	
Approach Delay, s/veh		60.2			69.3			15.2			4.5	
Approach LOS		E			E			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	84.4	15.9	26.3	20.8	77.0	12.7	29.5				
Change Period (Y+Rc), s	5.0	5.0	5.5	5.0	5.0	5.0	5.0	5.5				
Max Green Setting (Gmax), s	11.0	70.0	11.5	27.0	9.0	72.0	10.0	28.5				
Max Q Clear Time (g_c+I1), s	8.4	12.1	10.4	19.2	2.0	2.0	7.7	23.2				
Green Ext Time (p_c), s	0.0	1.3	0.0	1.2	0.0	3.1	0.0	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				30.5								
HCM 2010 LOS				C								

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2022 Existing AM

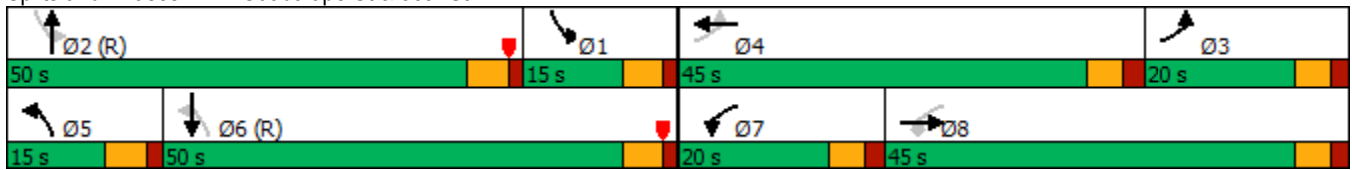
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	348	141	88	580	52	103	277	45	105	635	186
Future Volume (vph)	119	348	141	88	580	52	103	277	45	105	635	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	165		0	150		0	150		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	100			120			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.988			0.979			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3505	1468	1787	3502	0	1570	3352	0	1787	3426	0
Flt Permitted	0.138			0.394			0.225			0.521		
Satd. Flow (perm)	260	3505	1468	741	3502	0	372	3352	0	980	3426	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		7			15			32	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		723			729			395			485	
Travel Time (s)		14.1			14.2			7.7			9.4	
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
Heavy Vehicles (%)	1%	3%	10%	1%	2%	0%	15%	6%	2%	1%	2%	1%
Adj. Flow (vph)	129	378	153	96	630	57	112	301	49	114	690	202
Shared Lane Traffic (%)												
Lane Group Flow (vph)	129	378	153	96	687	0	112	350	0	114	892	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
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	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		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	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	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	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2022 Existing AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8			6			2		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.5	36.5		10.5	32.5		10.5	35.5	
Total Split (s)	20.0	45.0	45.0	20.0	45.0		15.0	50.0		15.0	50.0	
Total Split (%)	15.4%	34.6%	34.6%	15.4%	34.6%		11.5%	38.5%		11.5%	38.5%	
Maximum Green (s)	14.5	39.5	39.5	14.5	39.5		9.5	44.5		9.5	44.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lag	Lag	Lag	Lead	Lead		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		1.5	2.0		1.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		18.0	18.0		24.0			20.0			23.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	37.2	28.2	28.2	37.2	30.3		70.8	61.3		70.8	62.4	
Actuated g/C Ratio	0.29	0.22	0.22	0.29	0.23		0.54	0.47		0.54	0.48	
v/c Ratio	0.83	0.50	0.35	0.34	0.84		0.40	0.22		0.19	0.54	
Control Delay	87.5	46.3	7.2	32.6	56.4		18.1	21.0		15.5	26.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	87.5	46.3	7.2	32.6	56.4		18.1	21.0		15.5	26.0	
LOS	F	D	A	C	E		B	C		B	C	
Approach Delay		45.3			53.5			20.3			24.8	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	79	148	0	58	288		40	84		40	258	
Queue Length 95th (ft)	114	184	49	89	339		84	137		83	397	
Internal Link Dist (ft)		643			649			315			405	
Turn Bay Length (ft)	150		100	165			150			150		
Base Capacity (vph)	259	1064	556	355	1068		300	1588		592	1661	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.50	0.36	0.28	0.27	0.64		0.37	0.22		0.19	0.54	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 15.5 (12%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 95												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.84												
Intersection Signal Delay: 36.5						Intersection LOS: D						
Intersection Capacity Utilization 71.8%						ICU Level of Service C						
Analysis Period (min) 15												

Splits and Phases: 2: Guadalupe St & 38th St



Ascension Seton 38th TIA Compliance
HCM 2010 Signalized Intersection Summary

2: Guadalupe St & 38th St
2022 Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	348	141	88	580	52	103	277	45	105	635	186
Future Volume (veh/h)	119	348	141	88	580	52	103	277	45	105	635	186
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1845	1727	1881	1866	1900	1652	1802	1900	1881	1867	1900
Adj Flow Rate, veh/h	129	378	153	96	630	57	112	301	49	114	690	0
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	0
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
Percent Heavy Veh, %	1	3	10	1	2	0	15	6	2	1	2	1
Cap, veh/h	155	715	300	250	718	65	402	1011	163	742	1856	0
Arrive On Green	0.04	0.20	0.20	0.06	0.22	0.22	0.05	0.34	0.34	0.23	0.52	0.00
Sat Flow, veh/h	1792	3505	1468	1792	3289	297	1573	2954	476	1792	3640	0
Grp Volume(v), veh/h	129	378	153	96	339	348	112	173	177	114	690	0
Grp Sat Flow(s), veh/h/ln	1792	1752	1468	1792	1772	1813	1573	1712	1718	1792	1774	0
Q Serve(g_s), s	3.4	12.5	7.3	5.4	24.0	24.1	4.3	9.6	9.8	0.0	15.0	0.0
Cycle Q Clear(g_c), s	3.4	12.5	7.3	5.4	24.0	24.1	4.3	9.6	9.8	0.0	15.0	0.0
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.28	1.00		0.00
Lane Grp Cap(c), veh/h	155	715	300	250	387	396	402	586	588	742	1856	0
V/C Ratio(X)	0.83	0.53	0.51	0.38	0.88	0.88	0.28	0.30	0.30	0.15	0.37	0.00
Avail Cap(c_a), veh/h	280	1065	446	350	539	551	442	586	588	742	1856	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	59.9	46.1	16.9	38.3	49.1	49.1	13.9	31.3	31.3	18.6	18.3	0.0
Incr Delay (d2), s/veh	4.4	0.2	0.5	0.4	9.0	9.1	0.1	1.3	1.3	0.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.4	10.1	7.8	4.9	18.6	19.0	3.3	8.3	8.5	4.2	11.9	0.0
LnGrp Delay(d),s/veh	64.3	46.4	17.4	38.7	58.1	58.2	14.1	32.6	32.7	18.6	18.9	0.0
LnGrp LOS	E	D	B	D	E	E	B	C	C	B	B	
Approach Vol, veh/h		660			783			462			804	
Approach Delay, s/veh		43.2			55.8			28.1			18.9	
Approach LOS		D			E			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.2	50.0	10.9	33.9	11.7	73.5	12.7	32.0				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	44.5	14.5	39.5	9.5	44.5	14.5	39.5				
Max Q Clear Time (g_c+I1), s	2.0	11.8	5.4	26.1	6.3	17.0	7.4	14.5				
Green Ext Time (p_c), s	0.0	1.3	0.1	2.3	0.0	3.2	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				37.0								
HCM 2010 LOS				D								

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr
2022 Existing AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	7	45	50	9	46	15	625	57	47	1382	14
Future Volume (vph)	26	7	45	50	9	46	15	625	57	47	1382	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		115	150		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.871				0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1600	0	1805	1900	1583	1805	3505	1615	1770	3536	0
Flt Permitted	0.751			0.720			0.145			0.390		
Satd. Flow (perm)	1427	1600	0	1368	1900	1583	276	3505	1615	726	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49				55			63			2
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		209			115			1085			359	
Travel Time (s)		4.8			2.6			21.1			7.0	
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 (%)	0%	0%	4%	0%	0%	2%	0%	3%	0%	2%	2%	0%
Adj. Flow (vph)	29	8	49	55	10	51	16	687	63	52	1519	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	57	0	55	10	51	16	687	63	52	1534	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)		12			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
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	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6	20	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	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	0.0	
Detector 1 Queue (s)	0.0	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	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	D.P+P	NA	Perm	D.Pm	NA	
Protected Phases		4			8		5	2			6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr
2022 Existing AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	6		2	2		
Detector Phase	4	4		8	8	8	5	2	2	2	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	15.0	15.0	15.0	15.0	
Minimum Split (s)	35.0	35.0		31.5	31.5	31.5	9.5	35.0	35.0	35.0	25.0	
Total Split (s)	15.0	15.0		15.0	15.0	15.0	10.0	125.0	125.0	125.0	115.0	
Total Split (%)	10.7%	10.7%		10.7%	10.7%	10.7%	7.1%	89.3%	89.3%	89.3%	82.1%	
Maximum Green (s)	10.0	10.0		8.5	8.5	8.5	5.0	120.0	120.0	120.0	110.0	
Yellow Time (s)	3.5	3.5		3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5		3.5	3.5	3.5	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0		6.5	6.5	6.5	5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	23.0	23.0		18.0	18.0	18.0		23.0	23.0	23.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0	0	0	
Act Effct Green (s)	9.1	9.1		8.1	8.1	8.1	121.0	124.0	124.0	124.0	120.0	
Actuated g/C Ratio	0.06	0.06		0.06	0.06	0.06	0.86	0.89	0.89	0.89	0.86	
v/c Ratio	0.32	0.38		0.70	0.09	0.36	0.05	0.22	0.04	0.08	0.51	
Control Delay	71.1	27.6		104.3	64.1	20.9	1.5	1.3	0.2	1.8	4.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	71.1	27.6		104.3	64.1	20.9	1.5	1.3	0.2	1.8	4.3	
LOS	E	C		F	E	C	A	A	A	A	A	
Approach Delay		42.2			64.2			1.3			4.3	
Approach LOS		D			E			A			A	
Queue Length 50th (ft)	26	7		50	9	0	1	35	0	5	138	
Queue Length 95th (ft)	61	53		#120	28	40	m3	40	m3	11	278	
Internal Link Dist (ft)		129			35			1005			279	
Turn Bay Length (ft)							150		115	150		
Base Capacity (vph)	101	159		83	115	147	294	3104	1437	643	3031	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.29	0.36		0.66	0.09	0.35	0.05	0.22	0.04	0.08	0.51	
Intersection Summary												
Area Type:	Other											
Cycle Length: 140												
Actuated Cycle Length: 140												
Offset: 55 (39%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.70												
Intersection Signal Delay: 7.4				Intersection LOS: A								
Intersection Capacity Utilization 58.1%				ICU Level of Service B								
Analysis Period (min) 15												

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

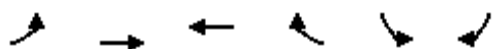
Splits and Phases: 3: Lamar Blvd & 40th St/Central Market Dr



Pedestrian Green has to be less than Phase Max Green.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

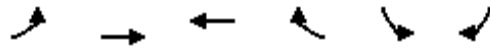
4: 38th St & Shoal Creek Blvd
2022 Existing AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Lane Configurations							
Traffic Volume (vph)	160	999	819	56	88	161	
Future Volume (vph)	160	999	819	56	88	161	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	150			75	230	0	
Storage Lanes	1			1	1	1	
Taper Length (ft)	100				60		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1805	3539	3539	1615	1787	1583	
Flt Permitted	0.266				0.950		
Satd. Flow (perm)	505	3539	3539	1615	1787	1583	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				37		168	
Link Speed (mph)		35	35		30		
Link Distance (ft)		478	541		394		
Travel Time (s)		9.3	10.5		9.0		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	0%	2%	2%	0%	1%	2%	
Adj. Flow (vph)	178	1110	910	62	98	179	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	178	1110	910	62	98	179	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane		Yes	Yes				
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	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
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	pm+pt	NA	NA	Perm	Prot	pm+ov	
Protected Phases	5	2	6		3	5	7

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

4: 38th St & Shoal Creek Blvd
2022 Existing AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Permitted Phases	2			6		7	
Detector Phase	5	2	6	6	3	5	
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	5.0	4.0	5.0
Minimum Split (s)	12.0	23.5	30.5	30.5	23.5	12.0	23.5
Total Split (s)	15.0	110.0	95.0	95.0	30.0	15.0	30.0
Total Split (%)	10.7%	78.6%	67.9%	67.9%	21.4%	10.7%	21%
Maximum Green (s)	7.0	104.5	89.5	89.5	24.5	7.0	24.5
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0
All-Red Time (s)	4.0	1.5	1.5	1.5	2.5	4.0	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	8.0	5.5	5.5	5.5	5.5	8.0	
Lead/Lag	Lead		Lag	Lag		Lead	
Lead-Lag Optimize?	Yes		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	2.0	2.0	2.0	2.0	1.0	2.0
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			
Flash Dont Walk (s)			18.0	18.0			
Pedestrian Calls (#/hr)			0	0			
Act Effct Green (s)	114.4	116.9	101.4	101.4	12.1	7.6	
Actuated g/C Ratio	0.82	0.84	0.72	0.72	0.09	0.05	
v/c Ratio	0.37	0.38	0.36	0.05	0.64	0.73	
Control Delay	5.1	3.4	3.7	0.5	79.8	28.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	5.1	3.4	3.7	0.5	79.8	28.7	
LOS	A	A	A	A	E	C	
Approach Delay		3.6	3.5		46.7		
Approach LOS		A	A		D		
Queue Length 50th (ft)	27	101	28	0	88	10	
Queue Length 95th (ft)	52	155	303	m2	146	86	
Internal Link Dist (ft)		398	461		314		
Turn Bay Length (ft)	150			75	230		
Base Capacity (vph)	491	2956	2562	1179	312	253	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.36	0.38	0.36	0.05	0.31	0.71	
Intersection Summary							
Area Type:	Other						
Cycle Length: 140							
Actuated Cycle Length: 140							
Offset: 68.5 (49%), Referenced to phase 2:EBTL and 6:WBT, Start of Red							
Natural Cycle: 70							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.73							
Intersection Signal Delay: 8.3				Intersection LOS: A			
Intersection Capacity Utilization 52.2%				ICU Level of Service A			
Analysis Period (min) 15							

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 38th St & Shoal Creek Blvd



Ascension Seton 38th TIA Compliance
HCM 2010 Signalized Intersection Summary

4: 38th St & Shoal Creek Blvd
2022 Existing AM

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	160	999	819	56	88	161		
Future Volume (veh/h)	160	999	819	56	88	161		
Number	5	2	6	16	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1881	1863		
Adj Flow Rate, veh/h	178	1110	910	62	98	179		
Adj No. of Lanes	1	2	2	1	1	1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	0	2	2	0	1	2		
Cap, veh/h	476	2826	2479	1131	220	259		
Arrive On Green	0.04	0.80	0.70	0.70	0.12	0.12		
Sat Flow, veh/h	1810	3632	3632	1615	1792	1583		
Grp Volume(v), veh/h	178	1110	910	62	98	179		
Grp Sat Flow(s),veh/h/ln	1810	1770	1770	1615	1792	1583		
Q Serve(g_s), s	3.7	12.9	14.5	1.7	7.1	14.9		
Cycle Q Clear(g_c), s	3.7	12.9	14.5	1.7	7.1	14.9		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	476	2826	2479	1131	220	259		
V/C Ratio(X)	0.37	0.39	0.37	0.05	0.45	0.69		
Avail Cap(c_a), veh/h	493	2826	2479	1131	314	342		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	6.0	4.1	8.5	6.5	57.0	55.2		
Incr Delay (d2), s/veh	0.2	0.4	0.4	0.1	0.5	1.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	3.2	10.5	11.6	1.4	6.4	10.9		
LnGrp Delay(d),s/veh	6.2	4.6	8.9	6.6	57.5	57.0		
LnGrp LOS	A	A	A	A	E	E		
Approach Vol, veh/h		1288	972		277			
Approach Delay, s/veh		4.8	8.7		57.2			
Approach LOS		A	A		E			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		117.3			13.7	103.6		22.7
Change Period (Y+Rc), s		5.5			8.0	5.5		5.5
Max Green Setting (Gmax), s		104.5			7.0	89.5		24.5
Max Q Clear Time (g_c+I1), s		14.9			5.7	16.5		16.9
Green Ext Time (p_c), s		6.3			0.0	4.8		0.3
Intersection Summary								
HCM 2010 Ctrl Delay			12.0					
HCM 2010 LOS			B					

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2022 Existing PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	495	111	128	488	170	193	1342	183	129	876	141
Future Volume (vph)	183	495	111	128	488	170	193	1342	183	129	876	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		260	150		160	150		120	150		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	50			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3539	1615	1787	3539	1568	1805	3574	1615	1719	3494	0
Flt Permitted	0.208			0.192			0.159			0.079		
Satd. Flow (perm)	391	3539	1615	361	3539	1568	302	3574	1615	143	3494	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143			172			151		15	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1022			1081			615			1085	
Travel Time (s)		19.9			21.1			12.0			21.1	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	1%	2%	0%	1%	2%	3%	0%	1%	0%	5%	1%	2%
Adj. Flow (vph)	185	500	112	129	493	172	195	1356	185	130	885	142
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	500	112	129	493	172	195	1356	185	130	1027	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes			Yes	
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	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	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	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	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	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	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	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2022 Existing PM

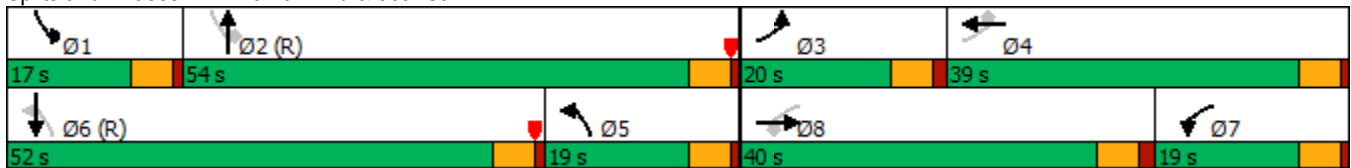
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8		4	6		2	2		
Detector Phase	3	8	8	7	4	4	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.0	31.0	31.0	10.0	32.0	32.0	10.0	36.0	
Total Split (s)	20.0	40.0	40.0	19.0	39.0	39.0	19.0	54.0	54.0	17.0	52.0	
Total Split (%)	15.4%	30.8%	30.8%	14.6%	30.0%	30.0%	14.6%	41.5%	41.5%	13.1%	40.0%	
Maximum Green (s)	14.5	34.5	34.5	14.0	34.0	34.0	14.0	49.0	49.0	12.0	47.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5	1.5	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		18.0	18.0		19.0	19.0		20.0	20.0		24.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	36.0	22.0	22.0	37.0	23.2	23.2	73.0	63.6	63.6	73.0	59.0	
Actuated g/C Ratio	0.28	0.17	0.17	0.28	0.18	0.18	0.56	0.49	0.49	0.56	0.45	
v/c Ratio	0.74	0.84	0.29	0.49	0.78	0.41	0.59	0.78	0.21	0.67	0.64	
Control Delay	50.5	64.8	4.8	75.0	84.4	31.0	38.2	32.8	6.4	37.5	30.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.5	64.8	4.8	75.0	84.4	31.0	38.2	32.8	6.4	37.5	30.4	
LOS	D	E	A	E	F	C	D	C	A	D	C	
Approach Delay		53.1			71.3			30.6			31.2	
Approach LOS		D			E			C			C	
Queue Length 50th (ft)	116	216	0	108	232	52	72	491	15	46	347	
Queue Length 95th (ft)	168	267	28	152	267	90	126	#747	67	121	462	
Internal Link Dist (ft)		942			1001			535			1005	
Turn Bay Length (ft)	150		260	150		160	150		120	150		
Base Capacity (vph)	267	939	533	272	925	537	331	1749	867	235	1593	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.69	0.53	0.21	0.47	0.53	0.32	0.59	0.78	0.21	0.55	0.64	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 34 (26%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.84												
Intersection Signal Delay: 42.0						Intersection LOS: D						
Intersection Capacity Utilization 85.0%						ICU Level of Service E						
Analysis Period (min) 15												

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2022 Existing PM

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Lamar Blvd & 38th St



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

1: Lamar Blvd & 38th St
2022 Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	183	495	111	128	488	170	193	1342	183	129	876	141
Future Volume (veh/h)	183	495	111	128	488	170	193	1342	183	129	876	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1900	1885	1870	1856	1900	1885	1900	1826	1885	1870
Adj Flow Rate, veh/h	185	500	112	129	493	0	195	1356	0	130	885	142
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	2	0	1	2	3	0	1	0	5	1	2
Cap, veh/h	262	574	260	260	583		506	1894		236	1117	179
Arrive On Green	0.10	0.16	0.16	0.10	0.16	0.00	0.22	0.53	0.00	0.05	0.36	0.36
Sat Flow, veh/h	1795	3554	1610	1795	3554	1572	1810	3582	1610	1739	3091	496
Grp Volume(v), veh/h	185	500	112	129	493	0	195	1356	0	130	513	514
Grp Sat Flow(s),veh/h/ln	1795	1777	1610	1795	1777	1572	1810	1791	1610	1739	1791	1796
Q Serve(g_s), s	11.0	17.8	6.9	3.2	17.5	0.0	3.1	37.3	0.0	4.4	33.3	33.3
Cycle Q Clear(g_c), s	11.0	17.8	6.9	3.2	17.5	0.0	3.1	37.3	0.0	4.4	33.3	33.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	262	574	260	260	583		506	1894		236	647	649
V/C Ratio(X)	0.71	0.87	0.43	0.50	0.84		0.39	0.72		0.55	0.79	0.79
Avail Cap(c_a), veh/h	283	943	427	268	929		506	1894		311	647	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	40.7	53.2	35.1	52.6	52.7	0.0	38.1	23.2	0.0	20.5	37.1	37.1
Incr Delay (d2), s/veh	5.8	2.7	0.4	0.5	2.2	0.0	0.2	2.4	0.0	0.7	8.8	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.0	12.8	4.9	7.0	12.5	0.0	8.7	22.3	0.0	3.1	22.2	22.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	55.9	35.5	53.1	54.9	0.0	38.3	25.6	0.0	21.2	45.9	45.9
LnGrp LOS	D	E	D	D	D		D	C		C	D	D
Approach Vol, veh/h		797			622	A		1551	A		1157	
Approach Delay, s/veh		50.9			54.6			27.2			43.1	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.4	73.7	18.5	26.3	33.1	52.0	18.4	26.5				
Change Period (Y+Rc), s	5.0	5.0	5.5	5.0	5.0	5.0	5.0	5.5				
Max Green Setting (Gmax), s	12.0	49.0	14.5	34.0	14.0	47.0	14.0	34.5				
Max Q Clear Time (g_c+I1), s	6.4	39.3	13.0	19.5	5.1	35.3	5.2	19.8				
Green Ext Time (p_c), s	0.0	3.1	0.0	1.8	0.1	2.0	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			40.4									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2022 Existing PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	539	132	124	410	102	196	827	119	88	572	122
Future Volume (vph)	217	539	132	124	410	102	196	827	119	88	572	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	165		0	150		0	150		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	100			120			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.970			0.981			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3574	1495	1805	3474	0	1703	3506	0	1805	3453	0
Flt Permitted	0.207			0.184			0.298			0.206		
Satd. Flow (perm)	389	3574	1495	350	3474	0	534	3506	0	391	3453	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		24			14			22	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		723			729			395			485	
Travel Time (s)		14.1			14.2			7.7			9.4	
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 (%)	1%	1%	8%	0%	1%	0%	6%	1%	1%	0%	2%	1%
Adj. Flow (vph)	226	561	138	129	427	106	204	861	124	92	596	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	226	561	138	129	533	0	204	985	0	92	723	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
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	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		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	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	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	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2022 Existing PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8			6			2		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.5	36.5		10.5	32.5		10.5	35.5	
Total Split (s)	14.0	44.0	44.0	14.0	44.0		18.0	54.0		18.0	54.0	
Total Split (%)	10.8%	33.8%	33.8%	10.8%	33.8%		13.8%	41.5%		13.8%	41.5%	
Maximum Green (s)	8.5	38.5	38.5	8.5	38.5		12.5	48.5		12.5	48.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		1.5	2.0		1.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		18.0	18.0		24.0			20.0			23.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	33.8	25.7	25.7	33.8	25.3		74.2	67.6		74.2	61.7	
Actuated g/C Ratio	0.26	0.20	0.20	0.26	0.19		0.57	0.52		0.57	0.47	
v/c Ratio	1.18	0.80	0.33	0.71	0.77		0.49	0.54		0.31	0.44	
Control Delay	170.7	78.3	20.1	55.1	54.5		23.6	22.9		14.5	23.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	170.7	78.3	20.1	55.1	54.5		23.6	22.9		14.5	23.8	
LOS	F	E	C	E	D		C	C		B	C	
Approach Delay		92.2			54.6			23.0			22.7	
Approach LOS		F			D			C			C	
Queue Length 50th (ft)	~211	248	41	81	215		72	278		30	202	
Queue Length 95th (ft)	#294	257	57	124	262		127	395		62	282	
Internal Link Dist (ft)		643			649			315			405	
Turn Bay Length (ft)	150		100	165			150			150		
Base Capacity (vph)	192	1058	554	186	1045		417	1831		374	1649	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	1.18	0.53	0.25	0.69	0.51		0.49	0.54		0.25	0.44	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 31.5 (24%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 95												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 1.18												
Intersection Signal Delay: 46.6						Intersection LOS: D						
Intersection Capacity Utilization 76.5%						ICU Level of Service D						
Analysis Period (min) 15												

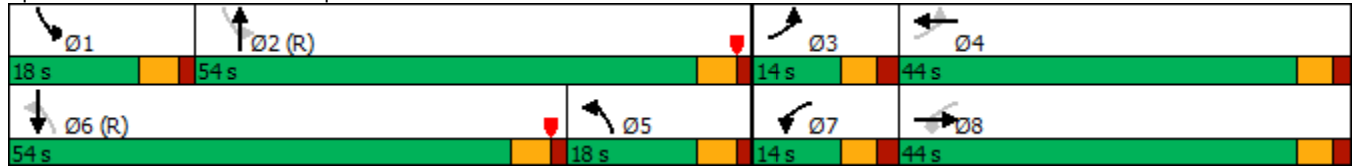
Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2022 Existing PM

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Guadalupe St & 38th St



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

2: Guadalupe St & 38th St
2022 Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	539	132	124	410	102	196	827	119	88	572	122
Future Volume (veh/h)	217	539	132	124	410	102	196	827	119	88	572	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1781	1900	1885	1900	1811	1885	1885	1900	1870	1885
Adj Flow Rate, veh/h	226	561	138	129	427	106	204	861	124	92	596	0
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
Percent Heavy Veh, %	1	1	8	0	1	0	6	1	1	0	2	1
Cap, veh/h	208	665	280	200	529	130	608	1705	246	337	1326	
Arrive On Green	0.07	0.19	0.19	0.07	0.19	0.19	0.21	0.54	0.54	0.04	0.37	0.00
Sat Flow, veh/h	1795	3582	1510	1810	2849	701	1725	3142	453	1810	3647	0
Grp Volume(v), veh/h	226	561	138	129	267	266	204	491	494	92	596	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1510	1810	1791	1759	1725	1791	1804	1810	1777	0
Q Serve(g_s), s	8.5	19.7	10.7	7.5	18.6	18.9	0.0	22.4	22.4	2.9	16.4	0.0
Cycle Q Clear(g_c), s	8.5	19.7	10.7	7.5	18.6	18.9	0.0	22.4	22.4	2.9	16.4	0.0
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.25	1.00		0.00
Lane Grp Cap(c), veh/h	208	665	280	200	333	327	608	972	979	337	1326	
V/C Ratio(X)	1.08	0.84	0.49	0.65	0.80	0.81	0.34	0.50	0.50	0.27	0.45	
Avail Cap(c_a), veh/h	208	1061	447	200	530	521	608	972	979	444	1326	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.6	51.1	47.4	41.0	50.7	50.8	26.1	18.7	18.7	14.4	30.7	0.0
Incr Delay (d2), s/veh	86.6	1.9	0.5	5.5	1.9	2.3	0.1	1.9	1.9	0.2	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.5	13.8	7.3	6.5	13.2	13.2	8.1	14.6	14.7	2.1	11.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	135.1	53.0	47.9	46.6	52.5	53.1	26.2	20.6	20.6	14.6	31.8	0.0
LnGrp LOS	F	D	D	D	D	D	C	C	C	B	C	
Approach Vol, veh/h		925			662			1189			688	A
Approach Delay, s/veh		72.3			51.6			21.6			29.5	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	76.0	14.0	29.6	32.4	54.0	14.0	29.6				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	12.5	48.5	8.5	38.5	12.5	48.5	8.5	38.5				
Max Q Clear Time (g_c+I1), s	4.9	24.4	10.5	20.9	2.0	18.4	9.5	21.7				
Green Ext Time (p_c), s	0.0	4.2	0.0	1.9	0.1	2.7	0.0	2.5				

Intersection Summary

HCM 6th Ctrl Delay	42.4
HCM 6th LOS	D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr

2022 Existing PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	27	28	113	14	91	7	1456	94	100	948	5
Future Volume (vph)	70	27	28	113	14	91	7	1456	94	100	948	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		115	150		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.924				0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1722	0	1787	1900	1615	1805	3574	1615	1805	3571	0
Flt Permitted	0.748			0.717			0.250			0.115		
Satd. Flow (perm)	1421	1722	0	1349	1900	1615	475	3574	1615	218	3571	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29				100			62		1	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		209			79			1085			359	
Travel Time (s)		4.8			1.8			21.1			7.0	
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 (%)	0%	4%	0%	1%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	77	30	31	124	15	100	8	1600	103	110	1042	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	61	0	124	15	100	8	1600	103	110	1047	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)		12			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
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	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6	20	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	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	0.0	
Detector 1 Queue (s)	0.0	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	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	D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		4			8		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr

2022 Existing PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	6		2	2		
Detector Phase	4	4		8	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	35.0	35.0		31.5	31.5	31.5	9.5	35.0	35.0	9.5	25.0	
Total Split (s)	28.0	28.0		28.0	28.0	28.0	15.0	107.0	107.0	15.0	107.0	
Total Split (%)	18.7%	18.7%		18.7%	18.7%	18.7%	10.0%	71.3%	71.3%	10.0%	71.3%	
Maximum Green (s)	23.0	23.0		21.5	21.5	21.5	10.0	102.0	102.0	10.0	102.0	
Yellow Time (s)	3.5	3.5		3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5		3.5	3.5	3.5	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0		6.5	6.5	6.5	5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	1.5		1.5	1.5	1.5	1.0	2.0	2.0	1.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	23.0	23.0		18.0	18.0	18.0		23.0	23.0		13.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	
Act Effct Green (s)	18.4	18.4		16.9	16.9	16.9	120.6	111.1	111.1	116.6	119.8	
Actuated g/C Ratio	0.12	0.12		0.11	0.11	0.11	0.80	0.74	0.74	0.78	0.80	
v/c Ratio	0.45	0.26		0.82	0.07	0.37	0.02	0.60	0.08	0.48	0.37	
Control Delay	68.0	35.7		101.2	57.6	14.0	3.6	11.0	3.0	10.8	5.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	68.0	35.7		101.2	57.6	14.0	3.6	11.0	3.0	10.8	5.3	
LOS	E	D		F	E	B	A	B	A	B	A	
Approach Delay		53.7			62.0			10.5			5.8	
Approach LOS		D			E			B			A	
Queue Length 50th (ft)	71	28		120	13	0	1	355	10	19	125	
Queue Length 95th (ft)	123	73		192	36	56	5	483	31	37	230	
Internal Link Dist (ft)		129			1			1005			279	
Turn Bay Length (ft)							150		115	150		
Base Capacity (vph)	217	288		193	272	317	473	2647	1212	281	2853	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.35	0.21		0.64	0.06	0.32	0.02	0.60	0.08	0.39	0.37	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 25 (17%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.82												
Intersection Signal Delay: 14.4						Intersection LOS: B						
Intersection Capacity Utilization 72.5%						ICU Level of Service C						
Analysis Period (min) 15												

Splits and Phases: 3: Lamar Blvd & 40th St/Central Market Dr



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

3: Lamar Blvd & 40th St/Central Market Dr
2022 Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	27	28	113	14	91	7	1456	94	100	948	5
Future Volume (veh/h)	70	27	28	113	14	91	7	1456	94	100	948	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1900	1885	1900	1900	1900	1885	1900	1900	1885	1900
Adj Flow Rate, veh/h	77	30	31	124	15	100	8	1600	103	110	1042	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
Percent Heavy Veh, %	0	4	0	1	0	0	0	1	0	0	1	0
Cap, veh/h	216	113	117	189	259	220	413	2595	1166	247	2734	13
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.01	0.72	0.72	0.03	0.75	0.75
Sat Flow, veh/h	1298	829	857	1352	1900	1610	1810	3582	1610	1810	3655	18
Grp Volume(v), veh/h	77	0	61	124	15	100	8	1600	103	110	511	536
Grp Sat Flow(s),veh/h/ln	1298	0	1686	1352	1900	1610	1810	1791	1610	1810	1791	1882
Q Serve(g_s), s	8.2	0.0	4.9	13.6	1.0	8.6	0.2	33.4	2.8	2.4	15.1	15.1
Cycle Q Clear(g_c), s	9.3	0.0	4.9	18.4	1.0	8.6	0.2	33.4	2.8	2.4	15.1	15.1
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	216	0	230	189	259	220	413	2595	1166	247	1339	1408
V/C Ratio(X)	0.36	0.00	0.27	0.66	0.06	0.46	0.02	0.62	0.09	0.44	0.38	0.38
Avail Cap(c_a), veh/h	238	0	259	198	272	231	523	2595	1166	315	1339	1408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.60	0.60	0.60	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.4	0.0	58.0	66.3	56.4	59.6	5.3	10.3	6.1	10.8	6.7	6.7
Incr Delay (d2), s/veh	0.4	0.0	0.2	5.5	0.0	0.5	0.0	0.7	0.1	0.5	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	0.0	3.8	8.7	0.9	6.4	0.1	16.8	1.7	2.0	9.5	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	0.0	58.3	71.8	56.4	60.2	5.3	11.0	6.2	11.3	7.5	7.5
LnGrp LOS	E	A	E	E	E	E	A	B	A	B	A	A
Approach Vol, veh/h		138			239			1711			1157	
Approach Delay, s/veh		59.7			66.0			10.6			7.8	
Approach LOS		E			E			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	113.7		27.0	5.9	117.2		27.0				
Change Period (Y+Rc), s	5.0	5.0		* 6.5	5.0	5.0		6.5				
Max Green Setting (Gmax), s	10.0	102.0		* 23	10.0	102.0		21.5				
Max Q Clear Time (g_c+I1), s	4.4	35.4		11.3	2.2	17.1		20.4				
Green Ext Time (p_c), s	0.0	12.0		0.2	0.0	4.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay 15.8

HCM 6th LOS B

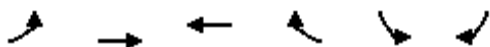
Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

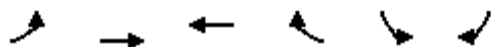
4: 38th St & Shoal Creek Blvd
2022 Existing PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Lane Configurations							
Traffic Volume (vph)	188	806	1000	156	30	91	
Future Volume (vph)	188	806	1000	156	30	91	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	150			75	230	0	
Storage Lanes	1			1	1	1	
Taper Length (ft)	100				60		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1770	3539	3574	1615	1805	1615	
Flt Permitted	0.254				0.950		
Satd. Flow (perm)	473	3539	3574	1615	1805	1615	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				78		94	
Link Speed (mph)		35	35		30		
Link Distance (ft)		478	541		394		
Travel Time (s)		9.3	10.5		9.0		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	2%	2%	1%	0%	0%	0%	
Adj. Flow (vph)	194	831	1031	161	31	94	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	194	831	1031	161	31	94	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane		Yes	Yes				
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	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
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	pm+pt	NA	NA	Perm	Prot	pm+ov	
Protected Phases	5	2	6		3	5	7

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

4: 38th St & Shoal Creek Blvd
2022 Existing PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Permitted Phases	2			6		7	
Detector Phase	5	2	6	6	3	5	
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	5.0	4.0	5.0
Minimum Split (s)	10.0	23.0	30.0	30.0	23.0	10.0	23.0
Total Split (s)	22.0	122.0	100.0	100.0	28.0	22.0	28.0
Total Split (%)	14.7%	81.3%	66.7%	66.7%	18.7%	14.7%	19%
Maximum Green (s)	17.0	117.0	95.0	95.0	23.0	17.0	23.0
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag	Lag		Lead	
Lead-Lag Optimize?	Yes		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	2.0	2.0	2.0	2.0	1.0	2.0
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			
Flash Dont Walk (s)			18.0	18.0			
Pedestrian Calls (#/hr)			0	0			
Act Effct Green (s)	137.0	139.0	126.2	126.2	7.2	5.8	
Actuated g/C Ratio	0.91	0.93	0.84	0.84	0.05	0.04	
v/c Ratio	0.40	0.25	0.34	0.12	0.36	0.61	
Control Delay	3.5	1.2	3.7	1.8	80.1	29.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	3.5	1.2	3.7	1.8	80.1	29.8	
LOS	A	A	A	A	F	C	
Approach Delay		1.6	3.4		42.3		
Approach LOS		A	A		D		
Queue Length 50th (ft)	17	43	114	13	30	0	
Queue Length 95th (ft)	31	66	178	35	66	59	
Internal Link Dist (ft)		398	461		314		
Turn Bay Length (ft)	150			75	230		
Base Capacity (vph)	579	3279	3005	1370	276	266	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.34	0.25	0.34	0.12	0.11	0.35	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Red
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 4.7
Intersection Capacity Utilization 54.7%
Analysis Period (min) 15

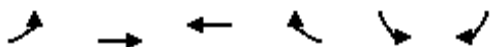
Intersection LOS: A
ICU Level of Service A

Splits and Phases: 4: 38th St & Shoal Creek Blvd



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

4: 38th St & Shoal Creek Blvd
2022 Existing PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	188	806	1000	156	30	91
Future Volume (veh/h)	188	806	1000	156	30	91
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1900	1900	1900
Adj Flow Rate, veh/h	194	831	1031	161	31	94
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	1	0	0	0
Cap, veh/h	443	3070	2857	1284	126	165
Arrive On Green	0.03	0.86	0.80	0.80	0.07	0.07
Sat Flow, veh/h	1781	3647	3676	1610	1810	1610
Grp Volume(v), veh/h	194	831	1031	161	31	94
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1610	1810	1610
Q Serve(g_s), s	2.9	6.2	12.3	3.4	2.4	8.3
Cycle Q Clear(g_c), s	2.9	6.2	12.3	3.4	2.4	8.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	443	3070	2857	1284	126	165
V/C Ratio(X)	0.44	0.27	0.36	0.13	0.25	0.57
Avail Cap(c_a), veh/h	586	3070	2857	1284	277	300
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.2	1.8	4.3	3.4	66.1	64.2
Incr Delay (d2), s/veh	0.3	0.2	0.4	0.2	0.4	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	2.7	7.2	1.9	2.1	6.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.5	2.0	4.7	3.6	66.4	65.3
LnGrp LOS	A	A	A	A	E	E
Approach Vol, veh/h		1025	1192		125	
Approach Delay, s/veh		2.3	4.5		65.6	
Approach LOS		A	A		E	
Timer - Assigned Phs		2			5	6
Phs Duration (G+Y+Rc), s		134.6			9.9	124.7
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		117.0			17.0	95.0
Max Q Clear Time (g_c+l1), s		8.2			4.9	14.3
Green Ext Time (p_c), s		4.2			0.1	5.9
					0.1	
Intersection Summary						
HCM 6th Ctrl Delay			6.8			
HCM 6th LOS			A			

Notes

User approved pedestrian interval to be less than phase max green.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2028 Forecasted AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	638	165	166	524	153	137	599	139	212	1131	346
Future Volume (vph)	150	638	165	166	524	153	137	599	139	212	1131	346
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		260	150		160	150		120	150		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	50			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3505	1583	1770	3505	1509	1805	3539	1599	1719	3449	0
Flt Permitted	0.173			0.144			0.055			0.355		
Satd. Flow (perm)	319	3505	1583	268	3505	1509	104	3539	1599	642	3449	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			167			136			140		42	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1022			1081			615			1085	
Travel Time (s)		19.9			21.1			12.0			21.1	
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 (%)	3%	3%	2%	2%	3%	7%	0%	2%	1%	5%	1%	1%
Adj. Flow (vph)	156	665	172	173	546	159	143	624	145	221	1178	360
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	665	172	173	546	159	143	624	145	221	1538	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes			Yes	
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	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	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	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	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	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	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	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2028 Forecasted AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8		4	6		2	2		
Detector Phase	3	8	8	7	4	4	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.0	31.0	31.0	10.0	32.0	32.0	10.0	36.0	
Total Split (s)	17.0	34.0	34.0	15.0	32.0	32.0	14.0	75.0	75.0	16.0	77.0	
Total Split (%)	12.1%	24.3%	24.3%	10.7%	22.9%	22.9%	10.0%	53.6%	53.6%	11.4%	55.0%	
Maximum Green (s)	11.5	28.5	28.5	10.0	27.0	27.0	9.0	70.0	70.0	11.0	72.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5	1.5	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		18.0	18.0		19.0	19.0		20.0	20.0		24.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	37.5	27.8	27.8	38.5	26.9	26.9	81.5	71.4	71.4	81.5	72.5	
Actuated g/C Ratio	0.27	0.20	0.20	0.28	0.19	0.19	0.58	0.51	0.51	0.58	0.52	
v/c Ratio	0.78	0.96	0.38	0.95	0.81	0.40	0.85	0.35	0.16	0.49	0.85	
Control Delay	67.7	79.0	14.6	110.4	64.7	14.2	85.0	21.3	3.6	11.6	28.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	67.7	79.0	14.6	110.4	64.7	14.2	85.0	21.3	3.6	11.6	28.7	
LOS	E	E	B	F	E	B	F	C	A	B	C	
Approach Delay		66.1			64.5			28.5			26.5	
Approach LOS		E			E			C			C	
Queue Length 50th (ft)	117	318	19	120	253	17	78	177	2	46	622	
Queue Length 95th (ft)	#192	#435	86	#264	322	83	#203	222	38	m72	733	
Internal Link Dist (ft)		942			1001			535			1005	
Turn Bay Length (ft)	150		260	150		160	150		120	150		
Base Capacity (vph)	204	713	455	183	675	400	169	1804	884	462	1805	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.76	0.93	0.38	0.95	0.81	0.40	0.85	0.35	0.16	0.48	0.85	
Intersection Summary												
Area Type:	Other											
Cycle Length: 140												
Actuated Cycle Length: 140												
Offset: 44 (31%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.96												
Intersection Signal Delay: 42.9						Intersection LOS: D						
Intersection Capacity Utilization 93.8%						ICU Level of Service F						
Analysis Period (min) 15												

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

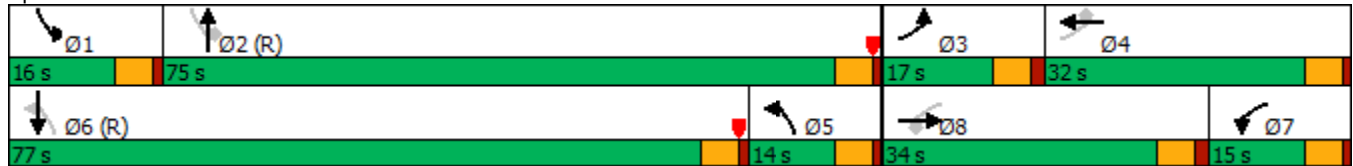
1: Lamar Blvd & 38th St
2028 Forecasted AM

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Lamar Blvd & 38th St



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

1: Lamar Blvd & 38th St
2028 Forecasted AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	638	165	166	524	153	137	599	139	212	1131	346
Future Volume (veh/h)	150	638	165	166	524	153	137	599	139	212	1131	346
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1856	1796	1900	1870	1885	1826	1885	1885
Adj Flow Rate, veh/h	156	665	172	173	546	0	143	624	0	221	1178	360
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
Percent Heavy Veh, %	3	3	2	2	3	7	0	2	1	5	1	1
Cap, veh/h	232	709	319	189	671		349	1786		498	1396	419
Arrive On Green	0.08	0.20	0.20	0.07	0.19	0.00	0.07	0.50	0.00	0.16	1.00	1.00
Sat Flow, veh/h	1767	3526	1585	1781	3526	1522	1810	3554	1598	1739	2714	815
Grp Volume(v), veh/h	156	665	172	173	546	0	143	624	0	221	770	768
Grp Sat Flow(s),veh/h/ln	1767	1763	1585	1781	1763	1522	1810	1777	1598	1739	1791	1738
Q Serve(g_s), s	9.9	26.0	11.0	8.6	20.8	0.0	0.0	14.8	0.0	9.1	0.0	0.0
Cycle Q Clear(g_c), s	9.9	26.0	11.0	8.6	20.8	0.0	0.0	14.8	0.0	9.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	232	709	319	189	671		349	1786		498	921	894
V/C Ratio(X)	0.67	0.94	0.54	0.92	0.81		0.41	0.35		0.44	0.84	0.86
Avail Cap(c_a), veh/h	232	718	323	189	680		349	1786		498	921	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.70	0.70	0.70
Uniform Delay (d), s/veh	42.5	55.1	32.7	62.8	54.3	0.0	21.1	21.0	0.0	14.0	0.0	0.0
Incr Delay (d2), s/veh	6.0	19.6	0.9	41.9	6.9	0.0	0.3	0.5	0.0	0.2	6.4	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.2	19.4	7.7	13.0	14.9	0.0	5.9	10.4	0.0	5.4	3.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.5	74.6	33.6	104.7	61.2	0.0	21.4	21.6	0.0	14.1	6.4	7.6
LnGrp LOS	D	E	C	F	E		C	C		B	A	A
Approach Vol, veh/h		993			719	A		767	A		1759	
Approach Delay, s/veh		63.4			71.7			21.5			7.9	
Approach LOS		E			E			C			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	75.4	17.0	31.6	14.4	77.0	15.0	33.6				
Change Period (Y+Rc), s	5.0	5.0	5.5	5.0	5.0	5.0	5.0	5.5				
Max Green Setting (Gmax), s	11.0	70.0	11.5	27.0	9.0	72.0	10.0	28.5				
Max Q Clear Time (g_c+I1), s	11.1	16.8	11.9	22.8	2.0	2.0	10.6	28.0				
Green Ext Time (p_c), s	0.0	1.6	0.0	1.0	0.0	4.2	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	34.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2028 Forecasted AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	146	428	173	108	713	64	127	341	55	129	781	229
Future Volume (vph)	146	428	173	108	713	64	127	341	55	129	781	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	165		0	150		0	150		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	100			120			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.988			0.979			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3505	1468	1787	3502	0	1570	3352	0	1787	3427	0
Flt Permitted	0.112			0.362			0.103			0.447		
Satd. Flow (perm)	211	3505	1468	681	3502	0	170	3352	0	841	3427	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		7			15			32	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		723			729			395			485	
Travel Time (s)		14.1			14.2			7.7			9.4	
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
Heavy Vehicles (%)	1%	3%	10%	1%	2%	0%	15%	6%	2%	1%	2%	1%
Adj. Flow (vph)	159	465	188	117	775	70	138	371	60	140	849	249
Shared Lane Traffic (%)												
Lane Group Flow (vph)	159	465	188	117	845	0	138	431	0	140	1098	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
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	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		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	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	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	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

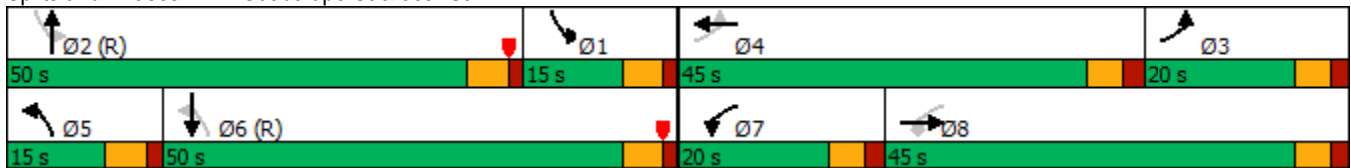
Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2028 Forecasted AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8			6			2		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.5	36.5		10.5	32.5		10.5	35.5	
Total Split (s)	20.0	45.0	45.0	20.0	45.0		15.0	50.0		15.0	50.0	
Total Split (%)	15.4%	34.6%	34.6%	15.4%	34.6%		11.5%	38.5%		11.5%	38.5%	
Maximum Green (s)	14.5	39.5	39.5	14.5	39.5		9.5	44.5		9.5	44.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lag	Lag	Lag	Lead	Lead		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		1.5	2.0		1.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		18.0	18.0		24.0			20.0			23.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	45.9	36.5	36.5	45.9	35.6		62.1	52.6		62.1	51.9	
Actuated g/C Ratio	0.35	0.28	0.28	0.35	0.27		0.48	0.40		0.48	0.40	
v/c Ratio	0.80	0.47	0.36	0.37	0.88		0.72	0.32		0.30	0.79	
Control Delay	75.9	39.8	9.5	27.3	55.6		44.8	27.6		22.4	39.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	75.9	39.8	9.5	27.3	55.6		44.8	27.6		22.4	39.8	
LOS	E	D	A	C	E		D	C		C	D	
Approach Delay		39.9			52.1			31.8			37.8	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	87	170	18	62	353		60	125		60	431	
Queue Length 95th (ft)	145	212	74	95	421		#175	185		111	#589	
Internal Link Dist (ft)		643			649			315			405	
Turn Bay Length (ft)	150		100	165			150			150		
Base Capacity (vph)	257	1087	565	386	1068		195	1365		470	1387	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.62	0.43	0.33	0.30	0.79		0.71	0.32		0.30	0.79	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 15.5 (12%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 95												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.88												
Intersection Signal Delay: 41.2						Intersection LOS: D						
Intersection Capacity Utilization 84.1%						ICU Level of Service E						
Analysis Period (min) 15												

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Guadalupe St & 38th St



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

2: Guadalupe St & 38th St
2028 Forecasted AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	428	173	108	713	64	127	341	55	129	781	229
Future Volume (veh/h)	146	428	173	108	713	64	127	341	55	129	781	229
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1856	1752	1885	1870	1900	1678	1811	1870	1885	1870	1885
Adj Flow Rate, veh/h	159	465	188	117	775	70	138	371	60	140	849	0
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
Percent Heavy Veh, %	1	3	10	1	2	0	15	6	2	1	2	1
Cap, veh/h	185	910	383	281	858	77	314	1017	163	596	1596	
Arrive On Green	0.06	0.26	0.26	0.06	0.26	0.26	0.06	0.34	0.34	0.17	0.45	0.00
Sat Flow, veh/h	1795	3526	1485	1795	3296	298	1598	2970	476	1795	3647	0
Grp Volume(v), veh/h	159	465	188	117	418	427	138	214	217	140	849	0
Grp Sat Flow(s),veh/h/ln	1795	1763	1485	1795	1777	1817	1598	1721	1725	1795	1777	0
Q Serve(g_s), s	5.8	14.7	9.2	6.2	29.6	29.6	6.0	12.1	12.3	0.0	22.5	0.0
Cycle Q Clear(g_c), s	5.8	14.7	9.2	6.2	29.6	29.6	6.0	12.1	12.3	0.0	22.5	0.0
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.28	1.00		0.00
Lane Grp Cap(c), veh/h	185	910	383	281	462	473	314	589	591	596	1596	
V/C Ratio(X)	0.86	0.51	0.49	0.42	0.90	0.90	0.44	0.36	0.37	0.23	0.53	
Avail Cap(c_a), veh/h	277	1071	451	370	540	552	333	589	591	596	1596	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	58.5	41.2	17.8	33.1	46.5	46.5	19.6	32.1	32.2	26.0	25.9	0.0
Incr Delay (d2), s/veh	11.0	0.2	0.4	0.4	15.6	15.4	0.4	1.7	1.8	0.1	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.6	10.5	5.7	4.9	21.2	21.6	4.0	9.1	9.2	5.3	14.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.5	41.4	18.2	33.5	62.1	61.9	20.0	33.8	33.9	26.0	27.2	0.0
LnGrp LOS	E	D	B	C	E	E	B	C	C	C	C	
Approach Vol, veh/h		812			962			569			989	A
Approach Delay, s/veh		41.5			58.6			30.5			27.0	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.4	50.0	13.3	39.3	13.5	63.9	13.6	39.1				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	9.5	44.5	14.5	39.5	9.5	44.5	14.5	39.5				
Max Q Clear Time (g_c+I1), s	2.0	14.3	7.8	31.6	8.0	24.5	8.2	16.7				
Green Ext Time (p_c), s	0.0	1.6	0.1	2.3	0.0	3.9	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay				40.3								
HCM 6th LOS				D								
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr

2028 Forecasted AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	9	55	61	11	57	18	769	70	58	1700	17
Future Volume (vph)	32	9	55	61	11	57	18	769	70	58	1700	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		115	150		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.871				0.850			0.850		0.998	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1600	0	1805	1900	1583	1805	3505	1615	1770	3533	0
Flt Permitted	0.750			0.690			0.086			0.330		
Satd. Flow (perm)	1425	1600	0	1311	1900	1583	163	3505	1615	615	3533	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60				63			77			2
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		209			115			1085			359	
Travel Time (s)		4.8			2.6			21.1			7.0	
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 (%)	0%	0%	4%	0%	0%	2%	0%	3%	0%	2%	2%	0%
Adj. Flow (vph)	35	10	60	67	12	63	20	845	77	64	1868	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	70	0	67	12	63	20	845	77	64	1887	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)		12			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
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	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6	20	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	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	0.0	
Detector 1 Queue (s)	0.0	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	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	D.P+P	NA	Perm	D.Pm	NA	
Protected Phases		4			8		5	2			6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr
2028 Forecasted AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	6		2	2		
Detector Phase	4	4		8	8	8	5	2	2	2	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	15.0	15.0	15.0	15.0	
Minimum Split (s)	35.0	35.0		31.5	31.5	31.5	9.5	35.0	35.0	35.0	25.0	
Total Split (s)	15.0	15.0		15.0	15.0	15.0	10.0	125.0	125.0	125.0	115.0	
Total Split (%)	10.7%	10.7%		10.7%	10.7%	10.7%	7.1%	89.3%	89.3%	89.3%	82.1%	
Maximum Green (s)	10.0	10.0		8.5	8.5	8.5	5.0	120.0	120.0	120.0	110.0	
Yellow Time (s)	3.5	3.5		3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5		3.5	3.5	3.5	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0		6.5	6.5	6.5	5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	23.0	23.0		18.0	18.0	18.0		23.0	23.0	23.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0	0	0	
Act Effct Green (s)	10.0	10.0		8.5	8.5	8.5	117.0	120.0	120.0	120.0	114.0	
Actuated g/C Ratio	0.07	0.07		0.06	0.06	0.06	0.84	0.86	0.86	0.86	0.81	
v/c Ratio	0.35	0.41		0.85	0.10	0.41	0.10	0.28	0.06	0.12	0.66	
Control Delay	71.9	26.1		129.5	64.4	22.5	2.2	1.6	0.2	2.1	7.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	71.9	26.1		129.5	64.4	22.5	2.2	1.6	0.2	2.1	7.0	
LOS	E	C		F	E	C	A	A	A	A	A	
Approach Delay		41.4			76.5			1.5			6.9	
Approach LOS		D			E			A			A	
Queue Length 50th (ft)	31	9		62	11	0	2	43	0	7	355	
Queue Length 95th (ft)	69	59		#155	33	48	m3	48	m2	14	415	
Internal Link Dist (ft)		129			35			1005			279	
Turn Bay Length (ft)							150		115	150		
Base Capacity (vph)	101	170		79	115	155	194	3004	1395	527	2877	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.35	0.41		0.85	0.10	0.41	0.10	0.28	0.06	0.12	0.66	
Intersection Summary												
Area Type:	Other											
Cycle Length: 140												
Actuated Cycle Length: 140												
Offset: 55 (39%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 100												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.85												
Intersection Signal Delay: 9.6				Intersection LOS: A								
Intersection Capacity Utilization 67.8%				ICU Level of Service C								
Analysis Period (min) 15												

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lamar Blvd & 40th St/Central Market Dr



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

3: Lamar Blvd & 40th St/Central Market Dr
2028 Forecasted AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	9	55	61	11	57	18	769	70	58	1700	17
Future Volume (veh/h)	32	9	55	61	11	57	18	769	70	58	1700	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1841	1900	1900	1870	1900	1856	1900	1870	1870	1900
Adj Flow Rate, veh/h	35	10	60	67	12	63	20	845	77	64	1868	19
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
Percent Heavy Veh, %	0	0	4	0	0	2	0	3	0	2	2	0
Cap, veh/h	125	14	86	77	115	96	72	9999	9966	226	9999	230
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.02	1.00	1.00	0.10	1.00	1.00
Sat Flow, veh/h	1346	235	1411	1352	1900	1585	1810	3526	1610	1781	3604	37
Grp Volume(v), veh/h	35	0	70	67	12	63	20	845	77	64	920	967
Grp Sat Flow(s),veh/h/ln	1346	0	1646	1352	1900	1585	1810	1763	1610	1781	1777	1864
Q Serve(g_s), s	3.5	0.0	5.8	2.7	0.8	5.4	0.2	0.0	0.0	5.4	0.0	0.0
Cycle Q Clear(g_c), s	4.4	0.0	5.8	8.5	0.8	5.4	0.2	0.0	0.0	5.4	0.0	0.0
Prop In Lane	1.00		0.86	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	125	0	100	77	115	96	72	21821	9966	0	11152	11697
V/C Ratio(X)	0.28	0.00	0.70	0.87	0.10	0.65	0.28	0.04	0.01	0.00	0.08	0.08
Avail Cap(c_a), veh/h	140	0	118	77	115	96	116	21821	9966	0	11152	11697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.2	0.0	64.5	69.5	62.2	64.3	52.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	14.0	60.6	0.4	14.8	1.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	0.0	5.1	6.7	0.8	4.7	1.1	0.0	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.4	0.0	78.5	130.1	62.5	79.2	53.9	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	E	A	E	F	E	E	D	A	A	A	A	A
Approach Vol, veh/h		105			142			942			1951	
Approach Delay, s/veh		74.1			101.8			1.1			0.0	
Approach LOS		E			F			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.8	890.3		15.0	6.6	902.4		15.0				
Change Period (Y+Rc), s	5.0	5.0		* 6.5	5.0	5.0		6.5				
Max Green Setting (Gmax), s	120.0	120.0		* 10	5.0	110.0		8.5				
Max Q Clear Time (g_c+I1), s	7.4	2.0		7.8	2.2	2.0		10.5				
Green Ext Time (p_c), s	0.2	7.5		0.1	0.0	30.9		0.0				

Intersection Summary

HCM 6th Ctrl Delay 7.4
HCM 6th LOS A

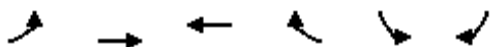
Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

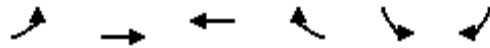
4: 38th St & Shoal Creek Blvd
2028 Forecasted AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Lane Configurations							
Traffic Volume (vph)	197	1229	1007	69	108	198	
Future Volume (vph)	197	1229	1007	69	108	198	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	150			75	230	0	
Storage Lanes	1			1	1	1	
Taper Length (ft)	100				60		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1805	3539	3539	1615	1787	1583	
Flt Permitted	0.195				0.950		
Satd. Flow (perm)	370	3539	3539	1615	1787	1583	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				37		107	
Link Speed (mph)		35	35		30		
Link Distance (ft)		478	541		394		
Travel Time (s)		9.3	10.5		9.0		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	0%	2%	2%	0%	1%	2%	
Adj. Flow (vph)	219	1366	1119	77	120	220	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	219	1366	1119	77	120	220	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane		Yes	Yes				
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	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
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	pm+pt	NA	NA	Perm	Prot	pm+ov	
Protected Phases	5	2	6		3	5	7

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

4: 38th St & Shoal Creek Blvd
2028 Forecasted AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Permitted Phases	2			6		7	
Detector Phase	5	2	6	6	3	5	
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	5.0	4.0	5.0
Minimum Split (s)	12.0	23.5	30.5	30.5	23.5	12.0	23.5
Total Split (s)	15.0	110.0	95.0	95.0	30.0	15.0	30.0
Total Split (%)	10.7%	78.6%	67.9%	67.9%	21.4%	10.7%	21%
Maximum Green (s)	7.0	104.5	89.5	89.5	24.5	7.0	24.5
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0
All-Red Time (s)	4.0	1.5	1.5	1.5	2.5	4.0	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	8.0	5.5	5.5	5.5	5.5	8.0	
Lead/Lag	Lead		Lag	Lag		Lead	
Lead-Lag Optimize?	Yes		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	2.0	2.0	2.0	2.0	1.0	2.0
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			
Flash Dont Walk (s)			18.0	18.0			
Pedestrian Calls (#/hr)			0	0			
Act Effct Green (s)	112.7	115.2	95.6	95.6	13.8	11.6	
Actuated g/C Ratio	0.80	0.82	0.68	0.68	0.10	0.08	
v/c Ratio	0.53	0.47	0.46	0.07	0.69	0.96	
Control Delay	8.1	4.5	9.5	2.3	79.8	82.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.1	4.5	9.5	2.3	79.8	82.2	
LOS	A	A	A	A	E	F	
Approach Delay		5.0	9.0		81.4		
Approach LOS		A	A		F		
Queue Length 50th (ft)	37	153	349	0	107	104	
Queue Length 95th (ft)	69	233	420	m5	169	#270	
Internal Link Dist (ft)		398	461		314		
Turn Bay Length (ft)	150			75	230		
Base Capacity (vph)	420	2913	2417	1114	312	233	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.52	0.47	0.46	0.07	0.38	0.94	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 68.5 (49%), Referenced to phase 2:EBTL and 6:WBT, Start of Red

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 14.8

Intersection LOS: B

Intersection Capacity Utilization 60.6%

ICU Level of Service B

Analysis Period (min) 15

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

4: 38th St & Shoal Creek Blvd
2028 Forecasted AM

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

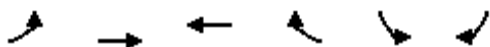
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 38th St & Shoal Creek Blvd



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

4: 38th St & Shoal Creek Blvd
2028 Forecasted AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	197	1229	1007	69	108	198
Future Volume (veh/h)	197	1229	1007	69	108	198
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1900	1885	1870
Adj Flow Rate, veh/h	219	1366	1119	77	120	220
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	1	2
Cap, veh/h	387	2756	2376	1076	262	310
Arrive On Green	0.05	0.78	0.67	0.67	0.15	0.15
Sat Flow, veh/h	1810	3647	3647	1610	1795	1585
Grp Volume(v), veh/h	219	1366	1119	77	120	220
Grp Sat Flow(s),veh/h/ln	1810	1777	1777	1610	1795	1585
Q Serve(g_s), s	5.2	19.6	21.3	2.3	8.6	18.1
Cycle Q Clear(g_c), s	5.2	19.6	21.3	2.3	8.6	18.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	387	2756	2376	1076	262	310
V/C Ratio(X)	0.57	0.50	0.47	0.07	0.46	0.71
Avail Cap(c_a), veh/h	387	2756	2376	1076	314	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	5.7	11.2	8.1	54.7	52.6
Incr Delay (d2), s/veh	1.2	0.6	0.7	0.1	0.5	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	10.7	12.9	1.5	7.1	12.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.5	6.4	11.9	8.2	55.2	56.6
LnGrp LOS	B	A	B	A	E	E
Approach Vol, veh/h		1585	1196		340	
Approach Delay, s/veh		6.9	11.7		56.1	
Approach LOS		A	B		E	
Timer - Assigned Phs		2			5	6
Phs Duration (G+Y+Rc), s		114.1			15.0	99.1
Change Period (Y+Rc), s		5.5			8.0	5.5
Max Green Setting (Gmax), s		104.5			7.0	89.5
Max Q Clear Time (g_c+I1), s		21.6			7.2	23.3
Green Ext Time (p_c), s		8.7			0.0	6.5
0.3						
Intersection Summary						
HCM 6th Ctrl Delay			14.1			
HCM 6th LOS			B			

Notes

User approved pedestrian interval to be less than phase max green.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2028 Forecasted PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	225	609	137	157	600	209	237	1650	225	159	1077	173
Future Volume (vph)	225	609	137	157	600	209	237	1650	225	159	1077	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		260	150		160	150		120	150		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	50			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3539	1615	1787	3539	1568	1805	3574	1615	1719	3494	0
Flt Permitted	0.162			0.152			0.074			0.070		
Satd. Flow (perm)	305	3539	1615	286	3539	1568	141	3574	1615	127	3494	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143			184			151		15	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1022			1081			615			1085	
Travel Time (s)		19.9			21.1			12.0			21.1	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	1%	2%	0%	1%	2%	3%	0%	1%	0%	5%	1%	2%
Adj. Flow (vph)	227	615	138	159	606	211	239	1667	227	161	1088	175
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	615	138	159	606	211	239	1667	227	161	1263	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes			Yes	
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	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	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	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	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	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	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	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2028 Forecasted PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8		4	6		2	2		
Detector Phase	3	8	8	7	4	4	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.0	31.0	31.0	10.0	32.0	32.0	10.0	36.0	
Total Split (s)	20.0	40.0	40.0	19.0	39.0	39.0	19.0	54.0	54.0	17.0	52.0	
Total Split (%)	15.4%	30.8%	30.8%	14.6%	30.0%	30.0%	14.6%	41.5%	41.5%	13.1%	40.0%	
Maximum Green (s)	14.5	34.5	34.5	14.0	34.0	34.0	14.0	49.0	49.0	12.0	47.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5	1.5	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		18.0	18.0		19.0	19.0		20.0	20.0		24.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	41.1	26.3	26.3	42.1	27.6	27.6	67.9	57.1	57.1	67.9	53.9	
Actuated g/C Ratio	0.32	0.20	0.20	0.32	0.21	0.21	0.52	0.44	0.44	0.52	0.41	
v/c Ratio	0.89	0.86	0.31	0.59	0.81	0.44	0.95	1.06	0.29	0.81	0.87	
Control Delay	65.8	62.3	7.5	70.5	74.4	26.1	92.6	77.2	10.3	58.8	42.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	65.8	62.3	7.5	70.5	74.4	26.1	92.6	77.2	10.3	58.8	42.7	
LOS	E	E	A	E	E	C	F	E	B	E	D	
Approach Delay		55.4			63.3			71.8			44.6	
Approach LOS		E			E			E			D	
Queue Length 50th (ft)	139	266	0	118	274	59	150	~831	38	84	503	
Queue Length 95th (ft)	#249	315	48	m145	297	m90	#330	#1054	103	#204	#714	
Internal Link Dist (ft)		942			1001			535			1005	
Turn Bay Length (ft)	150		260	150		160	150		120	150		
Base Capacity (vph)	262	939	533	272	925	545	252	1569	793	220	1456	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.87	0.65	0.26	0.58	0.66	0.39	0.95	1.06	0.29	0.73	0.87	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 34 (26%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 120												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 1.06												
Intersection Signal Delay: 60.3				Intersection LOS: E								
Intersection Capacity Utilization 100.6%				ICU Level of Service G								
Analysis Period (min) 15												

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2028 Forecasted PM

~ Volume exceeds capacity, queue is theoretically infinite.

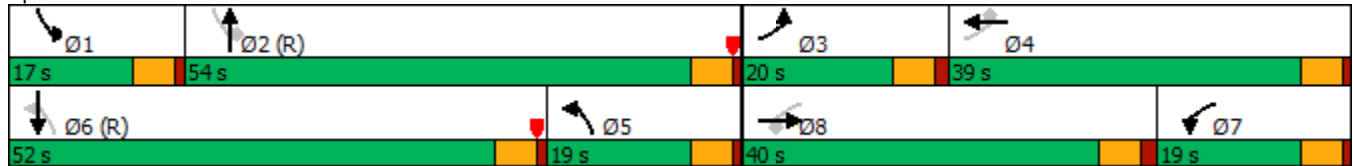
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Lamar Blvd & 38th St



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

1: Lamar Blvd & 38th St
2028 Forecasted PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	609	137	157	600	209	237	1650	225	159	1077	173
Future Volume (veh/h)	225	609	137	157	600	209	237	1650	225	159	1077	173
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1900	1885	1870	1856	1900	1885	1900	1826	1885	1870
Adj Flow Rate, veh/h	227	615	138	159	606	0	239	1667	0	161	1088	175
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	2	0	1	2	3	0	1	0	5	1	2
Cap, veh/h	281	690	313	278	697		374	1647		185	1117	179
Arrive On Green	0.11	0.19	0.19	0.11	0.20	0.00	0.17	0.46	0.00	0.07	0.36	0.36
Sat Flow, veh/h	1795	3554	1610	1795	3554	1572	1810	3582	1610	1739	3091	496
Grp Volume(v), veh/h	227	615	138	159	606	0	239	1667	0	161	629	634
Grp Sat Flow(s),veh/h/ln	1795	1777	1610	1795	1777	1572	1810	1791	1610	1739	1791	1796
Q Serve(g_s), s	13.0	21.9	7.9	5.3	21.5	0.0	11.3	59.8	0.0	7.7	45.0	45.3
Cycle Q Clear(g_c), s	13.0	21.9	7.9	5.3	21.5	0.0	11.3	59.8	0.0	7.7	45.0	45.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	281	690	313	278	697		374	1647		185	647	649
V/C Ratio(X)	0.81	0.89	0.44	0.57	0.87		0.64	1.01		0.87	0.97	0.98
Avail Cap(c_a), veh/h	281	943	427	278	929		374	1647		216	647	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	37.9	51.0	30.1	52.0	50.6	0.0	47.7	35.1	0.0	37.1	40.8	40.9
Incr Delay (d2), s/veh	14.8	6.8	0.4	1.8	5.6	0.0	2.8	25.2	0.0	21.5	26.4	27.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.1	15.6	5.6	8.6	15.2	0.0	11.8	40.3	0.0	10.1	31.5	31.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.7	57.8	30.4	53.8	56.2	0.0	50.4	60.3	0.0	58.6	67.3	68.2
LnGrp LOS	D	E	C	D	E		D	F		E	E	E
Approach Vol, veh/h		980			765	A		1906	A		1424	
Approach Delay, s/veh		52.8			55.7			59.0			66.7	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	64.8	20.0	30.5	27.5	52.0	19.8	30.7				
Change Period (Y+Rc), s	5.0	5.0	5.5	5.0	5.0	5.0	5.0	5.5				
Max Green Setting (Gmax), s	12.0	49.0	14.5	34.0	14.0	47.0	14.0	34.5				
Max Q Clear Time (g_c+I1), s	9.7	61.8	15.0	23.5	13.3	47.3	7.3	23.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	59.5
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2028 Forecasted PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	267	663	162	153	504	125	241	1017	146	108	703	150
Future Volume (vph)	267	663	162	153	504	125	241	1017	146	108	703	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	165		0	150		0	150		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	100			120			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.970			0.981			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3574	1495	1805	3474	0	1703	3506	0	1805	3453	0
Flt Permitted	0.165			0.140			0.205			0.108		
Satd. Flow (perm)	310	3574	1495	266	3474	0	367	3506	0	205	3453	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		24			14			22	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		723			729			395			485	
Travel Time (s)		14.1			14.2			7.7			9.4	
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 (%)	1%	1%	8%	0%	1%	0%	6%	1%	1%	0%	2%	1%
Adj. Flow (vph)	278	691	169	159	525	130	251	1059	152	113	732	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	278	691	169	159	655	0	251	1211	0	113	888	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
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	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		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	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	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	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2028 Forecasted PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8			6			2		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.5	36.5		10.5	32.5		10.5	35.5	
Total Split (s)	14.0	44.0	44.0	14.0	44.0		18.0	54.0		18.0	54.0	
Total Split (%)	10.8%	33.8%	33.8%	10.8%	33.8%		13.8%	41.5%		13.8%	41.5%	
Maximum Green (s)	8.5	38.5	38.5	8.5	38.5		12.5	48.5		12.5	48.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		1.5	2.0		1.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		18.0	18.0		24.0			20.0			23.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	39.1	30.7	30.7	39.1	30.6		68.9	60.8		68.9	56.4	
Actuated g/C Ratio	0.30	0.24	0.24	0.30	0.24		0.53	0.47		0.53	0.43	
v/c Ratio	1.47	0.82	0.36	0.88	0.78		0.78	0.74		0.55	0.59	
Control Delay	273.2	67.2	17.9	75.5	51.5		51.0	32.5		24.6	30.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	273.2	67.2	17.9	75.5	51.5		51.0	32.5		24.6	30.1	
LOS	F	E	B	E	D		D	C		C	C	
Approach Delay		110.2			56.2			35.7			29.5	
Approach LOS		F			E			D			C	
Queue Length 50th (ft)	~262	270	39	96	265		101	416		42	286	
Queue Length 95th (ft)	#414	278	m51	#180	311		#221	#636		82	393	
Internal Link Dist (ft)		643			649			315			405	
Turn Bay Length (ft)	150		100	165			150			150		
Base Capacity (vph)	189	1058	554	180	1045		322	1647		268	1510	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	1.47	0.65	0.31	0.88	0.63		0.78	0.74		0.42	0.59	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 31.5 (24%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 105												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 1.47												
Intersection Signal Delay: 57.3						Intersection LOS: E						
Intersection Capacity Utilization 89.8%						ICU Level of Service E						
Analysis Period (min) 15												

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2028 Forecasted PM

~ Volume exceeds capacity, queue is theoretically infinite.

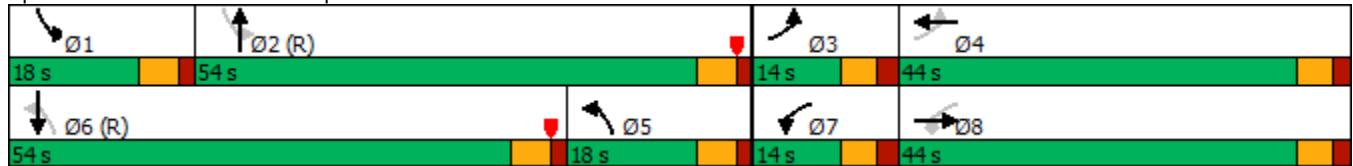
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Guadalupe St & 38th St



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

2: Guadalupe St & 38th St
2028 Forecasted PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	267	663	162	153	504	125	241	1017	146	108	703	150
Future Volume (veh/h)	267	663	162	153	504	125	241	1017	146	108	703	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1781	1900	1885	1900	1811	1885	1885	1900	1870	1885
Adj Flow Rate, veh/h	278	691	169	159	525	130	251	1059	152	112	732	0
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
Percent Heavy Veh, %	1	1	8	0	1	0	6	1	1	0	2	1
Cap, veh/h	209	798	336	198	635	156	495	1565	224	250	1326	
Arrive On Green	0.07	0.22	0.22	0.07	0.22	0.22	0.17	0.50	0.50	0.04	0.37	0.00
Sat Flow, veh/h	1795	3582	1510	1810	2848	702	1725	3144	451	1810	3647	0
Grp Volume(v), veh/h	278	691	169	159	329	326	251	603	608	112	732	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1510	1810	1791	1759	1725	1791	1804	1810	1777	0
Q Serve(g_s), s	8.5	24.1	12.7	8.5	22.8	23.0	0.5	33.1	33.2	3.9	21.1	0.0
Cycle Q Clear(g_c), s	8.5	24.1	12.7	8.5	22.8	23.0	0.5	33.1	33.2	3.9	21.1	0.0
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.25	1.00		0.00
Lane Grp Cap(c), veh/h	209	798	336	198	399	392	495	891	898	250	1326	
V/C Ratio(X)	1.33	0.87	0.50	0.80	0.82	0.83	0.51	0.68	0.68	0.45	0.55	
Avail Cap(c_a), veh/h	209	1061	447	198	530	521	495	891	898	343	1326	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.8	48.6	44.2	39.9	48.1	48.2	36.8	24.7	24.8	20.1	32.2	0.0
Incr Delay (d2), s/veh	177.5	4.8	0.4	19.4	6.0	6.5	0.3	4.1	4.1	0.5	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	20.6	16.7	8.4	8.7	16.1	16.0	11.1	21.0	21.1	2.9	14.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	223.3	53.5	44.6	59.3	54.1	54.6	37.1	28.8	28.9	20.6	33.8	0.0
LnGrp LOS	F	D	D	E	D	D	D	C	C	C	C	
Approach Vol, veh/h		1138			814			1462			844	A
Approach Delay, s/veh		93.6			55.3			30.3			32.1	
Approach LOS		F			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	70.2	14.0	34.5	27.5	54.0	14.0	34.5				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	12.5	48.5	8.5	38.5	12.5	48.5	8.5	38.5				
Max Q Clear Time (g_c+I1), s	5.9	35.2	10.5	25.0	2.5	23.1	10.5	26.1				
Green Ext Time (p_c), s	0.0	4.5	0.0	2.2	0.2	3.4	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay			52.4									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr
2028 Forecasted PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	33	34	139	17	112	9	1791	116	123	1166	6
Future Volume (vph)	86	33	34	139	17	112	9	1791	116	123	1166	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		115	150		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.924				0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1722	0	1787	1900	1615	1805	3574	1615	1805	3571	0
Flt Permitted	0.745			0.693			0.181			0.051		
Satd. Flow (perm)	1416	1722	0	1304	1900	1615	344	3574	1615	97	3571	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29				117			62		1	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		209			79			1085			359	
Travel Time (s)		4.8			1.8			21.1			7.0	
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 (%)	0%	4%	0%	1%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	95	36	37	153	19	123	10	1968	127	135	1281	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	95	73	0	153	19	123	10	1968	127	135	1288	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)		12			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
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	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6	20	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	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	0.0	
Detector 1 Queue (s)	0.0	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	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	D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		4			8		5	2		1	6	

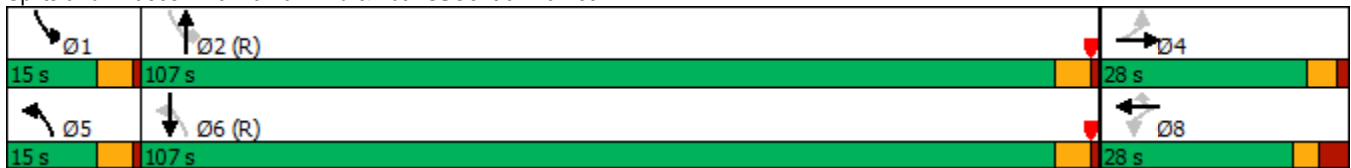
Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr
2028 Forecasted PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	6		2	2		
Detector Phase	4	4		8	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	35.0	35.0		31.5	31.5	31.5	9.5	35.0	35.0	9.5	25.0	
Total Split (s)	28.0	28.0		28.0	28.0	28.0	15.0	107.0	107.0	15.0	107.0	
Total Split (%)	18.7%	18.7%		18.7%	18.7%	18.7%	10.0%	71.3%	71.3%	10.0%	71.3%	
Maximum Green (s)	23.0	23.0		21.5	21.5	21.5	10.0	102.0	102.0	10.0	102.0	
Yellow Time (s)	3.5	3.5		3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5		3.5	3.5	3.5	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0		6.5	6.5	6.5	5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	1.5		1.5	1.5	1.5	1.0	2.0	2.0	1.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	23.0	23.0		18.0	18.0	18.0		23.0	23.0		13.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	
Act Effct Green (s)	21.1	21.1		19.6	19.6	19.6	116.9	105.3	105.3	113.9	115.4	
Actuated g/C Ratio	0.14	0.14		0.13	0.13	0.13	0.78	0.70	0.70	0.76	0.77	
v/c Ratio	0.48	0.27		0.91	0.08	0.39	0.03	0.78	0.11	0.79	0.47	
Control Delay	67.2	38.0		110.9	56.8	14.6	3.9	18.4	4.4	58.0	7.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	
Total Delay	67.2	38.0		110.9	56.8	14.6	3.9	19.1	4.4	58.0	7.5	
LOS	E	D		F	E	B	A	B	A	E	A	
Approach Delay		54.5			67.3			18.1			12.3	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	86	38		147	16	5	2	673	20	61	198	
Queue Length 95th (ft)	148	89		#273	43	66	6	776	43	#161	310	
Internal Link Dist (ft)		129			1			1005			279	
Turn Bay Length (ft)							150		115	150		
Base Capacity (vph)	217	288		186	272	331	369	2509	1152	188	2746	
Starvation Cap Reductn	0	0		0	0	0	0	215	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.44	0.25		0.82	0.07	0.37	0.03	0.86	0.11	0.72	0.47	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 25 (17%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 110												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.91												
Intersection Signal Delay: 21.2				Intersection LOS: C								
Intersection Capacity Utilization 84.4%				ICU Level of Service E								
Analysis Period (min) 15												

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Lamar Blvd & 40th St/Central Market Dr



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

3: Lamar Blvd & 40th St/Central Market Dr

2028 Forecasted PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	33	34	139	17	112	9	1791	116	123	1166	6
Future Volume (veh/h)	86	33	34	139	17	112	9	1791	116	123	1166	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1841	1900	1885	1900	1900	1900	1885	1900	1900	1885	1900
Adj Flow Rate, veh/h	95	36	37	153	19	123	10	1968	127	135	1281	7
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
Percent Heavy Veh, %	0	4	0	1	0	0	0	1	0	0	1	0
Cap, veh/h	219	119	123	188	272	231	321	2553	1148	181	2702	15
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.01	0.71	0.71	0.03	0.74	0.74
Sat Flow, veh/h	1266	832	855	1338	1900	1610	1810	3582	1610	1810	3653	20
Grp Volume(v), veh/h	95	0	73	153	19	123	10	1968	127	135	628	660
Grp Sat Flow(s),veh/h/ln	1266	0	1687	1338	1900	1610	1810	1791	1610	1810	1791	1882
Q Serve(g_s), s	10.5	0.0	5.8	15.7	1.3	10.6	0.2	52.5	3.7	3.1	21.1	21.1
Cycle Q Clear(g_c), s	11.8	0.0	5.8	21.5	1.3	10.6	0.2	52.5	3.7	3.1	21.1	21.1
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	219	0	242	188	272	231	321	2553	1148	181	1325	1392
V/C Ratio(X)	0.43	0.00	0.30	0.81	0.07	0.53	0.03	0.77	0.11	0.74	0.47	0.47
Avail Cap(c_a), veh/h	231	0	259	188	272	231	430	2553	1148	241	1325	1392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.13	0.13	0.13	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.7	0.0	57.5	67.8	55.6	59.6	6.4	13.7	6.7	28.8	7.8	7.8
Incr Delay (d2), s/veh	0.5	0.0	0.3	21.9	0.0	1.2	0.0	0.3	0.0	5.3	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.2	0.0	4.5	11.4	1.1	7.9	0.1	22.1	1.9	6.9	12.6	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	0.0	57.8	89.7	55.6	60.8	6.4	14.0	6.7	34.0	9.0	9.0
LnGrp LOS	E	A	E	F	E	E	A	B	A	C	A	A
Approach Vol, veh/h	168				295				2105		1423	
Approach Delay, s/veh	59.7				75.5				13.6		11.4	
Approach LOS	E				E				B		B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	111.9		28.0	6.0	116.0		28.0				
Change Period (Y+Rc), s	5.0	5.0		* 6.5	5.0	5.0		6.5				
Max Green Setting (Gmax), s	10.0	102.0		* 23	10.0	102.0		21.5				
Max Q Clear Time (g_c+I1), s	5.1	54.5		13.8	2.2	23.1		23.5				
Green Ext Time (p_c), s	0.0	17.4		0.2	0.0	6.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay 19.3

HCM 6th LOS B

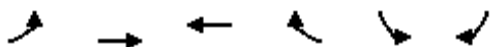
Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

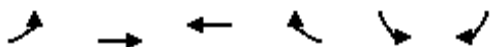
4: 38th St & Shoal Creek Blvd
2028 Forecasted PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Lane Configurations							
Traffic Volume (vph)	231	991	1230	192	37	112	
Future Volume (vph)	231	991	1230	192	37	112	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	150			75	230	0	
Storage Lanes	1			1	1	1	
Taper Length (ft)	100				60		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1770	3539	3574	1615	1805	1615	
Flt Permitted	0.188				0.950		
Satd. Flow (perm)	350	3539	3574	1615	1805	1615	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				78		76	
Link Speed (mph)		35	35		30		
Link Distance (ft)		478	541		394		
Travel Time (s)		9.3	10.5		9.0		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	2%	2%	1%	0%	0%	0%	
Adj. Flow (vph)	238	1022	1268	198	38	115	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	238	1022	1268	198	38	115	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane		Yes	Yes				
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	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
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	pm+pt	NA	NA	Perm	Prot	pm+ov	
Protected Phases	5	2	6		3	5	7

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

4: 38th St & Shoal Creek Blvd
2028 Forecasted PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Permitted Phases	2			6		7	
Detector Phase	5	2	6	6	3	5	
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	5.0	4.0	5.0
Minimum Split (s)	10.0	23.0	30.0	30.0	23.0	10.0	23.0
Total Split (s)	22.0	122.0	100.0	100.0	28.0	22.0	28.0
Total Split (%)	14.7%	81.3%	66.7%	66.7%	18.7%	14.7%	19%
Maximum Green (s)	17.0	117.0	95.0	95.0	23.0	17.0	23.0
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag	Lag		Lead	
Lead-Lag Optimize?	Yes		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	2.0	2.0	2.0	2.0	1.0	2.0
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			
Flash Dont Walk (s)			18.0	18.0			
Pedestrian Calls (#/hr)			0	0			
Act Effect Green (s)	134.3	135.3	121.1	121.1	7.7	8.1	
Actuated g/C Ratio	0.90	0.90	0.81	0.81	0.05	0.05	
v/c Ratio	0.61	0.32	0.44	0.15	0.41	0.72	
Control Delay	8.2	1.7	5.7	2.8	81.3	50.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.2	1.7	5.7	2.8	81.3	50.9	
LOS	A	A	A	A	F	D	
Approach Delay		2.9	5.3		58.5		
Approach LOS		A	A		E		
Queue Length 50th (ft)	22	61	171	22	37	38	
Queue Length 95th (ft)	41	92	283	54	76	103	
Internal Link Dist (ft)		398	461		314		
Turn Bay Length (ft)	150			75	230		
Base Capacity (vph)	474	3191	2886	1319	276	250	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.50	0.32	0.44	0.15	0.14	0.46	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Red

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 7.1

Intersection LOS: A

Intersection Capacity Utilization 63.5%

ICU Level of Service B

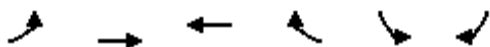
Analysis Period (min) 15

Splits and Phases: 4: 38th St & Shoal Creek Blvd



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

4: 38th St & Shoal Creek Blvd
2028 Forecasted PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	231	991	1230	192	37	112
Future Volume (veh/h)	231	991	1230	192	37	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1900	1900	1900
Adj Flow Rate, veh/h	238	1022	1268	198	38	115
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	1	0	0	0
Cap, veh/h	356	3026	2788	1253	148	196
Arrive On Green	0.04	0.85	0.78	0.78	0.08	0.08
Sat Flow, veh/h	1781	3647	3676	1610	1810	1610
Grp Volume(v), veh/h	238	1022	1268	198	38	115
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1610	1810	1610
Q Serve(g_s), s	3.9	9.0	18.2	4.7	3.0	10.1
Cycle Q Clear(g_c), s	3.9	9.0	18.2	4.7	3.0	10.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	356	3026	2788	1253	148	196
V/C Ratio(X)	0.67	0.34	0.45	0.16	0.26	0.59
Avail Cap(c_a), veh/h	487	3026	2788	1253	277	311
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.4	2.3	5.7	4.2	64.6	62.3
Incr Delay (d2), s/veh	0.8	0.3	0.5	0.3	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	4.2	10.3	2.7	2.5	7.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.3	2.6	6.2	4.5	64.9	63.4
LnGrp LOS	A	A	A	A	E	E
Approach Vol, veh/h		1260	1466		153	
Approach Delay, s/veh		3.5	6.0		63.7	
Approach LOS		A	A		E	
Timer - Assigned Phs		2			5	6
Phs Duration (G+Y+Rc), s		132.7			11.0	121.7
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		117.0			17.0	95.0
Max Q Clear Time (g_c+I1), s		11.0			5.9	20.2
Green Ext Time (p_c), s		5.6			0.1	8.2
						0.2
Intersection Summary						
HCM 6th Ctrl Delay			8.0			
HCM 6th LOS			A			

Notes

User approved pedestrian interval to be less than phase max green.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2028 Site Plus Forecasted AM (No Impr)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	157	653	169	170	551	153	144	604	139	212	1142	361
Future Volume (vph)	157	653	169	170	551	153	144	604	139	212	1142	361
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		260	150		160	150		120	150		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	50			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3505	1583	1770	3505	1509	1805	3539	1599	1719	3446	0
Flt Permitted	0.151			0.142			0.056			0.352		
Satd. Flow (perm)	279	3505	1583	265	3505	1509	106	3539	1599	637	3446	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			165			136			140		44	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1022			1081			615			1085	
Travel Time (s)		19.9			21.1			12.0			21.1	
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 (%)	3%	3%	2%	2%	3%	7%	0%	2%	1%	5%	1%	1%
Adj. Flow (vph)	164	680	176	177	574	159	150	629	145	221	1190	376
Shared Lane Traffic (%)												
Lane Group Flow (vph)	164	680	176	177	574	159	150	629	145	221	1566	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes			Yes	
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	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	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	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	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	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	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	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2028 Site Plus Forecasted AM (No Impr)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8		4	6		2	2		
Detector Phase	3	8	8	7	4	4	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.0	31.0	31.0	10.0	32.0	32.0	10.0	36.0	
Total Split (s)	17.0	34.0	34.0	15.0	32.0	32.0	14.0	75.0	75.0	16.0	77.0	
Total Split (%)	12.1%	24.3%	24.3%	10.7%	22.9%	22.9%	10.0%	53.6%	53.6%	11.4%	55.0%	
Maximum Green (s)	11.5	28.5	28.5	10.0	27.0	27.0	9.0	70.0	70.0	11.0	72.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5	1.5	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		18.0	18.0		19.0	19.0		20.0	20.0		24.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	38.0	28.1	28.1	39.0	27.2	27.2	81.0	70.9	70.9	81.0	72.0	
Actuated g/C Ratio	0.27	0.20	0.20	0.28	0.19	0.19	0.58	0.51	0.51	0.58	0.51	
v/c Ratio	0.85	0.97	0.39	0.96	0.85	0.40	0.88	0.35	0.16	0.50	0.87	
Control Delay	75.2	80.9	15.2	111.9	66.9	14.2	91.7	21.6	3.6	11.7	29.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	75.2	80.9	15.2	111.9	66.9	14.2	91.7	21.6	3.6	11.7	29.9	
LOS	E	F	B	F	E	B	F	C	A	B	C	
Approach Delay		68.7			66.5			30.1			27.7	
Approach LOS		E			E			C			C	
Queue Length 50th (ft)	123	328	21	123	268	17	84	178	2	46	642	
Queue Length 95th (ft)	#225	#451	91	#273	#356	83	#216	224	38	m72	755	
Internal Link Dist (ft)		942			1001			535			1005	
Turn Bay Length (ft)	150		260	150		160	150		120	150		
Base Capacity (vph)	196	713	453	185	679	402	170	1792	879	457	1793	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.84	0.95	0.39	0.96	0.85	0.40	0.88	0.35	0.16	0.48	0.87	
Intersection Summary												
Area Type:	Other											
Cycle Length: 140												
Actuated Cycle Length: 140												
Offset: 44 (31%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 100												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.97												
Intersection Signal Delay: 44.8				Intersection LOS: D								
Intersection Capacity Utilization 95.6%				ICU Level of Service F								
Analysis Period (min) 15												

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

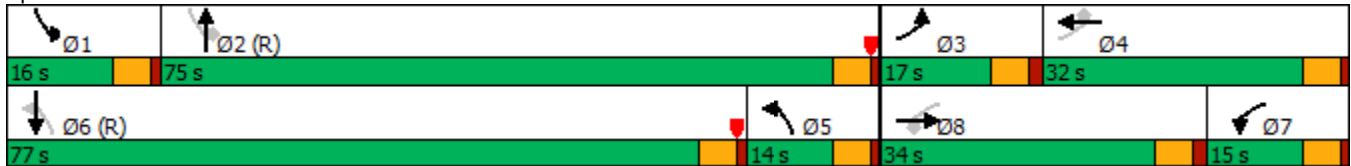
1: Lamar Blvd & 38th St
2028 Site Plus Forecasted AM (No Impr)

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Lamar Blvd & 38th St



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

1: Lamar Blvd & 38th St
2028 Site Plus Forecasted AM (No Impr)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	157	653	169	170	551	153	144	604	139	212	1142	361
Future Volume (veh/h)	157	653	169	170	551	153	144	604	139	212	1142	361
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1856	1796	1900	1870	1885	1826	1885	1885
Adj Flow Rate, veh/h	164	680	176	177	574	0	150	629	0	221	1190	376
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
Percent Heavy Veh, %	3	3	2	2	3	7	0	2	1	5	1	1
Cap, veh/h	226	718	323	187	680		339	1777		493	1385	429
Arrive On Green	0.08	0.20	0.20	0.07	0.19	0.00	0.06	0.50	0.00	0.16	1.00	1.00
Sat Flow, veh/h	1767	3526	1585	1781	3526	1522	1810	3554	1598	1739	2692	834
Grp Volume(v), veh/h	164	680	176	177	574	0	150	629	0	221	784	782
Grp Sat Flow(s),veh/h/ln	1767	1763	1585	1781	1763	1522	1810	1777	1598	1739	1791	1735
Q Serve(g_s), s	10.4	26.6	11.2	9.1	22.0	0.0	0.0	15.1	0.0	9.2	0.0	0.0
Cycle Q Clear(g_c), s	10.4	26.6	11.2	9.1	22.0	0.0	0.0	15.1	0.0	9.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	226	718	323	187	680		339	1777		493	921	892
V/C Ratio(X)	0.72	0.95	0.55	0.95	0.84		0.44	0.35		0.45	0.85	0.88
Avail Cap(c_a), veh/h	226	718	323	187	680		339	1777		493	921	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.69	0.69	0.69
Uniform Delay (d), s/veh	42.7	55.0	32.5	63.0	54.5	0.0	22.6	21.3	0.0	14.1	0.0	0.0
Incr Delay (d2), s/veh	9.5	21.4	1.1	49.6	9.1	0.0	0.3	0.6	0.0	0.2	7.0	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	20.0	7.9	13.7	15.9	0.0	6.6	10.5	0.0	5.4	3.2	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	76.4	33.6	112.6	63.5	0.0	22.9	21.8	0.0	14.3	7.0	8.6
LnGrp LOS	D	E	C	F	E		C	C		B	A	A
Approach Vol, veh/h		1020			751	A		779	A		1787	
Approach Delay, s/veh		65.2			75.1			22.0			8.6	
Approach LOS		E			E			C			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	75.0	17.0	32.0	14.0	77.0	15.0	34.0				
Change Period (Y+Rc), s	5.0	5.0	5.5	5.0	5.0	5.0	5.0	5.5				
Max Green Setting (Gmax), s	11.0	70.0	11.5	27.0	9.0	72.0	10.0	28.5				
Max Q Clear Time (g_c+I1), s	11.2	17.1	12.4	24.0	2.0	2.0	11.1	28.6				
Green Ext Time (p_c), s	0.0	1.6	0.0	0.8	0.0	4.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			35.8									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2028 Site Plus Forecasted AM (No Impr)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	434	177	108	726	64	134	341	55	129	785	239
Future Volume (vph)	151	434	177	108	726	64	134	341	55	129	785	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	165		0	150		0	150		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	100			120			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.988			0.979			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3505	1468	1787	3502	0	1570	3352	0	1787	3423	0
Flt Permitted	0.111			0.361			0.089			0.445		
Satd. Flow (perm)	209	3505	1468	679	3502	0	147	3352	0	837	3423	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		7			15			34	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		723			729			395			485	
Travel Time (s)		14.1			14.2			7.7			9.4	
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
Heavy Vehicles (%)	1%	3%	10%	1%	2%	0%	15%	6%	2%	1%	2%	1%
Adj. Flow (vph)	164	472	192	117	789	70	146	371	60	140	853	260
Shared Lane Traffic (%)												
Lane Group Flow (vph)	164	472	192	117	859	0	146	431	0	140	1113	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
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	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		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	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	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	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2028 Site Plus Forecasted AM (No Impr)

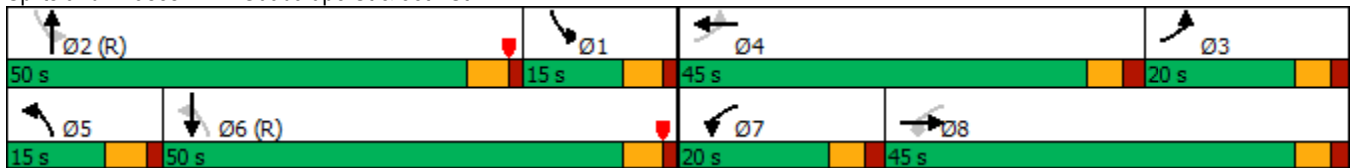
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8			6			2		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.5	36.5		10.5	32.5		10.5	35.5	
Total Split (s)	20.0	45.0	45.0	20.0	45.0		15.0	50.0		15.0	50.0	
Total Split (%)	15.4%	34.6%	34.6%	15.4%	34.6%		11.5%	38.5%		11.5%	38.5%	
Maximum Green (s)	14.5	39.5	39.5	14.5	39.5		9.5	44.5		9.5	44.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lag	Lag	Lag	Lead	Lead		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		1.5	2.0		1.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		18.0	18.0		24.0			20.0			23.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	46.6	37.3	37.3	46.6	35.9		61.4	51.9		61.4	50.5	
Actuated g/C Ratio	0.36	0.29	0.29	0.36	0.28		0.47	0.40		0.47	0.39	
v/c Ratio	0.80	0.47	0.36	0.36	0.88		0.78	0.32		0.30	0.82	
Control Delay	75.5	39.3	9.7	26.8	56.0		54.3	28.0		22.8	42.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	75.5	39.3	9.7	26.8	56.0		54.3	28.0		22.8	42.0	
LOS	E	D	A	C	E		D	C		C	D	
Approach Delay		39.6			52.5			34.7			39.9	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	89	170	20	61	360		71	127		62	452	
Queue Length 95th (ft)	153	215	78	95	430		#207	185		111	#603	
Internal Link Dist (ft)		643			649			315			405	
Turn Bay Length (ft)	150		100	165			150			150		
Base Capacity (vph)	256	1091	566	390	1068		190	1346		464	1351	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.64	0.43	0.34	0.30	0.80		0.77	0.32		0.30	0.82	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 15.5 (12%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 95												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.88												
Intersection Signal Delay: 42.4						Intersection LOS: D						
Intersection Capacity Utilization 85.6%						ICU Level of Service E						
Analysis Period (min) 15												

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2028 Site Plus Forecasted AM (No Impr)

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Guadalupe St & 38th St



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

2: Guadalupe St & 38th St
2028 Site Plus Forecasted AM (No Impr)

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	151	434	177	108	726	64	134	341	55	129	785	239	
Future Volume (veh/h)	151	434	177	108	726	64	134	341	55	129	785	239	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1885	1856	1752	1885	1870	1900	1678	1811	1870	1885	1870	1885	
Adj Flow Rate, veh/h	164	472	192	117	789	70	146	371	60	140	853	0	
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	
Percent Heavy Veh, %	1	3	10	1	2	0	15	6	2	1	2	1	
Cap, veh/h	190	934	393	284	870	77	311	1017	163	584	1560		
Arrive On Green	0.06	0.27	0.27	0.06	0.26	0.26	0.07	0.34	0.34	0.16	0.44	0.00	
Sat Flow, veh/h	1795	3526	1485	1795	3302	293	1598	2970	476	1795	3647	0	
Grp Volume(v), veh/h	164	472	192	117	425	434	146	214	217	140	853	0	
Grp Sat Flow(s),veh/h/ln	1795	1763	1485	1795	1777	1818	1598	1721	1725	1795	1777	0	
Q Serve(g_s), s	6.2	14.8	9.4	6.1	30.1	30.1	6.5	12.1	12.3	0.0	23.0	0.0	
Cycle Q Clear(g_c), s	6.2	14.8	9.4	6.1	30.1	30.1	6.5	12.1	12.3	0.0	23.0	0.0	
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.28	1.00		0.00	
Lane Grp Cap(c), veh/h	190	934	393	284	468	479	311	589	591	584	1560		
V/C Ratio(X)	0.86	0.51	0.49	0.41	0.91	0.91	0.47	0.36	0.37	0.24	0.55		
Avail Cap(c_a), veh/h	277	1071	451	373	540	552	324	589	591	584	1560		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	58.2	40.5	17.8	32.5	46.3	46.3	20.3	32.1	32.2	26.5	26.9	0.0	
Incr Delay (d2), s/veh	12.6	0.2	0.3	0.4	16.3	16.0	0.4	1.7	1.8	0.1	1.4	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln	9.9	10.6	5.8	4.8	21.6	22.0	4.3	9.1	9.2	5.4	15.1	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	70.8	40.7	18.2	32.9	62.6	62.3	20.7	33.8	33.9	26.6	28.3	0.0	
LnGrp LOS	E	D	B	C	E	E	C	C	C	C	C		
Approach Vol, veh/h	828			976			577			993			A
Approach Delay, s/veh	41.4			58.9			30.6			28.1			
Approach LOS	D			E			C			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	26.5	50.0	13.7	39.8	14.0	62.6	13.5	40.0					
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5					
Max Green Setting (Gmax), s	9.5	44.5	14.5	39.5	9.5	44.5	14.5	39.5					
Max Q Clear Time (g_c+I1), s	2.0	14.3	8.2	32.1	8.5	25.0	8.1	16.8					
Green Ext Time (p_c), s	0.0	1.6	0.1	2.2	0.0	3.9	0.0	2.3					

Intersection Summary

HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr
2028 Site Plus Forecasted AM (No Impr)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	9	55	61	11	57	18	781	70	58	1725	17
Future Volume (vph)	32	9	55	61	11	57	18	781	70	58	1725	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		115	150		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.871				0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1600	0	1805	1900	1583	1805	3505	1615	1770	3536	0
Flt Permitted	0.750			0.690			0.082			0.325		
Satd. Flow (perm)	1425	1600	0	1311	1900	1583	156	3505	1615	605	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60				63			77			2
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		209			115			1085			359	
Travel Time (s)		4.8			2.6			21.1			7.0	
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 (%)	0%	0%	4%	0%	0%	2%	0%	3%	0%	2%	2%	0%
Adj. Flow (vph)	35	10	60	67	12	63	20	858	77	64	1896	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	70	0	67	12	63	20	858	77	64	1915	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)		12			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
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	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6	20	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	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	0.0	
Detector 1 Queue (s)	0.0	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	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	D.P+P	NA	Perm	D.Pm	NA	
Protected Phases		4			8		5	2			6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr
2028 Site Plus Forecasted AM (No Impr)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	6		2	2		
Detector Phase	4	4		8	8	8	5	2	2	2	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	15.0	15.0	15.0	15.0	
Minimum Split (s)	35.0	35.0		31.5	31.5	31.5	9.5	35.0	35.0	35.0	25.0	
Total Split (s)	15.0	15.0		15.0	15.0	15.0	10.0	125.0	125.0	125.0	115.0	
Total Split (%)	10.7%	10.7%		10.7%	10.7%	10.7%	7.1%	89.3%	89.3%	89.3%	82.1%	
Maximum Green (s)	10.0	10.0		8.5	8.5	8.5	5.0	120.0	120.0	120.0	110.0	
Yellow Time (s)	3.5	3.5		3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5		3.5	3.5	3.5	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0		6.5	6.5	6.5	5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	23.0	23.0		18.0	18.0	18.0		23.0	23.0	23.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0	0	0	
Act Effct Green (s)	10.0	10.0		8.5	8.5	8.5	117.0	120.0	120.0	120.0	114.0	
Actuated g/C Ratio	0.07	0.07		0.06	0.06	0.06	0.84	0.86	0.86	0.86	0.81	
v/c Ratio	0.35	0.41		0.85	0.10	0.41	0.11	0.29	0.06	0.12	0.67	
Control Delay	71.9	26.1		129.5	64.4	22.5	2.2	1.6	0.2	2.2	7.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	71.9	26.1		129.5	64.4	22.5	2.2	1.6	0.2	2.2	7.2	
LOS	E	C		F	E	C	A	A	A	A	A	
Approach Delay		41.4			76.5			1.5			7.0	
Approach LOS		D			E			A			A	
Queue Length 50th (ft)	31	9		62	11	0	2	44	0	7	366	
Queue Length 95th (ft)	69	59		#155	33	48	m3	48	m2	14	428	
Internal Link Dist (ft)		129			35			1005			279	
Turn Bay Length (ft)							150		115	150		
Base Capacity (vph)	101	170		79	115	155	189	3004	1395	518	2879	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.35	0.41		0.85	0.10	0.41	0.11	0.29	0.06	0.12	0.67	
Intersection Summary												
Area Type:	Other											
Cycle Length: 140												
Actuated Cycle Length: 140												
Offset: 55 (39%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 100												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.85												
Intersection Signal Delay: 9.6				Intersection LOS: A								
Intersection Capacity Utilization 67.9%				ICU Level of Service C								
Analysis Period (min) 15												

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr
2028 Site Plus Forecasted AM (No Impr)

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Lamar Blvd & 40th St/Central Market Dr



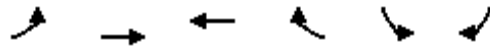
Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

3: Lamar Blvd & 40th St/Central Market Dr
2028 Site Plus Forecasted AM (No Impr)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	9	55	61	11	57	18	781	70	58	1725	17
Future Volume (veh/h)	32	9	55	61	11	57	18	781	70	58	1725	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1841	1900	1900	1870	1900	1856	1900	1870	1870	1900
Adj Flow Rate, veh/h	35	10	60	67	12	63	20	858	77	64	1896	19
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
Percent Heavy Veh, %	0	0	4	0	0	2	0	3	0	2	2	0
Cap, veh/h	125	14	86	77	115	96	72	9999	9966	226	9999	226
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.02	1.00	1.00	0.10	1.00	1.00
Sat Flow, veh/h	1346	235	1411	1352	1900	1585	1810	3526	1610	1781	3605	36
Grp Volume(v), veh/h	35	0	70	67	12	63	20	858	77	64	933	982
Grp Sat Flow(s),veh/h/ln	1346	0	1646	1352	1900	1585	1810	1763	1610	1781	1777	1864
Q Serve(g_s), s	3.5	0.0	5.8	2.7	0.8	5.4	0.2	0.0	0.0	5.4	0.0	0.0
Cycle Q Clear(g_c), s	4.4	0.0	5.8	8.5	0.8	5.4	0.2	0.0	0.0	5.4	0.0	0.0
Prop In Lane	1.00		0.86	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	125	0	100	77	115	96	72	21821	9966	0	11152	11698
V/C Ratio(X)	0.28	0.00	0.70	0.87	0.10	0.65	0.28	0.04	0.01	0.00	0.08	0.08
Avail Cap(c_a), veh/h	140	0	118	77	115	96	116	21821	9966	0	11152	11698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.2	0.0	64.5	69.5	62.2	64.3	52.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	14.0	60.6	0.4	14.8	1.8	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	0.0	5.1	6.7	0.8	4.7	1.1	0.0	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.4	0.0	78.5	130.1	62.5	79.2	53.9	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	E	A	E	F	E	E	D	A	A	A	A	A
Approach Vol, veh/h		105			142			955			1979	
Approach Delay, s/veh		74.1			101.8			1.1			0.0	
Approach LOS		E			F			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.8	890.3		15.0	6.6	902.4		15.0				
Change Period (Y+Rc), s	5.0	5.0		* 6.5	5.0	5.0		6.5				
Max Green Setting (Gmax), s	120.0	120.0		* 10	5.0	110.0		8.5				
Max Q Clear Time (g_c+I1), s	7.4	2.0		7.8	2.2	2.0		10.5				
Green Ext Time (p_c), s	0.2	7.6		0.1	0.0	32.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			7.3									
HCM 6th LOS			A									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

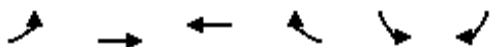
4: 38th St & Shoal Creek Blvd
2028 Site Plus Forecasted AM (No Impr)



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Lane Configurations							
Traffic Volume (vph)	197	1246	1016	72	115	198	
Future Volume (vph)	197	1246	1016	72	115	198	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	150			75	230	0	
Storage Lanes	1			1	1	1	
Taper Length (ft)	100				60		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	
Frt				0.850		0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1805	3539	3539	1615	1787	1583	
Flt Permitted	0.192				0.950		
Satd. Flow (perm)	365	3539	3539	1615	1787	1583	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)				38		105	
Link Speed (mph)		35	35		30		
Link Distance (ft)		478	541		394		
Travel Time (s)		9.3	10.5		9.0		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	0%	2%	2%	0%	1%	2%	
Adj. Flow (vph)	219	1384	1129	80	128	220	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	219	1384	1129	80	128	220	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		12		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane		Yes	Yes				
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	2	2	1	1	1	
Detector Template	Left	Thru	Thru	Right	Left	Right	
Leading Detector (ft)	20	100	100	20	20	20	
Trailing Detector (ft)	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	20	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
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	pm+pt	NA	NA	Perm	Prot	pm+ov	
Protected Phases	5	2	6		3	5	7

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

4: 38th St & Shoal Creek Blvd
2028 Site Plus Forecasted AM (No Impr)



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø7
Permitted Phases	2			6		7	
Detector Phase	5	2	6	6	3	5	
Switch Phase							
Minimum Initial (s)	4.0	15.0	15.0	15.0	5.0	4.0	5.0
Minimum Split (s)	12.0	23.5	30.5	30.5	23.5	12.0	23.5
Total Split (s)	15.0	110.0	95.0	95.0	30.0	15.0	30.0
Total Split (%)	10.7%	78.6%	67.9%	67.9%	21.4%	10.7%	21%
Maximum Green (s)	7.0	104.5	89.5	89.5	24.5	7.0	24.5
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0
All-Red Time (s)	4.0	1.5	1.5	1.5	2.5	4.0	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	8.0	5.5	5.5	5.5	5.5	8.0	
Lead/Lag	Lead		Lag	Lag		Lead	
Lead-Lag Optimize?	Yes		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	2.0	2.0	2.0	2.0	1.0	2.0
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Walk Time (s)			7.0	7.0			
Flash Dont Walk (s)			18.0	18.0			
Pedestrian Calls (#/hr)			0	0			
Act Effct Green (s)	112.1	114.6	95.2	95.2	14.4	11.4	
Actuated g/C Ratio	0.80	0.82	0.68	0.68	0.10	0.08	
v/c Ratio	0.54	0.48	0.47	0.07	0.70	0.98	
Control Delay	8.5	4.7	9.6	2.2	79.9	86.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.5	4.7	9.6	2.2	79.9	86.8	
LOS	A	A	A	A	E	F	
Approach Delay		5.2	9.1		84.3		
Approach LOS		A	A		F		
Queue Length 50th (ft)	38	161	358	1	114	106	
Queue Length 95th (ft)	71	246	428	m5	178	#281	
Internal Link Dist (ft)		398	461		314		
Turn Bay Length (ft)	150			75	230		
Base Capacity (vph)	413	2897	2406	1110	312	229	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.53	0.48	0.47	0.07	0.41	0.96	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 68.5 (49%), Referenced to phase 2:EBTL and 6:WBT, Start of Red

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 15.4

Intersection LOS: B

Intersection Capacity Utilization 61.2%

ICU Level of Service B

Analysis Period (min) 15

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

4: 38th St & Shoal Creek Blvd
2028 Site Plus Forecasted AM (No Impr)

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

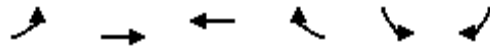
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: 38th St & Shoal Creek Blvd



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

4: 38th St & Shoal Creek Blvd
2028 Site Plus Forecasted AM (No Impr)



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	197	1246	1016	72	115	198
Future Volume (veh/h)	197	1246	1016	72	115	198
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1900	1885	1870
Adj Flow Rate, veh/h	219	1384	1129	80	128	220
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	0	1	2
Cap, veh/h	383	2756	2375	1076	262	310
Arrive On Green	0.05	0.78	0.67	0.67	0.15	0.15
Sat Flow, veh/h	1810	3647	3647	1610	1795	1585
Grp Volume(v), veh/h	219	1384	1129	80	128	220
Grp Sat Flow(s),veh/h/ln	1810	1777	1777	1610	1795	1585
Q Serve(g_s), s	5.2	20.0	21.6	2.4	9.2	18.1
Cycle Q Clear(g_c), s	5.2	20.0	21.6	2.4	9.2	18.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	383	2756	2375	1076	262	310
V/C Ratio(X)	0.57	0.50	0.48	0.07	0.49	0.71
Avail Cap(c_a), veh/h	383	2756	2375	1076	314	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	5.8	11.3	8.1	55.0	52.6
Incr Delay (d2), s/veh	1.3	0.7	0.7	0.1	0.5	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	10.9	13.1	1.6	7.6	12.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.7	6.4	12.0	8.2	55.5	56.6
LnGrp LOS	B	A	B	A	E	E
Approach Vol, veh/h		1603	1209		348	
Approach Delay, s/veh		7.0	11.7		56.2	
Approach LOS		A	B		E	
Timer - Assigned Phs		2			5	6
Phs Duration (G+Y+Rc), s		114.1			15.0	99.1
Change Period (Y+Rc), s		5.5			8.0	5.5
Max Green Setting (Gmax), s		104.5			7.0	89.5
Max Q Clear Time (g_c+I1), s		22.0			7.2	23.6
Green Ext Time (p_c), s		8.9			0.0	6.6
						0.3
Intersection Summary						
HCM 6th Ctrl Delay			14.2			
HCM 6th LOS			B			
Notes						
User approved pedestrian interval to be less than phase max green.						

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2028 Site Plus Forecasted PM (No Impr)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	241	641	144	160	615	209	242	1661	225	159	1083	182
Future Volume (vph)	241	641	144	160	615	209	242	1661	225	159	1083	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		260	150		160	150		120	150		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	50			100			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850			0.850			0.850		0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3539	1615	1787	3539	1568	1805	3574	1615	1719	3491	0
Flt Permitted	0.154			0.145			0.075			0.071		
Satd. Flow (perm)	290	3539	1615	273	3539	1568	142	3574	1615	128	3491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145			179			151		16	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1022			1081			615			1085	
Travel Time (s)		19.9			21.1			12.0			21.1	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	1%	2%	0%	1%	2%	3%	0%	1%	0%	5%	1%	2%
Adj. Flow (vph)	243	647	145	162	621	211	244	1678	227	161	1094	184
Shared Lane Traffic (%)												
Lane Group Flow (vph)	243	647	145	162	621	211	244	1678	227	161	1278	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes			Yes	
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	1	2	1	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	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	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	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	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	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	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2028 Site Plus Forecasted PM (No Impr)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8		4	6		2	2		
Detector Phase	3	8	8	7	4	4	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.0	31.0	31.0	10.0	32.0	32.0	10.0	36.0	
Total Split (s)	20.0	40.0	40.0	19.0	39.0	39.0	19.0	54.0	54.0	17.0	52.0	
Total Split (%)	15.4%	30.8%	30.8%	14.6%	30.0%	30.0%	14.6%	41.5%	41.5%	13.1%	40.0%	
Maximum Green (s)	14.5	34.5	34.5	14.0	34.0	34.0	14.0	49.0	49.0	12.0	47.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5	1.5	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		18.0	18.0		19.0	19.0		20.0	20.0		24.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	41.7	27.6	27.6	42.7	28.0	28.0	67.3	56.5	56.5	67.3	53.3	
Actuated g/C Ratio	0.32	0.21	0.21	0.33	0.22	0.22	0.52	0.43	0.43	0.52	0.41	
v/c Ratio	0.95	0.86	0.32	0.63	0.82	0.44	0.97	1.08	0.29	0.81	0.89	
Control Delay	77.7	61.2	7.8	72.0	73.9	26.2	97.6	84.0	10.4	58.8	44.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	77.7	61.2	7.8	72.0	73.9	26.2	97.6	84.0	10.4	58.8	44.6	
LOS	E	E	A	E	E	C	F	F	B	E	D	
Approach Delay		57.6			63.4			77.7			46.2	
Approach LOS		E			E			E			D	
Queue Length 50th (ft)	150	279	0	118	279	57	155	~848	38	84	516	
Queue Length 95th (ft)	#290	328	52	m144	304	m93	#338	#1065	103	#204	#726	
Internal Link Dist (ft)		942			1001			535			1005	
Turn Bay Length (ft)	150		260	150		160	150		120	150		
Base Capacity (vph)	260	939	535	261	925	542	252	1552	786	220	1440	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.93	0.69	0.27	0.62	0.67	0.39	0.97	1.08	0.29	0.73	0.89	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 34 (26%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 130												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 1.08												
Intersection Signal Delay: 63.4				Intersection LOS: E								
Intersection Capacity Utilization 102.2%				ICU Level of Service G								
Analysis Period (min) 15												

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

1: Lamar Blvd & 38th St
2028 Site Plus Forecasted PM (No Impr)

~ Volume exceeds capacity, queue is theoretically infinite.

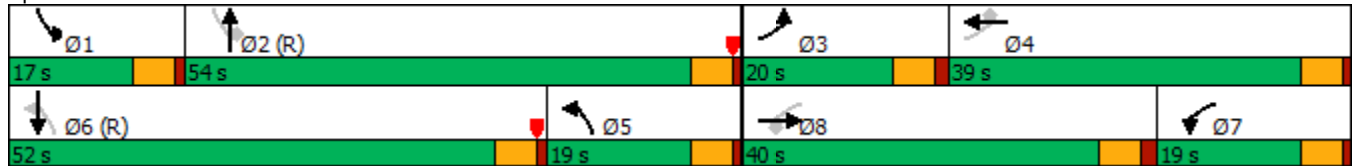
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Lamar Blvd & 38th St



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

1: Lamar Blvd & 38th St
2028 Site Plus Forecasted PM (No Impr)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	241	641	144	160	615	209	242	1661	225	159	1083	182
Future Volume (veh/h)	241	641	144	160	615	209	242	1661	225	159	1083	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1900	1885	1870	1856	1900	1885	1900	1826	1885	1870
Adj Flow Rate, veh/h	243	647	145	162	621	0	244	1678	0	161	1094	184
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	2	0	1	2	3	0	1	0	5	1	2
Cap, veh/h	281	722	327	268	712		364	1633		185	1109	186
Arrive On Green	0.11	0.20	0.20	0.11	0.20	0.00	0.17	0.46	0.00	0.07	0.36	0.36
Sat Flow, veh/h	1795	3554	1610	1795	3554	1572	1810	3582	1610	1739	3069	515
Grp Volume(v), veh/h	243	647	145	162	621	0	244	1678	0	161	637	641
Grp Sat Flow(s),veh/h/ln	1795	1777	1610	1795	1777	1572	1810	1791	1610	1739	1791	1793
Q Serve(g_s), s	14.0	23.1	8.3	5.7	22.0	0.0	12.0	59.3	0.0	7.7	45.8	46.2
Cycle Q Clear(g_c), s	14.0	23.1	8.3	5.7	22.0	0.0	12.0	59.3	0.0	7.7	45.8	46.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	281	722	327	268	712		364	1633		185	647	648
V/C Ratio(X)	0.87	0.90	0.44	0.60	0.87		0.67	1.03		0.87	0.98	0.99
Avail Cap(c_a), veh/h	281	943	427	268	929		364	1633		216	647	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.84	0.84	0.84
Uniform Delay (d), s/veh	38.0	50.5	29.4	52.7	50.4	0.0	48.5	35.4	0.0	36.9	41.1	41.2
Incr Delay (d2), s/veh	22.6	7.8	0.4	2.7	6.1	0.0	3.9	29.7	0.0	21.3	28.8	29.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.5	16.3	5.8	8.8	15.6	0.0	12.2	41.7	0.0	10.0	32.4	32.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	58.3	29.7	55.4	56.4	0.0	52.3	65.1	0.0	58.2	69.9	71.0
LnGrp LOS	E	E	C	E	E		D	F		E	E	E
Approach Vol, veh/h		1035			783	A		1922	A		1439	
Approach Delay, s/veh		54.8			56.2			63.5			69.1	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	64.3	20.0	31.0	27.0	52.0	19.1	31.9				
Change Period (Y+Rc), s	5.0	5.0	5.5	5.0	5.0	5.0	5.0	5.5				
Max Green Setting (Gmax), s	12.0	49.0	14.5	34.0	14.0	47.0	14.0	34.5				
Max Q Clear Time (g_c+I1), s	9.7	61.3	16.0	24.0	14.0	48.2	7.7	25.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	62.2
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2028 Site Plus Forecasted PM (No Impr)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	278	676	170	153	511	125	245	1017	146	108	706	156
Future Volume (vph)	278	676	170	153	511	125	245	1017	146	108	706	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		100	165		0	150		0	150		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	100			120			100			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.971			0.981			0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3574	1495	1805	3477	0	1703	3506	0	1805	3450	0
Flt Permitted	0.168			0.138			0.198			0.105		
Satd. Flow (perm)	316	3574	1495	262	3477	0	355	3506	0	200	3450	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		23			14			23	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		723			729			395			485	
Travel Time (s)		14.1			14.2			7.7			9.4	
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 (%)	1%	1%	8%	0%	1%	0%	6%	1%	1%	0%	2%	1%
Adj. Flow (vph)	290	704	177	159	532	130	255	1059	152	113	735	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	290	704	177	159	662	0	255	1211	0	113	898	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)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes						Yes			Yes	
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	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		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	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	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	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	3	8		7	4		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2028 Site Plus Forecasted PM (No Impr)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		8	8			6			2		
Detector Phase	3	8	8	7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	15.0		5.0	15.0	
Minimum Split (s)	10.5	30.5	30.5	10.5	36.5		10.5	32.5		10.5	35.5	
Total Split (s)	14.0	44.0	44.0	14.0	44.0		18.0	54.0		18.0	54.0	
Total Split (%)	10.8%	33.8%	33.8%	10.8%	33.8%		13.8%	41.5%		13.8%	41.5%	
Maximum Green (s)	8.5	38.5	38.5	8.5	38.5		12.5	48.5		12.5	48.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		1.5	2.0		1.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		18.0	18.0		24.0			20.0			23.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	39.7	31.3	31.3	39.7	31.2		68.3	60.2		68.3	55.8	
Actuated g/C Ratio	0.31	0.24	0.24	0.31	0.24		0.53	0.46		0.53	0.43	
v/c Ratio	1.51	0.82	0.37	0.88	0.78		0.81	0.74		0.55	0.60	
Control Delay	289.6	66.4	19.0	74.7	50.8		55.2	33.1		25.7	30.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	289.6	66.4	19.0	74.7	50.8		55.2	33.1		25.7	30.8	
LOS	F	E	B	E	D		E	C		C	C	
Approach Delay		114.5			55.4			37.0			30.2	
Approach LOS		F			E			D			C	
Queue Length 50th (ft)	~277	266	41	95	265		106	425		42	296	
Queue Length 95th (ft)	#433	283	m56	#180	313		#237	#642		84	401	
Internal Link Dist (ft)		643			649			315			405	
Turn Bay Length (ft)	150		100	165			150			150		
Base Capacity (vph)	192	1058	554	180	1045		315	1630		265	1492	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	1.51	0.67	0.32	0.88	0.63		0.81	0.74		0.43	0.60	
Intersection Summary												
Area Type:	Other											
Cycle Length: 130												
Actuated Cycle Length: 130												
Offset: 31.5 (24%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 105												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 1.51												
Intersection Signal Delay: 59.1						Intersection LOS: E						
Intersection Capacity Utilization 90.6%						ICU Level of Service E						
Analysis Period (min) 15												

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

2: Guadalupe St & 38th St
2028 Site Plus Forecasted PM (No Impr)

~ Volume exceeds capacity, queue is theoretically infinite.

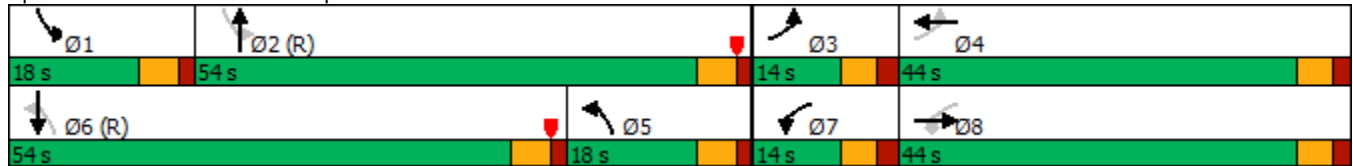
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Guadalupe St & 38th St



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

2: Guadalupe St & 38th St
2028 Site Plus Forecasted PM (No Impr)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	676	170	153	511	125	245	1017	146	108	706	156
Future Volume (veh/h)	278	676	170	153	511	125	245	1017	146	108	706	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1781	1900	1885	1900	1811	1885	1885	1900	1870	1885
Adj Flow Rate, veh/h	290	704	177	159	532	130	255	1059	152	112	735	0
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
Percent Heavy Veh, %	1	1	8	0	1	0	6	1	1	0	2	1
Cap, veh/h	211	811	342	198	647	157	488	1552	222	248	1326	
Arrive On Green	0.07	0.23	0.23	0.07	0.23	0.23	0.17	0.49	0.49	0.05	0.37	0.00
Sat Flow, veh/h	1795	3582	1510	1810	2856	695	1725	3144	451	1810	3647	0
Grp Volume(v), veh/h	290	704	177	159	333	329	255	603	608	112	735	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1510	1810	1791	1760	1725	1791	1804	1810	1777	0
Q Serve(g_s), s	8.5	24.6	13.4	8.5	22.9	23.1	1.0	33.4	33.5	4.0	21.3	0.0
Cycle Q Clear(g_c), s	8.5	24.6	13.4	8.5	22.9	23.1	1.0	33.4	33.5	4.0	21.3	0.0
Prop In Lane	1.00		1.00	1.00		0.39	1.00		0.25	1.00		0.00
Lane Grp Cap(c), veh/h	211	811	342	198	406	399	488	884	891	248	1326	
V/C Ratio(X)	1.38	0.87	0.52	0.80	0.82	0.83	0.52	0.68	0.68	0.45	0.55	
Avail Cap(c_a), veh/h	211	1061	447	198	530	521	488	884	891	340	1326	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.6	48.4	44.1	39.6	47.8	47.8	37.4	25.1	25.1	20.4	32.2	0.0
Incr Delay (d2), s/veh	196.6	5.1	0.5	19.7	5.9	6.4	0.5	4.2	4.2	0.5	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	22.5	17.0	8.7	8.6	16.2	16.1	11.3	21.1	21.3	3.0	14.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	242.3	53.5	44.5	59.2	53.7	54.2	37.9	29.3	29.4	20.9	33.9	0.0
LnGrp LOS	F	D	D	E	D	D	D	C	C	C	C	
Approach Vol, veh/h	1171			821			1466			847		
Approach Delay, s/veh	98.9			55.0			30.8			32.2		
Approach LOS	F			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.4	69.7	14.0	34.9	27.1	54.0	14.0	34.9				
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5				
Max Green Setting (Gmax), s	12.5	48.5	8.5	38.5	12.5	48.5	8.5	38.5				
Max Q Clear Time (g_c+I1), s	6.0	35.5	10.5	25.1	3.0	23.3	10.5	26.6				
Green Ext Time (p_c), s	0.0	4.5	0.0	2.2	0.2	3.4	0.0	2.8				

Intersection Summary

HCM 6th Ctrl Delay	54.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr
2028 Site Plus Forecasted PM (No Impr)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	33	34	139	17	112	9	1817	116	123	1180	6
Future Volume (vph)	86	33	34	139	17	112	9	1817	116	123	1180	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		115	150		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.924				0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1722	0	1787	1900	1615	1805	3574	1615	1805	3571	0
Flt Permitted	0.745			0.693			0.177			0.047		
Satd. Flow (perm)	1416	1722	0	1304	1900	1615	336	3574	1615	89	3571	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29				116			62		1	
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		209			79			1085			359	
Travel Time (s)		4.8			1.8			21.1			7.0	
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 (%)	0%	4%	0%	1%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	95	36	37	153	19	123	10	1997	127	135	1297	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	95	73	0	153	19	123	10	1997	127	135	1304	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)		12			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
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	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6	20	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	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	0.0	
Detector 1 Queue (s)	0.0	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	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	D.P+P	NA	Perm	D.P+P	NA	
Protected Phases		4			8		5	2		1	6	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr
2028 Site Plus Forecasted PM (No Impr)

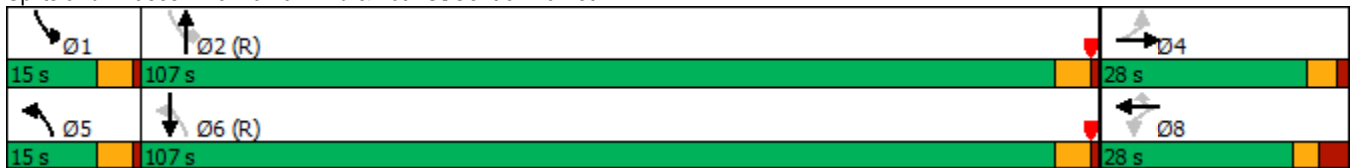
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8	6		2	2		
Detector Phase	4	4		8	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	35.0	35.0		31.5	31.5	31.5	9.5	35.0	35.0	9.5	25.0	
Total Split (s)	28.0	28.0		28.0	28.0	28.0	15.0	107.0	107.0	15.0	107.0	
Total Split (%)	18.7%	18.7%		18.7%	18.7%	18.7%	10.0%	71.3%	71.3%	10.0%	71.3%	
Maximum Green (s)	23.0	23.0		21.5	21.5	21.5	10.0	102.0	102.0	10.0	102.0	
Yellow Time (s)	3.5	3.5		3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.5	1.5		3.5	3.5	3.5	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0		6.5	6.5	6.5	5.0	5.0	5.0	5.0	5.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	1.5		1.5	1.5	1.5	1.0	2.0	2.0	1.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)	23.0	23.0		18.0	18.0	18.0		23.0	23.0		13.0	
Pedestrian Calls (#/hr)	0	0		0	0	0		0	0		0	
Act Effct Green (s)	21.1	21.1		19.6	19.6	19.6	116.9	105.2	105.2	113.9	115.4	
Actuated g/C Ratio	0.14	0.14		0.13	0.13	0.13	0.78	0.70	0.70	0.76	0.77	
v/c Ratio	0.48	0.27		0.91	0.08	0.40	0.03	0.80	0.11	0.81	0.47	
Control Delay	67.2	38.0		110.9	56.8	14.9	3.9	19.0	4.4	63.7	7.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	
Total Delay	67.2	38.0		110.9	56.8	14.9	3.9	19.7	4.4	63.7	7.6	
LOS	E	D		F	E	B	A	B	A	E	A	
Approach Delay		54.5			67.4			18.8			12.9	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	86	38		147	16	6	2	695	20	68	202	
Queue Length 95th (ft)	148	89		#273	43	67	6	801	43	#172	316	
Internal Link Dist (ft)		129			1			1005			279	
Turn Bay Length (ft)							150		115	150		
Base Capacity (vph)	217	288		186	272	330	364	2505	1151	182	2746	
Starvation Cap Reductn	0	0		0	0	0	0	211	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.44	0.25		0.82	0.07	0.37	0.03	0.87	0.11	0.74	0.47	
Intersection Summary												
Area Type:	Other											
Cycle Length: 150												
Actuated Cycle Length: 150												
Offset: 25 (17%), Referenced to phase 2:NBSB and 6:NBSB, Start of Red												
Natural Cycle: 110												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.91												
Intersection Signal Delay: 21.7				Intersection LOS: C								
Intersection Capacity Utilization 85.2%				ICU Level of Service E								
Analysis Period (min) 15												

Ascension Seton 38th TIA Compliance Lanes, Volumes, Timings

3: Lamar Blvd & 40th St/Central Market Dr
2028 Site Plus Forecasted PM (No Impr)

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Lamar Blvd & 40th St/Central Market Dr



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

3: Lamar Blvd & 40th St/Central Market Dr
2028 Site Plus Forecasted PM (No Impr)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	33	34	139	17	112	9	1817	116	123	1180	6
Future Volume (veh/h)	86	33	34	139	17	112	9	1817	116	123	1180	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1841	1900	1885	1900	1900	1900	1885	1900	1900	1885	1900
Adj Flow Rate, veh/h	95	36	37	153	19	123	10	1997	127	135	1297	7
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
Percent Heavy Veh, %	0	4	0	1	0	0	0	1	0	0	1	0
Cap, veh/h	219	119	123	188	272	231	316	2553	1148	177	2703	15
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.01	0.71	0.71	0.03	0.74	0.74
Sat Flow, veh/h	1266	832	855	1338	1900	1610	1810	3582	1610	1810	3653	20
Grp Volume(v), veh/h	95	0	73	153	19	123	10	1997	127	135	636	668
Grp Sat Flow(s),veh/h/ln	1266	0	1687	1338	1900	1610	1810	1791	1610	1810	1791	1882
Q Serve(g_s), s	10.5	0.0	5.8	15.7	1.3	10.6	0.2	54.3	3.7	3.1	21.5	21.5
Cycle Q Clear(g_c), s	11.8	0.0	5.8	21.5	1.3	10.6	0.2	54.3	3.7	3.1	21.5	21.5
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	219	0	242	188	272	231	316	2553	1148	177	1325	1392
V/C Ratio(X)	0.43	0.00	0.30	0.81	0.07	0.53	0.03	0.78	0.11	0.76	0.48	0.48
Avail Cap(c_a), veh/h	231	0	259	188	272	231	425	2553	1148	237	1325	1392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.7	0.0	57.5	67.8	55.6	59.6	6.4	14.0	6.7	30.1	7.9	7.9
Incr Delay (d2), s/veh	0.5	0.0	0.3	21.9	0.0	1.2	0.0	0.2	0.0	6.4	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.2	0.0	4.5	11.4	1.1	7.9	0.1	22.3	1.8	7.0	12.8	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	0.0	57.8	89.7	55.6	60.8	6.4	14.2	6.7	36.5	9.1	9.1
LnGrp LOS	E	A	E	F	E	E	A	B	A	D	A	A
Approach Vol, veh/h		168			295			2134			1439	
Approach Delay, s/veh		59.7			75.5			13.7			11.7	
Approach LOS		E			E			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	111.9		28.0	6.0	116.0		28.0				
Change Period (Y+Rc), s	5.0	5.0		* 6.5	5.0	5.0		6.5				
Max Green Setting (Gmax), s	10.0	102.0		* 23	10.0	102.0		21.5				
Max Q Clear Time (g_c+I1), s	5.1	56.3		13.8	2.2	23.5		23.5				
Green Ext Time (p_c), s	0.0	17.7		0.2	0.0	6.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay 19.4

HCM 6th LOS B

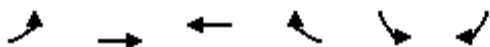
Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

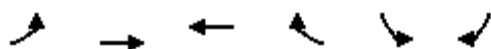
4: 38th St & Shoal Creek Blvd
2028 Site Plus Forecasted PM (No Impr)



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	231	1001	1248	199	40	112
Future Volume (vph)	231	1001	1248	199	40	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			75	230	0
Storage Lanes	1			1	1	1
Taper Length (ft)	100				60	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3574	1615	1805	1615
Flt Permitted	0.158				0.950	
Satd. Flow (perm)	294	3539	3574	1615	1805	1615
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				136		115
Link Speed (mph)		35	35		30	
Link Distance (ft)		478	541		394	
Travel Time (s)		9.3	10.5		9.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	1%	0%	0%	0%
Adj. Flow (vph)	238	1032	1287	205	41	115
Shared Lane Traffic (%)						
Lane Group Flow (vph)	238	1032	1287	205	41	115
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
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	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	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
Detector 1 Queue (s)	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
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	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		8	

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

4: 38th St & Shoal Creek Blvd
2028 Site Plus Forecasted PM (No Impr)



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	2			6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	12.0	75.0	63.0	63.0	15.0	15.0
Total Split (%)	13.3%	83.3%	70.0%	70.0%	16.7%	16.7%
Maximum Green (s)	7.0	70.0	58.0	58.0	10.0	10.0
Yellow Time (s)	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max	None	None
Walk Time (s)		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effect Green (s)	74.6	75.6	62.0	62.0	7.5	7.5
Actuated g/C Ratio	0.83	0.84	0.69	0.69	0.08	0.08
v/c Ratio	0.65	0.35	0.52	0.18	0.27	0.48
Control Delay	13.2	2.6	8.6	2.7	42.5	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	2.6	8.6	2.7	42.5	14.8
LOS	B	A	A	A	D	B
Approach Delay		4.6	7.8		22.1	
Approach LOS		A	A		C	
Queue Length 50th (ft)	22	61	183	13	22	0
Queue Length 95th (ft)	#96	96	244	37	53	48
Internal Link Dist (ft)		398	461		314	
Turn Bay Length (ft)	150			75	230	
Base Capacity (vph)	371	2971	2461	1154	200	281
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.35	0.52	0.18	0.20	0.41

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Red
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 7.2
Intersection Capacity Utilization 64.0%
Analysis Period (min) 15

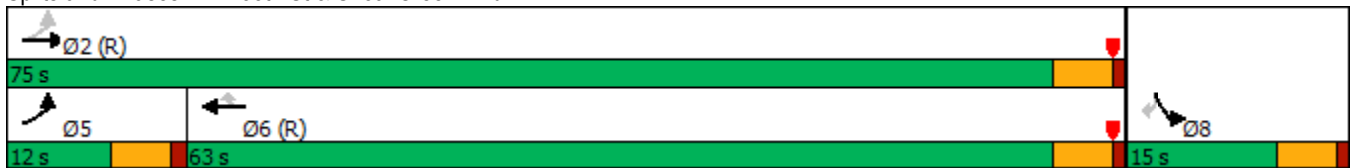
Intersection LOS: A
ICU Level of Service B

Ascension Seton 38th TIA Compliance
Lanes, Volumes, Timings

4: 38th St & Shoal Creek Blvd
2028 Site Plus Forecasted PM (No Impr)

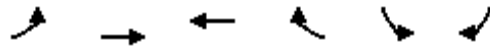
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: 38th St & Shoal Creek Blvd



Ascension Seton 38th TIA Compliance
HCM 6th Signalized Intersection Summary

4: 38th St & Shoal Creek Blvd
2028 Site Plus Forecasted PM (No Impr)



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	231	1001	1248	199	40	112
Future Volume (veh/h)	231	1001	1248	199	40	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1900	1900	1900
Adj Flow Rate, veh/h	238	1032	1287	205	41	115
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	1	0	0	0
Cap, veh/h	364	2835	2445	1099	165	147
Arrive On Green	0.06	0.80	0.68	0.68	0.09	0.09
Sat Flow, veh/h	1781	3647	3676	1610	1810	1610
Grp Volume(v), veh/h	238	1032	1287	205	41	115
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1610	1810	1610
Q Serve(g_s), s	3.3	7.4	16.0	4.2	1.9	6.3
Cycle Q Clear(g_c), s	3.3	7.4	16.0	4.2	1.9	6.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	364	2835	2445	1099	165	147
V/C Ratio(X)	0.65	0.36	0.53	0.19	0.25	0.78
Avail Cap(c_a), veh/h	396	2835	2445	1099	201	179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.4	2.6	7.1	5.2	38.0	40.0
Incr Delay (d2), s/veh	3.4	0.4	0.8	0.4	0.8	16.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	2.8	8.8	2.2	1.6	5.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.8	3.0	7.9	5.6	38.8	56.8
LnGrp LOS	B	A	A	A	D	E
Approach Vol, veh/h		1270	1492		156	
Approach Delay, s/veh		4.6	7.6		52.1	
Approach LOS		A	A		D	
Timer - Assigned Phs		2			5	6
Phs Duration (G+Y+Rc), s		76.8			10.4	66.4
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		70.0			7.0	58.0
Max Q Clear Time (g_c+I1), s		9.4			5.3	18.0
Green Ext Time (p_c), s		9.4			0.1	13.8
Intersection Summary						
HCM 6th Ctrl Delay			8.7			
HCM 6th LOS			A			

Notes

User approved pedestrian interval to be less than phase max green.



August 19, 2022

Re: **Opposition to Rezoning Request & Request for Postponement**
C814-92-0006.02 - 1201 W. 38th Street

Dear Planning Commissioners,

On behalf of the West 31st Street Creekside Neighborhood Association, we are requesting postponement of the above-referenced rezoning request. **We are requesting a postponement until the September 27th meeting of the Planning Commission to provide the applicant sufficient time to provide the City and the impacted neighborhoods an adequate traffic impact analysis.** Earlier this week, we received a copy of a letter by which the applicant intends to “show compliance with” a TIA approved in 1992.

Under the applicant’s figures, the proposed expansion of the facility would increase trips per day by 5,364 over what was previously approved, an increase of approximately 33% of the total trips generated from the facility. Additionally, the proposed PUD amendment significantly alters the configuration of the buildings, including ingress and egress onto the local roadways. The applicant’s data shows that some roadways will increase up to 10%, while also completely omitting the impact that the new configuration and expansion will have on West 34th and West 31st Streets. The applicant’s analysis demonstrates the need for a new TIA.

Conditions in the area have changed substantially since 1992; that point should be well understood. As the city and the area has grown, this area of Austin has become increasingly more congested, with failing intersections and non-stop traffic. At the same time, the City of Austin has prioritized the improvement of its bicycle and pedestrian networks. This neighborhood serves as a critical link for bicycle commuters making their way across Central Austin, as well as recreational users of the Shoal Creek Trail.

Planned Unit Developments are about *superiority*. This PUD presents an opportunity to help address known gaps in the bicycle and pedestrian network. Given the substantial impact this expansion will have on the overall traffic in this area, we believe the most important metric for superiority on this project should be how it helps address the deficiencies in the area’s bicycle and pedestrian network.

The City, our adjacent neighborhoods, and bicycling and trail advocates have been engaged in several years of discussions for how to best address bicycle and pedestrian safety in this area. While we understand that the applicant does not want to be dragged into these discussions, the traffic generated from this project will be part of the mix of users, and proper planning and coordination should occur to ensure that we are improving conditions overall.

Thank you for the consideration of our postponement request.

Best regards,

Robert “Bobby” Levinski
Attorney, Levinski Law,
PLLC
512-636-7649 (mobile)